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THESIS

THE RELATIONSHIP BETWEEN THE EDUCATIONAL BACKGROUND AND MANAGERIAL EXPERIENCE OF SENIOR NAVY MEDICAL SERVICE CORPS EXECUTIVES (HEALTH CARE ADMINISTRATORS) AND THEIR PERCEIVED CURRENT AND REQUIRED MANAGEMENT CAPABILITIES

by

Jerry L. Gardner

March, 1994

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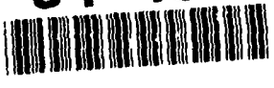

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The purpose of this thesis is to examine the reported educational attainment and management experience of senior Navy medical department executives in an attempt to isolate those variables that affect their perceived management capabilities. The data used for this thesis were taken from the results of a joint Bureau of Medicine and Surgery (BUMED) and Naval Postgraduate School (NPS) survey, which was designed to asses the unique educational needs of Navy medical department executives. This thesis explores one of the findings of the survey which was that the Medical Service Corps (Health Care Administrator (HCA) cohort perceived their current skills to be higher than the skill levels required for a majority of the management skill categories listed in the survey. This thesis isolates certain management education and experience variables to determine why this group is so confident in their skill levels. The findings indicate that the HCA cohort has more management education and experience than the other medical communities. Additionally, management experience had more of an impact than management education on the HCA responses.

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The Relationship Between the Educational Background and Managerial Experience of Senior Navy Medical Service Corps Executives (Health Care Administrators) and Their Perceived Current and Required Management Capabilities

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Submitted in partial fulfillment
of the requirements for the degree of

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ABSTRACT

The purpose of this thesis is to examine the reported educational attainment and management experience of senior Navy medical department executives in an attempt to isolate those variables that affect their perceived management capabilities. The data used for this thesis were taken from the results of a joint Bureau of Medicine and Surgery (BUMED) and Naval Postgraduate School (NPS) survey, which was designed to asses the unique educational needs of Navy medical department executives. This thesis explores one of the findings of the survey which was that the Medical Service Corps Health Care Administrator (HCA) cohort perceived their current skills to be higher than the skill levels required for a majority of the management skill categories listed in the survey. This thesis isolates certain management education and experience variables to determine why this group is so confident in their skill levels. The findings indicate that the HCA cohort has more management education and experience than the other medical communities. Additionally, management experience had more of an impact than management education on the HCA responses.

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I. INTRODUCTION

The health care environment in the United States is experiencing tremendous turbulence, managerial uncertainty, financial instability, and organizational volatility. The literature describes a future of health care delivery in which the present pressures affecting health care administrators will intensify due to "changing demographics, ambivalent public policy, escalating costs, decreasing payments, increasing competition among providers, volatile relations between hospitals and their medical staffs, heightened concern for quality and escalating demands for cost-value linkages from private and corporate consumers, continued growth and evolution of managed care arrangements, and continued shifts away from hospital-based delivery of services." [Ref. 1:p. 182] Health care executives are faced with the challenge of controlling costs and improving quality while remaining focused on the needs of the patient as an individual. These drastic changes in health care delivery are forcing administrators to re-examine and expand their knowledge base in order to refine the knowledge, skills, and abilities (KSAs) necessary to cope effectively with this turbulent environment. "The Base Realignment and Closure process, continuing congressional interest, implementation of the Coordinated Care

Program, sophisticated management information technologies, and various Department of Defense (DOD) initiatives contribute additional managerial challenges" to military health care executives. [Ref. 2:p. 1]

The United States Navy Bureau of Medicine (BUMED), realizing that Senior Navy Medical Department executives are lacking in the skills necessary to effectively cope with the rapidly changing environment, has entered into a partnership with Naval Postgraduate School (NPS), Administrative Sciences Department[1], for the purpose of identifying the competencies necessary to effectively function in senior executive management positions within Navy Medicine. Subsequently, NPS faculty have developed and are in the process of delivering an innovative Executive Management Education (EME) program designed to include the unique managerial requirements that were identified. The program is designed to: (1) provide a curriculum based on an analysis of the Navy's needs and (2) provide a "module" type delivery system which targets specific educational objectives selectively based on the educational background of the individuals. This thesis examines the reported educational attainment and management experience of senior Navy medical department executives in an attempt to isolate those variables that affect their perceived management

[1]The Naval Postgraduate School Administrative Sciences Department has been renamed the Systems Management Department during the writing of this thesis.

capabilities. The results of this analysis can then be used to further tailor the educational modules.

A. BACKGROUND

The Department of the Navy Medical Blue Ribbon Panel (BRP) addressed Senior Medical Department officers' lack of formal management training in their 1988 report concerning the issues facing Navy Medicine into the 1990s [Ref. 3:p. 29]. This lack of formal training programs was noted in 1982 by the Vice Chief of Naval Operations (VCNO) as a result of a Navy Inspector General report. The VCNO directed that "Medical Department officers have the opportunity to receive leadership training at critical points in their careers." [Ref. 3:p. 29] Additionally, a 1987 Inspector General report noted concerns with management training citing that "current management training had limited effectiveness due to the lack of definition of knowledge, skills, and abilities for each management level throughout the Medical Department." [Ref. 3:p. 29]

The Department of Defense Appropriations Act formalized the need for military health care executives to expand and refine their managerial knowledge, skills, and abilities in Section 8096 of the fiscal year 1992 and 1993 stating that "None of the funds appropriated in this Act may be used to fill the commander's position at any military facility with a

lth care professional unless the prospective candidate can demonstrate professional administrative skills." [Ref. 2:p. 1]

A task force was convened by the Assistant Secretary of Defense (Health Affairs) to examine civilian and military health care administration practices and identify the unique needs for military commanders. The Schartz and Cox report, released in 1992, provided results of the task force, which included a comprehensive list of the knowledge requirements for executive managers of military medical treatment facilities. [Ref. 4]

The Navy initiated an independent effort in May 1992 to develop a program to meet the specific needs of Navy medical department executives which should satisfy Congress' demand that senior Navy Medical Department executives be adequately prepared to manage complex medical systems.

NPS developed a two-step needs assessment approach to identify the competencies required to effectively manage complex Navy medical systems. The needs assessment consisted of:

1. Semi-structured interviews were completed in July 1992 and provided the basis to identify the competencies that are perceived as important by executives currently holding positions of significant managerial responsibility in Navy medicine. Their input was utilized in developing a survey to asses the relative importance of the skill areas.

2. Survey questionnaires were sent to senior executives within the Navy Medical Department to obtain the recipients' views/beliefs concerning the competencies required to effectively manage Navy medical systems.

The questionnaires were structured so the respondents could provide what they felt was their current skill level for each managerial activity and what they felt was the required skill level for executives to function effectively in their managerial roles (see Appendix A). The survey questionnaire was mailed to 720 senior executives in Navy medicine, including: "all incumbent Commanding officers, Executive Officers, Officers-in-Charge, and Directors; Executive Officer billets; key health care executives in the operational forces and headquarters commands; specialty advisors; and medical department flag officers." [Ref. 2:p. 6] BUMED provided this listing from the prospective Commanding Officer/ Executive Officer screening list, key Command personnel listing, and specialty advisor lists with additional information obtained from the Bureau of Naval Personnel. Of the 720 mailed out on 14 November,1992,476 responses were received by 14 January 1993, which was the cut-off date to be included in this research. Thirteen of the 720 responses sent were returned as undeliverable. Consequently, the return rate for the survey was 67 percent.

John R. Morrison performed an initial analysis on the survey data in his masters thesis titled, "The Relationship

Between the Perceived Executive Management Capabilities of Senior Navy Medical Department Executives and Their Reported Managerial Requirements" published in June of 1993 [Ref. 5]. Morrison grouped the survey questions into eight major management categories listed below:

1. Financial/Resource Management
2. Program Planning and Evaluation
3. Decision Making/Problem Solving
4. Legal Issues
5. Operational Management Issues
6. Organizational Behavior
7. Personnel and Human Resources Management
8. Communications

The focus of Morrison's thesis was to provide an initial analysis of the survey responses and to identify any gaps, or deltas, between the current level of skill reported by the respondent and the required level of skill for their current position with respect to the respondents' corps, rank, and organizational position cohorts.

Utilizing the 21 data categories reported by Schwartz and Cox (1992), the NPS research team grouped the survey data into those same categories to make the data more useful. The 21 skill categories and the corresponding survey questions are presented in Appendix B.

The "Preliminary Analysis of Educational Needs for Navy Health Care Executives" [Ref. 2] provided the first

comprehensive look at the data generated by the survey. The purpose of this report as stated by the researchers was [Ref. 2:p. 3]:

1. To determine the requirements for each management skill area generated during the interviews. That is, how important do Medical Department personnel think these skills are for effective executive management? Are they all equally important? Are some more important that others? Further, are the skill areas congruent with those generated by the Schwartz and Cox (1992) research, excluding military readiness requirements? This objective addresses the broad, long-term consideration of what should be taught to future Navy health care executives.

2. To determine the need for education in each management skill area surveyed. This objective addresses both long- and short-term considerations. In the context of the design of the EME program, to what extent do Medical Department personnel need education in each of the skill areas? Is there a perceived need for more education in some areas as compared to others? In the context of short-term needs, these data can be used to guide the selection of modules for prototype testing. Where possible, choices can be made to elect to test a module from a "high need" area while still serving the primary goal of gathering information from on-site (MTF) testing.

3. To examine perceptions of how requirements and needs differ as a function of characteristics of the survey respondents. This report addresses corps, and position (principally positions within an MTF are considered for the present research), which are assumed to be primary considerations in designing an EME program. Rank is considered to a lesser extent. Some of the questions of interest include, do people from the Medical Corps (MC) attach different levels of importance to skill areas as compared to members of the Nurse Corps (NC)? Do members of the Medical Service Corps, Health Care Administration (MSC(HCA)) express need for differing types of education as compared to members of the Medical Service Corps, Allied Health (MSC(AH))? Do members of the Dental Corps (DC) express the same needs as others? Do perceptions differ as a function of rank or position? Other variables, for example, background in management education, will be examined in future reports. Clearly, if a program tailored to individual needs--one that recognizes previous

experience, educational background, etcetera--is to be designed, examination of these data is critical.

"The use of the survey allowed the NPS researchers to evaluate the relative importance of skill areas generated by the interviews, to inventory respondents' previous management experience and education, and to quantify the findings with a larger population of senior executives within Navy medicine." [Ref. 2:p. 4] The BUMED research team utilized the results of their analysis in tailoring the EME program to meet the perceived executive educational needs of the Navy Medical Department. The NPS team is now in the process of delivering these educational modules to individual MTFs.

B. OBJECTIVES

Morrison's thesis provided an initial analysis of the survey responses necessary to complete the first phase needs assessment of perceived skills required for effective and efficient functioning as a health care executive. The NPS faculty team has published the "needs assessment" [Ref. 2] and developed prototype educational modules based on their results. In an effort to build on these findings, this thesis will examine the effects of differing levels of education and experience of the Medical Service Corps Health Care Administrator (HCA) survey respondents with respect to perceptions of their management capabilities by answering the following questions:

1. How does educational level explain the differences between the perceived current and required managerial capabilities reported by the Medical Service Corps Health Care Administrator respondents?

2. How does managerial experience explain the differences between the perceived current and required managerial capabilities reported by the Medical Service Corps Health Care Administrator respondents?

C. METHODOLOGY

One of the important areas addressed in the "needs assessment" [Ref. 2] was the "management skill gaps." These skill gaps were determined by subtracting the current skill level from the required skill level perceived by each individual. The procedure created deltas that belong to one of three different categories. A negative delta represents an area where the respondent felt his or her skills exceeded the required level. A delta of zero means current skills were equal to those required. A positive delta indicated areas where the respondent felt his or her current level of skill did not meet the required skill level for the task.

The analysis of the skill gaps [Ref. 2] showed that HCAs have the fewest number of people reporting positive skill gaps as compared to respondents from the Medical Corps (MC), Nurse Corps (NC), Medical Service Corps Allied Health specialists (AH), and Dental Corps (DC). Figure 1 shows the

percentage of respondents within each corps that perceive management skill gaps. Further, "The HCA respondents rate their current skill levels higher than other groups in 13 of 21 categories. Additionally, in 8 of these 13 categories, the ratings range from 10 to 25 percentage points higher than the next closest group. Given the management-oriented training and education necessary for the HCA profession, and a management career track commencing at entry level, it stands to reason that this group probably perceives less of a need for education in management than others." [Ref 2:pp. 18,19] This thesis examines the HCA data in an attempt to isolate educational variables and levels of management experience that seem to have the biggest effect on perceptions. This data will enable NPS researchers to tailor the EME program to meet the needs of the Navy Medical Department based on existing education and training programs.

II. BACKGROUND AND LITERATURE REVIEW

The U.S. Navy Medical Department is composed of four distinct officer designator groups: the Medical Corps (MC), Dental Corps (DC), Nurse Corps (NC), and the Medical Service Corps (MSC). Additionally, the MSC is divided into an administrative branch known as the Health Care Administrators (HCA) and a clinician branch known as the Allied Health (AH) providers. Regardless of corps affiliation and professional alliance, all medical department officers have in common a dual obligation: their role as health care providers and their responsibilities as naval officers [Ref. 6:p. 7].

"The evolution of health care management in the 20th century has been from physician/nurse to health administration generalists to management specialist to political leader." [Ref. 7:p. 733] While executive positions in Navy health care are held by each of the aforementioned Corps specialties, the NPS study described earlier indicated that HCA specialists seem to be the most confident in their management capabilities in health care executive roles [Ref. 2]. Managerial abilities of the HCA community are the focus of this thesis.

This chapter looks at the background and development of the Medical Service Corps with emphasis on the HCA specialists as well as the background and development of education programs and career management for health care administrators.

Additionally, a discussion of the development of education and training in the U. S. Navy medical department is included to indicate the Navy's continually developing commitment to the education of it's medical department officers.

A. BACKGROUND AND DEVELOPMENT OF THE MEDICAL SERVICE CORPS

The demobilization following World War II created a real concern within the Navy Medical Department that they would be left without a permanent base of administrative and allied health professional experience. As one officer phrased it some years later, "The need for commissioned officers who were skilled (medical) administrators had been well documented in the 'war to end all wars' and the experience gained early in World War II demonstrated the same need for officers that were equally skilled in the practice of sciences allied to medicine." [Ref. 6:p. 89] The Medical Service Corps was formally established by law in 1947 and included the following sections: Medical Supply and Administration, Pharmacy, Optometry, and Medical Allied Sciences. Of the 252 original Medical Service Corps officers, about 80 percent were medical supply and administration; they ranked from ensign through lieutenant commander and all had prior military service.

The Medical Service Corps has grown today to approximately 2,800 officers on active duty in the grades of ensign through rear admiral. Professional health care administrators account for about 50 percent of the Medical

Service Corps (see Table I) with about 70 percent having had some prior military service before entering the medical service corps. Additionally, the Health Care Administration branch includes 12 subspecialties (see Table II). The definitions of the abbreviations in the "description" column are presented in Appendix C.

Table I
MEDICAL SERVICE CORPS POPULATION DISTRIBUTION

MSC BRANCH	FREQUENCY	PERCENT
HCA	1394	49
AH	1454	51
TOTAL	2848	100

Source: BUMIS, MED-5123, end May 93

B. BACKGROUND AND DEVELOPMENT OF HEALTH CARE ADMINISTRATION EDUCATION PROGRAMS

This section provides a brief background of the development of health care administration education programs as well as an overview of the management curriculum development process intended by the developers to increase the effectiveness of health care executives. This management curriculum development provides insight into the areas where the health care administrators should be more knowledgeable than their medical department counterparts.

Table II
MEDICAL SERVICE CORPS, HEALTH CARE ADMINISTRATORS SPECIALTY INVENTORY

SPECIALTY CODE	DESCRIPTION	INVENTORY	PERCENT
0031	Financial Mgt	145	10.4
0032	Mat'l Log Mgt	26	1.9
0033	MPTA	32	2.3
0037	Educ/Trng Mgt	14	1.0
0042	Ops Research	4	0.3
0095	Computer Tech	15	1.1
1800	Hlth Care Adm	766	54.9
1801	Pt Admin	142	10.2
1802	Med Logistics	85	6.1
1803	Med Data Svcs	35	2.5
1804	Med Const Lia	24	1.7
1805	Plans/Ops/Med Int	106	7.6
	TOTAL HCA	1394	100

Source: BUMIS, MED-5123, end May 93

1. The Emergence of Health Care Management Programs

Institutional management and health care prior to World War II was predominantly an extension of clinical responsibility, with a nurse or a physician assuming administrative chores [Ref 7:p. 724]. The predominant theory of management of these times was that "leaders were born, not trained." Lacking any formal training schools, the leaders of this era were, for the most part, self-taught health care providers given this position of authority simply by their status within their organizations.

The University of Chicago introduced the professional education of hospital administrators in the 1930s. "Initially empirical in the transmission of lessons learned from experience, or as we now call it *grounded theory*, a profession with a body of knowledge began to emerge." [Ref. 7:p. 724] Early founding directors of graduate programs in hospital administration such as Arthur Bachmeyer and Ray Brown [Ref. 8] emphasized a practice orientation with most programs maintaining a focus on hospital processes and human relations skills [Ref. 9].

This emphasis was prevalent into the 1960s. Subsequently, the curricular emphasis shifted to research-based rigor with a focus on business-oriented functional specialties such as financial management and operations research [Ref. 9]. "During the turbulent 1980s, curricular focus on analytical and quantitative skills was strengthened by governmental fascination with free-market competition in health care and a general embracing of the business model for hospital operations." [Ref. 1:p. 183] The question began to emerge as to whether the functionally specialized and analytically rigorous Masters of Business Administration (MBA) should replace the Masters of Health Administration (MHA) as the primary preparatory degree suitable for health care executives.

2. Development of the Health Care Management Curriculum: MBA versus MHA

Over the past ten years, there has been substantial criticism of management education programs in the United States. [Ref. 10] Graduates of management programs seem to be lacking in their capacity to deal with the uncertainty and constant change of organizational life. William Obrien, president of Hanover Insurance, eloquently addresses this issue, in Peter Senge's *The Fifth Discipline* [Ref. 11]:

> [We strive] for organizational models that are more congruent with human nature. When the industrial age began, people worked six days a week to earn enough for food and shelter. Today, most of us have these handled by Tuesday afternoon. Our traditional hierarchical organizations are not designed to provide for people's higher order needs [for] self-respect and self-actualization. The ferment in management will continue until organizations begin to address these needs, for all employees. They must give up the old dogma of planning, organizing and controlling, [and realize] the almost sacred responsibility for the lives of so many people. [Managers' fundamental task is] providing the enabling conditions for people to lead the most enriching lives they can.

There is overwhelming consensus that business-related analytical skills and functional abilities remain critically important ingredients for success in managing health care organizations. However, there is strong evidence of concern among practitioners and the academic community that an exclusive focus on quantitative analysis, functional specialization, and the calculative rationality of the "bottom line" may not adequately prepare graduates to be the visionary, adaptive, and collaborative team-builders who will

be needed to lead health care organizations of the future. This concern reflects an increasing recognition of the importance of interpersonal, communication, and integrative skills as essential for effective leadership in health care organizations, particularly in an era of increasingly complex relationships with medical staffs and other critical organizational constituencies [Ref. 1:p. 183].

3. The Future of Health Care Management Programs

Although there has been a considerable amount of interest shown in the area of forecasting the future of health care and in estimating the executive skills needed to cope with increasingly changing organizational demands, relatively little empirical research combining these two topics has been reported in the literature. In 1990, Eubanks conducted a cross-sectional study of hospital chief executive officers (CEOs) designed to assess the skills needed for future success. The respondents ranked strategy formulation/planning highest in importance, followed by finance, negotiation/consensus-building, and human resource development [Ref 12].

In a similar study, Reagon reported that a practitioner-based assessment of baccalaureate-level skills and knowledge needs ranked interpersonal skills, knowledge of the health care sector, and financial management among the most important [Ref 13].

In a Delphi study cosponsored by Arthur Andersen and Company and the American College of Healthcare Executives (1991), Weil and Herman sought to forecast trends in delivery, financing, and utilization of health care through 1996 which involved over 2600 physicians, hospital executives, board chairs, and purchasers. This study was characterized by strong predictions of heightened volatility in relations between hospitals and medical staffs. The cause of this volatility was thought to arise from continued pressures for cost control, increasing demands for provider disclosure of adverse outcomes and other performance indicators, and changes in physician payment driven by implementation of resource-based relative value scales [Ref. 14].

In the graduate education arena, the debate seems to be centered around the differences and/or relevance of the type of graduate program that best prepares students to fill these health care executive roles. Graduate programs are expected to produce persons who are both knowledgeable about the field in which they plan to be employed and skilled in carrying out the many tasks associated with successful performance in their future roles. The literature reveals criticism towards these professional schools for ignoring the real world skills needed for survival and satisfactory role performance [Ref. 15]. One viewpoint of a health administration practitioner is reflected in Nurkin's observation that "educators and practitioners have grown

remote" and need "to establish [communication] linkages between education and practice" [Ref. 16]. Looking at the role of the university as a whole, Lynton suggests that professional schools may have overemphasized the value of cognitive rationality and must redirect their efforts to "broaden [their] approach to provide competence rather than mere knowledge and to stimulate occupational and civic effectiveness and not only analytical capability" [Ref. 17:p. 4]. Additionally, he recognized the need for further linkages between theoretical analysis and practical experience with emphasis on the interpersonal, affective, and other noncognitive dimensions of professional life. Weil urges "both faculty and students to be more practice oriented and to develop more opportunities for students to use and apply classroom learning realistic settings." [Ref. 15:p. 8]

Both graduate health administration programs and MBA programs have received criticism for failing to bridge the gap between theory and practice [Ref. 15]. Myrsiades and Walker, in their observation of graduate health administration programs, suggest that:

> Graduate health administration programs, it appears, have adequately presented the framework of theory, the cognitive elements of professional education, the techniques of analysis, and the methodologies of their several disciplines. It is the development of "real world" skills and the practical integration of academic knowledge and those skills that has often been left to the uncertainties of the administrative residency, internship, or clerkship experience. [Ref. 15:p. 8]

While receiving praises for its effectiveness in cognitive

learning, the MBA program has been criticized for its lack of relevance. Rehder and Porter observe that "the MBA specialists produced in the last twenty-five years are, it seems, no longer what American business needs. A new kind of MBA program with a distinctly humanistic and creative perspective would emphasize the non-cognitive qualities that MBAs need to become leaders" [Ref. 17:p. 52].

The evident theme prevalent in the health care management literature is the dissatisfaction with the "leaders" that are being produced by management education programs such as the MBA and the MHA. While there have been considerable advancements in the education of health care executives, there still seems to be a missing link that would provide the "non-cognitive qualities" [Ref. 17:p. 52] necessary to become effective leaders. This missing link may not be available through conventional management education degree programs. Continuing education through short courses and seminars as well as the good old-fashioned "school of hard knocks" may be the only answers to bridging this educational gap. These issues will be further explored in the following section.

C. EDUCATION AND TRAINING IN THE U. S. NAVY MEDICAL DEPARTMENT

The three basic career development processes necessary for an officer to develop well-rounded qualifications are

education, training, and work experience [Ref. 6:p. 41]. Education provides the opportunity to enhance knowledge and skill with the emphasis on intellectual rather than technical orientation. As a complement to education, training is more specific to the problem or job and tends to be more technically oriented. Work experience provides the opportunity for the officer to apply the knowledge and skills acquired through education and training.

Oglesby encourages health care executives to "continually develop or stretch" through the establishment of a set of activities which will allow for this development [Ref. 18:p. 18]. Burke suggests that "renewal is a continuous, lifelong process requiring constant learning. Individual executives would do well to develop a framework for renewal in their careers and organizations." [Ref. 18:p. 13] This need for the "lifelong process" is eloquently expressed in the U. S. Navy Medical Department Officer's Career Guide:

> Education and training can and should be a lifelong process. A portion of each Medical Department officer's career development should focus on education and training through a combination of individual studies, short courses, seminars, conferences, service college courses, and postgraduate education, either Navy-sponsored or self-funded. Continual learning is essential to keeping current both as a naval officer and a health care professional.

The U. S. Navy Medical Department Officer Career Guide (Ref. 6) provides the Medical Service Corps with specific career guidance concerning education and training. This guidance includes the provision of general career planning

guidelines that help individual officers to map out a career strategy to include a wide diversification of management positions. Appendix D outlines the basic principles of career development and presents developmental objectives for the officer career phases. Appendix E is a graphical presentation of the career planning chart for MSC officers. The educational opportunities appropriate for the different career phases are presented in Appendix F.

The educational opportunities available to the Navy Medical Department seem to be endless. These opportunities include postgraduate education as well as service short courses. Appendix G lists the postgraduate educational opportunities available to the Medical Department. Additional information concerning the course content is presented in Appendix H. A list of the service short courses is presented in Appendix I with their descriptions in Appendix J.

Evident here is the importance being placed on continuing education for officers in the Navy Medical Department. However, due to the clinical responsibilities of the MC, NC, DC, and AH specialists, the pursuit of these educational opportunities is not always an option for the individuals in these corps. The HCAs, on the other hand, are placed into management positions virtually upon being commissioned into the Navy. And, without the clinical responsibilities of the other corps, HCAs have the time and are highly encouraged to pursue the many educational opportunities which are available.

III. METHODOLOGY

This study examines the effects of education attainment and management experience of senior Navy medical department executives in an attempt to isolate those variables that affect their perceived management capabilities. Data from a survey administered by the Naval Postgraduate School were analyzed to address these issues across Navy medical department corps with emphasis on the Medical Service Corps Health Care Administrators (HCA). The hypothesis under consideration in this thesis is that skill levels reported by HCAs, which were higher than those reported by members of the other corps, were due to educational attainment and management experience.

This thesis addresses the following questions:

1. How does educational level explain the differences between the perceived current and required managerial capabilities reported by the Medical Service Corps Health Care Administrator respondents?

2. How does managerial experience explain the differences between the perceived current and required managerial capabilities reported by the Medical Service Corps Health Care Administrator respondents?

A. SURVEY INSTRUMENT

The background and development of the survey questionnaire (Appendix A) is discussed in Chapter I of this thesis. The

questionnaire is divided into two sections: (1) Part 1 which is divided into eight major management categories with a total of sixty questions and a section that asks the respondents to rate the management education requirements for each of the major categories; and (2) Part 2 which seeks the demographics of the respondents as well as their management education/training background.

1. **Managing a Military Medical Treatment Facility - Part 1**

Part one of the survey instrument was designed to measure three aspects of the respondent's perceptions of executive management in Navy medicine (as quoted from ref. 5, p. 34):

> 1. Their current level of managerial skills for each of the sixty managerial activities questions contained in the questionnaire.
>
> 2. Their perception of the required level of skill for each of the sixty management activities an executive must have to function effectively in the respondent's current role in Navy Medicine.
>
> 3. Given the scenario of a management education program being developed for executives in their current managerial role, the respondent was requested to indicate the level of need they would attach to each of the major managerial activity groups. However, while the term "priority" is used to describe the assigned level of need, it should not be inferred that the eight managerial activity groups are being ranked against each other. The intent was for each activity group to receive a rating indicating the level of educational need within that group.

The sixty managerial activity questions were structured so the respondents could provide what they

perceived to be their current and required level of skill for each of the questions on a rating scale of "0" to "10". A rating of "0" represents no knowledge or ability in the area, "1" to "3" represents a low level, "4" to "7" represents a moderate level, and "8" to "10" represents a high level.

This thesis focuses on the current and required skills of the respondents to determine the skill gaps. Previous studies have isolated the positive skill gaps of the respondents in determining the education "needs" areas. This thesis isolates the negative skill gaps of the respondents that would indicate a higher perceived current skill level than what is required for the management area.

2. Managing a Military Medical Treatment Facility - Part II

Part II of the questionnaire was designed to provide background information of the individual respondents. The first subsection of part II provides the demographic data for the respondents including basic individual and job experience information. The second subsection, "Management Education/ Training Background," provides management education and training data for the respondents including traditional undergraduate and postgraduate programs, non-traditional civilian programs, and various short courses provided by the military. Professional organization affiliation was also requested, however these data were not used in this thesis.

B. SURVEY RESPONDENTS

The survey questionnaire was mailed out to 720 senior Navy health care executives on 14 November 1992 and the last questionnaires used in this analysis were returned on 14 January 1993. A total of 476 responses were received. Thirteen of the 720 questionnaires sent out were returned as "undeliverable," which resulted in using 707 vice the original count of 720 for purposes of computing the return rate of 67 percent. BUMED provided a listing of senior health care executives that were targeted for this survey. The recipients of the survey include: all incumbent Commanding Officers, Executive Officers, Officers-in-Charge, and Directors; all officers currently being screened for Commanding Officer and Executive Officer billets; key health care executives in the operational forces and headquarters commands; specialty advisors; and medical department flag officers.

C. PROCEDURES

Frequency analyses were utilized for all data fields to extract the usable data in this thesis. This procedure eliminated any entries without complete data. Thus, the total sample size varied slightly from the original 476 survey respondents on several of the questions as well as the demographic descriptors. For all statistical work, the Statistical Application System (SAS) version 5.18 on the Naval Postgraduate School's mainframe computer was utilized.

The respondents used for this analysis represented virtually every executive position in Navy Medicine. The proportions of surveys that were received tracked very closely with the proportions that were sent out, which validates the conclusion that this analysis is based on a representative sample of the population being considered.

1. Perception of Management Capability By Corps

Frequency analyses were performed across all 60 questions and broken out by corps. The sample size for this breakdown varies slightly among each of the statistical procedures due to inconsistent responses provided to certain questions. The results of this frequency analysis verified the study performed by the NPS faculty [Ref. 2], which revealed that the HCAs have the fewest number of people reporting that the required skills for management skill areas exceeded their current skills (positive management skill gaps). If the skill gap created by the answers indicated a negative delta or a delta of "0," the response was grouped into a category of "good" deltas. These individuals felt their current level of skill was greater than or equal to that required for the management area.

In conducting the analysis, the average percentages of "good" deltas were evaluated across the 21 management categories to examine relationships with corps affiliation.

2. Perception of Management Capability by Traditional Undergraduate/Graduate Management Programs

This analysis first establishes the management background of the respondents by performing cross-tabulations on the "Management Education/Training Background" responses as a function of corps (HCA, AH, MC, DC, and NC). The HCA cohort is then isolated to determine the effects of having some type of management degree on the percentages of "good" deltas. The management degrees that are included in the analysis include the "traditional graduate/undergraduate management degrees" listed in the demographic section of Appendix A, i.e., Bachelors in Business Administration (BBA), Bachelors of Science in Hospital Administration (BSHCA), Masters in Business Administration (MBA), Masters of Science in Health Care Administration (MHA), and a category in which respondents reported to having some type of management degree other than those mentioned (OTHERG).

The HCA respondents were separated in two cohorts for this analysis. Those individuals reporting any of the aforementioned "tradition graduate/undergraduate management degrees" were grouped into a "some" category and those individuals who had no management degrees grouped into a "none" category. These categories were examined to establish trends exhibited by the "some" cohort.

3. Perception of Management Capability by Service Short Course

This analysis was conducted isolating the HCA cohort. One of the important areas developed in the literature is the importance of continuing education for health care professionals. The number of short courses taken by the respondents indicates a commitment by the respondents to individual professional development through service educational opportunities.

The overall population was first analyzed by medical community to see if there is any dominance of short course attendance. The HCA cohort was then isolated to determine the effects of the number of short courses attended on the "good" deltas. Respondents were grouped into three categories for analysis; 0 to 2 courses taken, 3 to 4 courses taken, and over 5 courses taken. These categories were then examined across the 21 management categories to establish direct relationships between number of short courses taken and the percentages of "good" deltas.

4. Perception of Management Education by Management Experience

A final analysis was conducted to isolate variables that reflect the HCA respondents' previous management experience while in the Navy. The variables used for this analysis include "Years in a Management Position" (YRSMGPOS), "Number of Management Positions" (MGRPOS), "Months as a

Commanding Officer (CO))" (MOSCO), and "Months as an Executive Officer (XO))" (MOSXO). Respondents provided the data for this analysis in the demographic section of the survey (Part II). Each of these variables were coded into categories based on the distribution of the responses. These categories are developed in the following chapter.

IV. RESULTS AND DISCUSSION

The results published by Crawford, et al. [Ref. 2] indicated that the HCA respondents reported fewer skill gaps as a group when compared to the other groups (i.e., MC, NC, DC, and AH). It was suggested that "given the management oriented training and education necessary for the HCA profession, and a management career track commencing at entry level, it stands to reason that this group probably perceives less of a need for education in management than others." [Ref. 2:p. 19].

This chapter examines the education and management background variables introduced in Part II of the survey (Appendix A) for the purpose of identifying the variables relating to these "negative" or "good" deltas, which are more prevalent in the HCA responses. This chapter begins with an overview of the demographics of the HCA respondents. An overview of the entire population of respondents is provided in Reference 5. Subsequent sections present the analysis of the "good" deltas produced by the survey respondents with emphasis on the management education and experience variables discussed in the previous chapter.

A. DEMOGRAPHICS AND NON-IDENTIFYING PERSONAL DATA

While the following data provide a general description of the survey population, the information is self reported, which may cause inconsistencies and errors that are not identifiable.

1. Overall Breakdown by Medical Community

Table III displays the population data utilized in this thesis broken down by medical community. These data were generated by frequency distribution procedures performed utilizing the Statistical Analysis Software (SAS) package on the mainframe computer at NPS. These data may differ slightly from the data used in the original analysis [Ref. 2] due to procedural differences. Community subspecialty codes were used to separate the Medical Service Corps (MSC) officers into Health Care Administrators (HCA) and Allied Health (AH)

Table III
SURVEY RESPONDENTS BY MEDICAL COMMUNITY

CORPS	FREQUENCY	PERCENT
MEDICAL	154	36.3
DENTAL	97	22.9
MEDICAL SERVICE - HCA	93	21.9
MEDICAL SERVICE - AH	30	7.1
NURSE	50	11.8

segments. When this procedure was introduced in the data, forty-one MSCs previously identified as responding to the survey were dropped from the analysis because of failure to provide a subspecialty code. Additionally, five respondents included in an "other" category were excluded because of the small sample size. The final data size for this analysis was 422.

2. Rank

Table IV illustrates the breakdown of the HCA group by rank. Consistent with the targeted population of "senior" Navy Medical Department executives, 79.5 percent of the HCA respondents hold the rank of Commander and above with the Captain cohort representing 46.2 percent of the respondents.

Table IV
MSC (HCA) RESPONDENTS BY RANK

RANK	FREQUENCY	PERCENT
CAPTAIN (0-6)	43	46.2
COMMANDER (0-5)	31	33.3
LIEUTENANT COMMANDER (0-4)	17	18.3
LIEUTENANT (0-3)	2	2.2
TOTAL	93	100

3. Organizational Position

Table V shows the organizational position occupied by the HCA respondents at the time of the survey. Because of the large number of different organizational positions reported,

Table V
MSC (HCA) RESPONDENTS BY POSITION

Position	Frequency	Percent
Commanding Officer < 12	6	6.5
Commanding Officer > 12	11	11.8
Executive Officer < 12	10	10.8
Executive Officer > 12	10	10.8
Director	40	43
Department Head	7	7.5
Other	7	7.5
"."	2	2.2

N=93

the seven cohorts displayed in Table V were constructed by condensing survey responses into like categories. The Commanding Officer and Executive Officer categories are expressed in terms of months, i.e., "Commanding Officer < 12" would be a respondent that was in a Commanding Officer billet for less than twelve months. Appendix K provides the breakdown of the responses placed into each cohort.

B. PERCEPTION OF MANAGEMENT CAPABILITY BY MEDICAL COMMUNITY

Appendix L presents the table of negative and zero deltas that represent the "good" deltas (i.e., deltas where the current skill level exceeds that required for a management skill area) for each of the 60 questions across each medical community. The numbers reported in the table represent percentages of the population that reported "good" deltas for each question. The HCA cohort reported a higher number of "good" deltas in 16 of the 21 management categories. These findings are somewhat consistent with those reported in Reference 2 that noted that the HCA respondents rated their current skill levels higher than the other groups in 13 of the 21 categories. The number of categories with "good" deltas was slightly higher than the findings in Reference 2 because the "good" deltas included zero deltas as well as negative deltas. The findings in Reference 2 included only negative deltas as indicators that the respondents' current skill level was higher than the perceived required skill level for the particular management category. The remainder of this chapter explores the management-oriented training and education as well as the management career track of the HCAs to determine their effect on the perceived management capabilities of the survey respondents.

C. PERCEPTION OF MANAGEMENT CAPABILITY BY TRADITIONAL UNDERGRADUATE/GRADUATE MANAGEMENT PROGRAMS

1. Management Education/Training Background by Medical Community

Appendix M presents the frequencies of management education and training programs by medical community. Included here are a variety of education and training experiences that were reported in the management education/training background section of Part II of the survey (Appendix A). The cohort sizes for this analysis were similar to that reported in Table III with the following exceptions: MSC (AH) - n=30, and MC - n=154, and overall n=424. The sample size differences are caused by reporting inconsistencies by the respondents.

In analyzing corps trends, it is immediately evident that the HCA cohort attends the majority of the reported "traditional undergraduate/graduate management" programs as illustrated in Table VI. The programs included in this section are the Masters in Hospital Administration (MHA), Masters in Public Health (MPH), Masters in Business Administration (MBA), Bachelors of Science in Health Care Administration (BSHCA), Bachelors in Business Administration (BBA), and an "other" category where the respondents listed some other type of graduate/undergraduate management program other than those listed. The HCA cohort is responsible for over 80 percent of 4 out of the 6 programs listed.

Table VI
TRADITIONAL UNDERGRADUATE/GRADUATE MANAGEMENT PROGRAMS REPORTED BY HCA RESPONDENTS AS A PERCENT OF TOTAL

PROGRAM	HCA FREQUENCY	PERCENT OF OVERALL DEGREES
MHA	21	95.5
MPH	4	9.8
MBA	23	82.1
BS (HCA)	20	80
BBA	3	100
OTHER	26	49.1
TOTAL	97	56.4

Additionally, 56.4 percent of the traditional undergraduate/ graduate degrees reported by the overall population are held by HCA respondents.

2. Survey Responses by "Some" Versus "None" Traditional Undergraduate/Graduate Degree

This analysis is performed on the HCA cohort to examine the effects of having some type of management education on the "good" deltas. For this analysis, the "some" cohort includes anyone with any of the "traditional undergraduate/graduate management degrees" discussed in the previous section.

Table VII presents the total survey population broken down by medical community for the "some" versus "none" management education categories. As displayed in the table, the HCA cohort represents 53.03 percent of the 132 total

Table VII
TABLE OF OVERALL RESPONSES FOR "SOME" MANAGEMENT EDUCATION VERSUS "NONE" BY MEDICAL COMMUNITY

CORPS	"SOME"	"NONE"	TOTAL	PERCENT OF TOTAL
HCA	70	23	93	53.03
AH	12	18	30	9.09
MC	34	120	154	25.76
NC	9	41	50	6.82
DC	7	90	97	5.30
TOTAL	132	292	424	31.13

respondents that indicated having some type of management degree. The common suggestion throughout this thesis is that the higher percentage of "good" deltas reported by the HCA cohort was due to their management education and experience backgrounds. This analysis determines the effects of management education on the responses.

The data for this analysis are presented in Appendix N. The results of this analysis reveal that the cohort that reported having "none" management education reported higher percentages of "good" deltas in 18 of the 21 management categories as displayed in Table VIII. Those individuals who reported having "some" type of management degree reported higher percentages of "good" deltas in productivity/outcomes management, labor/management relations, and materials management.

Table VIII
PERCENT OF HCA RESPONDENTS REPORTING "GOOD" SKILL GAPS AS A FUNCTION OF TRADITIONAL MANAGEMENT EDUCATION

MANAGEMENT CATEGORY	"SOME" MANAGEMENT EDUCATION	"NONE" MANAGEMENT EDUCATION
Decision Making/Problem Solving	52.9	64.4
Communications	45.9	57.5
Quantitative Analysis	40.0	41.3
Information Management	38.6	41.3
Managing Quality	42.9	43.5
Strategic Planning	39.3	47.8
Systems Perspective	62.7	71.0
Financial Management	49.7	47.8
Personnel Management	57.4	62.3
Materials Management	56.7	59.4
Productivity/Outcomes Management	48.6	34.8
Facilities Management	51.0	56.5
Group Dynamics	48.9	71.7
Individual Behavior	46.4	70.7
Organizational Design	47.1	67.4
Labor/Management Relations	45.7	43.5
Conflict Resolution	37.1	60.9
Managing Change/Technology	42.9	52.2
Alternative Health Care Delivery Systems	34.3	39.1
Legal Issues	55.0	57.2
Ethics	55.7	65.2

The findings from this analysis indicate that having some type of management degree doesn't seem to affect the perceptions of managerial competence among the HCA cohort. An additional analysis of the "some" versus "none" cohorts with respect to the managerial experience variables discussed in Chapter III reveals that the "none" cohort has more management experience as a commanding officer (CO) and as an executive officer (XO) as displayed in Table IX. It is expected that this dominance in CO/XO experience may account for the higher percentages of "good" deltas for the "none" cohort. This finding is further explored in the following sections.

Table IX
TABLE OF MANAGEMENT EXPERIENCE VARIABLES FOR "SOME" VERSUS "NONE" MANAGEMENT EDUCATION IN HCA RESPONDENTS

MANAGEMENT EXPERIENCE VARIABLE	"NONE" COHORT	"SOME COHORT
MONTHS AS A COMMANDING OFFICER	16.15	8.28
MONTHS AS AN EXECUTIVE OFFICER	19.28	14.62
NUMBER OF MANAGEMENT POSITIONS	6.13	6.62
YEARS IN A MANAGEMENT POSITION	14.43	15.66

D. PERCEPTION OF MANAGEMENT CAPABILITY BY SERVICE SHORT COURSE

The service short courses used in this analysis and the abbreviations used in Appendix M are presented in Table X. Appendix M provides the frequencies, by medical community, of the short courses taken by the respondents used in this

Table X
SERVICE SHORT COURSES WITH ABBREVIATIONS

SHORT COURSE	ABBREVIATION
Prospective Commanding Officer/Executive Officer	PCOXO
Interagency Institute for Federal Health Care Executives	IIFHCE
Leader Development (Command)	COMMAND
Leader Development (Senior)	SENIOR
Leader Development (Intermediate)	INTERMEDIATE
Strategic Medical Readiness and Contingency Course	STRAT MRC
Management Development Course	MAN DEV
Financial and Material Management	FIN MAT MAN
Patient Services Administration	PAT SVC ADMIN

analysis. There are no evident trends across medical communities that would indicate that one corps had dominated attendance at one of the courses except in the financial and materials management and the patient services administration courses, which are normally offered exclusively to HCAs.

The short courses listed in Table X are grouped together to analyze the impact of the "number of short courses attended" on the percentages of "good" deltas reported by the HCA cohort. For purposes of analysis, the short courses attended are added together for each HCA respondent and the total courses taken is used to group the respondents into the categories presented in Table XI.

Those respondents who indicated having 5 or more short courses reported higher percentages of "good" deltas in all 21

Table XI
CATEGORIES FOR NUMBER OF SHORT COURSES TAKEN FOR HCA RESPONDENTS

COURSES	FREQUENCY	PERCENT OF TOTAL
0 TO 2	27	29
3 OR 4	42	45
5 OR MORE	24	26
TOTAL	93	100

categories as compared to the other two cohorts. The results are displayed in Table XII. The HCA respondents seem to be more confident of their abilities after they have completed 5 or more short courses. The detailed results for each of the 60 questions are presented in Appendix O.

E. PERCEPTION OF MANAGEMENT CAPABILITY BY MANAGEMENT EXPERIENCE

In order to establish the effects of management experience on the perceptions of management capabilities of the respondents, the following variables were isolated: YRSMGPOS, MGRPOS, MOSCO, and MOSXO. These variables are discussed in Chapter III and represent Years in a Management Position, Number of Management Positions, Months as a Commanding Officer, and Months as an Executive Officer, respectively. Table IX in Section C of this chapter suggested that the higher commanding officer/executive officer experience reported by the cohort with "none" management education may have been the cause of the higher percentages of "good" deltas

Table XII
PERCENTAGES OF HCA RESPONDENTS REPORTING "GOOD" SKILL GAPS FOR NUMBERS OF SHORT COURSES TAKEN

MANAGEMENT CATEGORY	0 TO 2	3 TO 4	5 OR MORE
Decision Making/Problem Solving	64.4	43.8	66.7
Communications	50.6	40.9	60.6
Quantitative Analysis	50.0	27.4	52.1
Information Management	37.0	38.1	43.8
Managing Quality	33.3	40.5	58.3
Strategic Planning	42.6	32.1	56.3
Systems Perspective	66.7	55.2	79.2
Financial Management	55.6	38.1	60.0
Personnel Management	59.3	48.4	76.0
Materials Management	59.3	48.4	70.8
Productivity/Outcomes Management	40.7	33.3	70.8
Facilities Management	55.6	39.7	70.8
Group Dynamics	57.4	47.6	63.5
Individual Behavior	55.6	44.6	62.5
Organizational Design	50.0	41.7	72.9
Labor/Management Relations	44.4	35.7	62.5
Conflict Resolution	40.7	35.7	58.3
Managing Change/Technology	44.4	38.1	58.3
Alternative Health Care Delivery Systems	44.4	23.8	45.8
Legal Issues	53.1	52.4	63.9
Ethics	63.0	50.0	66.7

reported by that cohort in that analysis. This analysis will explore the relationship of these management experience variables on the HCA cohort.

Table XIII shows the means for the management experience variables across each of the medical communities. The averages for the HCA cohort are higher than the overall averages in each of the four categories. Furthermore, the HCA cohort holds a distinct advantage in the YRSMGPOS and MGRPOS categories.

Table XIII
TABLE OF MANAGEMENT EXPERIENCE VARIABLES AS A FUNCTION OF MEDICAL COMMUNITY

VARIABLE	HCA	AH	MC	NC	DC	AVERAGE
YRSMGPOS	15.4	9.2	5.8	9.7	5.7	9.2
MGRPOS	6.5	3.1	2.4	4.3	2.6	3.8
MOSCO	10.1	10.3	3.1	6.6	13.5	9.36
MOSXO	15.7	9.3	2.6	6.7	17.6	11.1

1. Years in a Management Position

Table XIV displays the distribution for "years in a management position" for the HCA community. Appendix P presents the comprehensive data for the HCA cohort across the 60 questions.

The data in Table IV indicate that 79.5 percent of the HCA cohort held the rank of 0-5 or above; however, the data in Table XIV indicate that only 45 percent of the HCA cohort report having 16 or more years in a management position. Given the fact that it would take at least 16 years of service as an officer for an HCA to reach the rank of 0-5, these data

Table XIV
YEARS SPENT IN A MANAGEMENT POSITION FOR HCA COHORT

YRSMGPOS	FREQUENCY	PERCENT OF TOTAL
0 TO 10	22	24
10.5 TO 15	29	31
16 TO 20	25	27
OVER 20	17	18
TOTAL	93	100

indicate that the more senior HCA personnel don't consider all of their career to have been in management positions. This finding may have been due to the wording of the question that inquired about "years in a managerial position" and "number of managerial positions." For these questions, "managerial" is defined as "50% of time involved in managerial (non-clinical) tasks." This finding will be further explored in the following section to see if this was due to misunderstanding of the question.

Table XV displays only the management categories that showed direct relationships between YRSMGPOS and the percentages of "good" deltas. All of the categories are shown in Appendix P. The largest differences across the "years in a management position" occur in financial management and labor/management relations.

For the financial management category, the "over 20" cohort reports the highest percentages of "good" deltas in questions 1 through 3, of the category, which deal with

Table XV
TABLE OF MANAGEMENT CATEGORIES EXHIBITING DIRECT RELATIONSHIPS BETWEEN YRSMGPOS AND THE PERCENTAGE OF "GOOD" DELTAS FOR HCA RESPONDENTS

MANAGEMENT CATEGORY	0 TO 10	10.5 TO 15	16 TO 20	OVER 20
Managing Quality	36.4	41.4	44.0	50.0
Strategic Planning	31.8	41.4	44.0	50.0
Financial Management	34.5	41.4	56.0	58.0
Personnel Management	50.0	55.2	64.8	66.7
Materials Management	42.4	50.6	68.0	72.2
Productivity/ Outcomes Management	27.3	41.4	56.0	58.8
Facilities Management	36.4	50.6	61.3	62.7
Labor/ Management Relations	22.7	48.3	52.0	58.8
Managing Change/ Technology	36.4	44.8	48.0	52.9

financial statements, funding sources and limitations, and operating and capital budgets respectively. These areas are normally under the purview of more senior officers because of their critical nature.

The same rationale used to explain the financial management categories can be applied to labor/management relations. It would stand to reason that the responsibility for dealing with labor issues would be with the more senior officers, making it hard to gain experience in this area for junior personnel.

The lowest percentages of "good" deltas occurred in productivity/outcomes management and labor/management relations, which would indicate that these are areas where junior officers may need education.

2. Number of Management Positions

The distribution for this analysis is displayed in Table XVI. The comprehensive data for this analysis are presented in Appendix Q.

Table XVI
NUMBER OF MANAGEMENT POSITIONS FOR THE HCA COHORT

MGRPOS	FREQUENCY	PERCENT OF TOTAL
0 TO 4	26	28
5 TO 7	33	35
8 AND OVER	34	37
TOTAL	93	100

Considering the fact that the length of a normal tour of duty in the medical community is about 3 years, the data in Table XVI is consistent with the reported rank structure in Table IV. Table XVI indicates that 72 percent of the HCA cohort reports occupying 5 or more management positions. If each of these positions lasted about 3 years, this would account for 15 or more years of service, which is about the time an HCA would be eligible for the 0-5 ranking. These data

would seem to indicate that the HCA cohort feels that the majority of their jobs are in management positions, which contradicts the findings of the previous section for "years in a management position." This contradiction would seem to indicate a misunderstanding of the definition of "managerial" position used in the questionnaire [Ref. 1]. The career path of HCAs, as discussed in Reference 6, is designed to put HCAs in managerial positions at the beginning of their careers and allow them to progress through positions that allow for increased responsibility.

Table XVII reveals only those management categories that represent direct relationships between the number of management positions and the percentages of "good" deltas

Table XVII
TABLE OF MANAGEMENT CATEGORIES DEMONSTRATING DIRECT RELATIONSHIPS WITH MGTPOS AND PERCENTAGE OF "GOOD" DELTAS FOR HCA RESPONDENTS

MANAGEMENT CATEGORY	0 TO 4	5 TO 7	8 AND OVER
Quantitative Analysis	32.7	37.9	48.5
Strategic Planning	30.8	45.5	45.6
Financial Management	33.8	50.9	59.4
Personnel Management	52.6	58.6	63.3
Materials Management	50.0	51.5	52.9
Productivity/Outcomes Management	26.9	51.5	52.9
Facilities Management	42.3	55.6	56.9

reported by the HCA cohort. Financial management and productivity/outcomes management provide the largest differences between the "0 to 4" cohort and the "over 8" cohort. As mentioned in the analysis of "years in a management position," the expertise gained in the financial management arena is normally only available to the more senior HCAs because of the critical nature of this area.

Although materials management is listed with the management categories demonstrating positive relationships with MGTPOS, the increase of only 2.9 percentage points across the cohorts does not indicate that this category can be considered as acquiring increasing knowledge as a function of the number of management positions. The lowest percentage of "good" deltas occurred in productivity/outcomes management.

3. Months as an Executive Officer

The frequency distribution for "months as an executive officer" is presented in Table XVIII. The total sample size for this analysis was only 87 because of the inconsistencies in the responses provided. Appendix R presents the responses for the 60 questions.

The normal rank of an executive officer in an MTF is 0-5 to 0-6 depending on the size of the facility. Table IV indicates that 77.5 percent of the HCAs are 0-5 and above. The data in Table XVIII indicate that only 56 percent of the HCA cohort are reporting experience as an executive officer,

Table XVIII
TABLE OF MONTHS AS AN EXECUTIVE OFFICER FOR THE HCA COHORT

MOSXO	FREQUENCY	PERCENT OF TOTAL
NONE	38	44
1 TO 24	26	30
OVER 24	23	26
TOTAL	87	100

which would imply that 21.5 percent of the eligible HCA cohort has not been in an executive officer position.

The management categories that demonstrate direct relationships with MOSXO and the percentages of "good" deltas are displayed in Table XIX. Labor/management relations and alternative health care delivery systems account for the largest differences across the categories. Those individuals

Table XIX
TABLE OF MANAGEMENT CATEGORIES EXHIBITING DIRECT RELATIONSHIPS WITH PERCENTAGES OF "GOOD" DELTAS AND MOSXO FOR HCA RESPONDENTS

MANAGEMENT CATEGORY	NONE	1 TO 24	OVER 24
Financial Management	45.3	48.5	60.9
Productivity/Outcomes Management	39.5	46.2	56.5
Organizational Design	48.7	50	52.2
Labor/Management Relations	34.2	50	56.5
Alternative Health Care Delivery Systems	26.3	38.5	47.8

with no experience as an executive officer are only reporting 34.2 and 26.3 percent "good" deltas, respectively, for these two management areas, which would indicate a need for education in these areas for individuals with no experience as an executive officer.

4. Months as a Commanding Officer

Table XX displays the frequency distribution for "months as a commanding officer" for the HCA cohort. Again, the total sample size of 85 differs slightly from the sample sizes used in previous analyses due to reporting errors and inconsistencies.

Table XX
TABLE OF MONTHS AS A COMMANDING OFFICER FOR HCA COHORT

MOSCO	FREQUENCY	PERCENT OF TOTAL
NONE	55	65.0
1 TO 24	15	17.5
OVER 24	15	17.5
TOTAL	85	100

The highest level of management within the medical community (or any community) would be at the Commanding Officer level. The normal rank for a commanding officer would be an 0-6. Additionally, this individual should have demonstrated an outstanding background of leadership in order to be considered for this position. While 46.2 percent of the

HCA cohort are 0-6 (Table IV), only 35 percent of the HCA cohort have any experience as a commanding officer, which would indicate that 11.2 percent of the 0-6 cohort have not been in a commanding officer billet.

Due to extremely small sample sizes in the "1 to 24" and the "over 24" cohorts, large changes in the percentages of "good" deltas can be attributed to subsequent small changes in the responses. The management categories that display a direct relationship with MOSCO are displayed in Table XXI.

Table XXI
TABLE OF MANAGEMENT CATEGORIES EXHIBITING DIRECT RELATIONSHIPS WITH PERCENTAGES OF "GOOD" DELTAS AND MOSCO FOR HCA RESPONDENTS

MANAGEMENT CATEGORY	NONE	1 TO 24	OVER 24
Financial Management	46.5	54.7	61.3
Facilities Management	47.9	57.8	62.2
Organizational Design	47.3	56.7	56.7
Conflict Resolution	40.0	46.7	46.7
Alternative Health Care Delivery Systems	30.9	40.0	53.3

Alternative health care delivery systems provides the largest increases in the percentages of "good" deltas with respect to the distribution displayed in Table XX. Similar to the findings in the "months as an executive officer" analysis, the "none" cohort only reports 30.9 percent "good" deltas in

this category. It stands to reason that this management area will normally be the responsibility of only the most senior officers within a Military Treatment Facility because of the costs and politics involved in dealing with alternative health care delivery systems. However, because of a rapidly changing health care environment, which is shifting towards emphasizing cost cutting by utilizing alternative health care delivery systems, this management area is becoming one of utmost importance and should be stressed in any management education program.

IV. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Previous research [Ref. 2] indicated that fewer members of the HCA community reported management skill gaps as compared to health care executives from the other corps. That is, the HCA cohort was least likely to report that their current management skills were less than those required for the positions they held. The authors of the research suggested that management-oriented training and education, as well as a management career track commencing at entry level, were the major contributors to this perceived management expertise. This thesis was designed to further explore those results. The analyses conducted in the present research support the conclusions and recommendations described below.

A. PERCEPTION OF MANAGEMENT CAPABILITY BY TRADITIONAL UNDERGRADUATE/GRADUATE DEGREE

This analysis was performed isolating the HCA cohort to see what effect management education had on their responses. Those individuals who reported having "some" type of management degree (one or more) were separated from those reporting no management education ("none") to see if management education was driving the higher percentages of "good" deltas.

The "some" cohort reported higher percentages of "good" deltas (current skills are equal to or greater than required

skills) in only 3 of the 21 management skill categories. Those categories were productivity/outcomes management, labor/management relations, and materials management. These results indicate that management education is not a major contributor to the respondents' perceptions of higher skills than what is required for the management categories. An analysis of the "none" cohort revealed that this cohort had considerable more experience as commanding officers and executive officers than the "some" cohort. This finding indicates that experience may have more of an impact on the respondents' perceptions than education.

B. PERCEPTION OF MANAGEMENT CAPABILITY BY SERVICE SHORT COURSE

The trend evident within this analysis was that the cohort that had attended 5 or more short courses reported a higher percentage of "good" deltas in all 21 categories than "0 to 2" or the "3 to 4" cohorts. There were no trends that would indicate a direct relationship between the number of short courses taken and the "good" deltas.

C. PERCEPTION OF MANAGEMENT CAPABILITY BY MANAGEMENT EXPERIENCE

The variables used to analyze the influence of managerial experience on the "good" deltas were "years in a management position," "number of management positions," "months as a commanding officer," and "months as an executive officer."

The data for the "years in a management position" and "number of management positions" indicate a contradiction in the responses. This contradiction seemed to be due to the misunderstanding of the wording of the questions concerning these variables. A common theme throughout this thesis is that the HCA cohort spend their careers in management positions, which has a direct effect on their confidence in their skill levels reflected in the higher percentages of "good" deltas in their survey responses. This theme was validated in the "number of management positions" analysis where the HCA cohort reported that the majority of their careers were spent in management positions.

Analyses on all four experience variables revealed a direct relationship with financial management, which would indicate that as management experience increases, health care administrators feel more confident in their skills in this area. It stands to reason that this an area that should be addressed when tailoring educational programs targeted for the more junior HCAs. Additionally, productivity/outcomes management and labor/management relations were consistently among the categories exhibiting a direct relationship with the "good" deltas as experience increases. These are also categories where the respondents with the least management experience reported the lowest percentages of "good" deltas among the 21 management categories. These categories should

also be stressed in an education program directed at the officers with limited management experience.

Overall, management experience provided the best insight into the higher percentages of "good" deltas reported by the HCAs. The data indicate that as the HCAs gain more management experience, they are more confident about their knowledge in the areas that are normally the responsibility of more senior officers such as financial management and labor/management relations.

D. ADDITIONAL CONCLUSIONS AND COMMENTS

The data from this thesis indicated that the HCA cohort reported more "good" deltas than the other medical communities across the 21 management skill areas. Additionally, the HCA cohort held the majority of the traditional graduate/ undergraduate management degrees. The HCA cohort also reported higher averages in the "years in a management position" and the "number of management positions" variables. These factors indicate that the Medical Service Corps realizes the importance of these factors to producing Health Care Executives who are both knowledgeable and effective in managerial roles. In order to develop effective leaders within the other medical communities, management opportunities should be made available for those individuals who aspire to become leaders within Navy Medicine. Additionally, if the other medical community officers are expected to be

knowledgeable in the areas of patient services administration and financial management, these short courses should be made available to all officers within Navy Medicine.

B. RECOMMENDATIONS

The following recommendations are made based on the analyses provided in Chapter III and the conclusions provided in this chapter:

1. Additional analyses should be performed to see what is causing the "good" deltas with respect to the education variables discussed in this thesis, i.e., higher reported current skills or low perception of skills required for a particular skill area.

2. The analyses in this thesis were performed, for the most part, on the HCA cohort, which ranged in size from 85 to 93 depending on the statistical technique utilized. This resulted in extremely small sample sizes for several of the analyses, which precluded the utilization of statistical tests for significance of variables such as the Chi Square test. This survey should be administered to the entire HCA community.

3. Short courses such as financial and materials management and patient services administration should be restructured and shortened versions should be made available to all Navy Medical Department officers.

APPENDIX A. MANAGING A MILITARY MEDICAL TREATMENT FACILITY: A SURVEY OF EDUCATIONAL NEEDS

This survey is designed to assess your perception of the knowledge and ability required to effectively manage health care facilities, now and in the future. We will use the results of the survey to design executive management education programs.

The survey is based on the views and beliefs of over 100 Navy Medical Department executive managers, elicited through interviews and a pretesting process. As a result, survey questions represent management knowledge and abilities that were most frequently expressed as necessary for managing medical treatment facilities.

Your responses to this survey will become part of the aggregate of responses from others currently serving in executive management positions throughout the Navy Medical Department. The combined results will allow us to quantify the importance of each management skill area.

All information gathered by this survey will be collated, in the aggregate, for statistical use only. The anonymity of each survey participant is assured since no need exists, and no effort will be made, to identify the participants.

Please do the following:

1. Follow the instructions provided in the survey.
2. Complete this survey within five (5) working days.
3. Return your completed survey in the pre-addressed envelope provided for that purpose.

If you have any questions, contact Adj. Research Professor Ken Orleff at (408) 646-3339 or (DSN) 878-3339.

Thank you for your participation.

MANAGING A MILITARY MEDICAL TREATMENT FACILITY - PART I

This survey has two purposes. It is designed to measure:

1) Your current level of managerial skills.
2) Your perception of the required level of skills for an executive in your role.

Using the scale, rate each of the following managerial activities in terms of your current level of knowledge or ability. A '0' indicates that you have no knowledge or ability in this area. A rating of '1' to '3' indicates a low level of knowledge or ability, a rating of '4' to '7' indicates a moderate level, and a rating of '8' to '10' indicates a high level. Use the numbers within a category to indicate your position more precisely. (Put your ratings in the column labeled "Current Skill Level.")

Then, using the same scale, rate the same managerial activities in terms of the required level of knowledge or ability necessary to function effectively as an executive in your role. (Put your rating in the column labeled "Required Skill Level.")

CURRENT SKILL LEVEL	REQUIRED SKILL LEVEL	
_____	_____	1. Interpreting financial statements, e.g., CPTAR, MEPR, NC2100, etc.
_____	_____	2. Recognizing funding sources and limitations of their uses.
_____	_____	3. Evaluating operating (O&M,N) and capital (CP,N) budgets and monitoring their execution.
_____	_____	4. Knowing the resource management advantages and drawbacks of alternative health care delivery systems.
_____	_____	5. Maximizing benefits from third party payer (e.g., insurance companies) reimbursements.
_____	_____	6. Working with the procurement system (negotiating, contracting, evaluating bids, acquiring goods and services).
_____	_____	7. Understanding cost-benefit analysis techniques (make or buy decisions, cost-effective trade-offs).
		PROGRAM PLANNING AND EVALUATION
_____	_____	8. Managing a planning process: using models and methods of both strategic and business planning.
_____	_____	9. Understanding methods for evaluating the effectiveness and efficiency of various programs.
_____	_____	10. Evaluating and applying market analysis strategies, including methods to analyze consumer needs.
_____	_____	11. Employing quality improvement principles and methods.

MANAGING A MILITARY MEDICAL TREATMENT FACILITY - PART I

0	1 2 3	4 5 6 7	8 9 10
NONE	LOW LEVEL	MODERATE LEVEL	HIGH LEVEL

CURRENT SKILL LEVEL	REQUIRED SKILL LEVEL	
_____	_____	12. Understanding the interrelationships of departments and functions of military treatment facilities, i.e., the systems perspective.
		DECISION MAKING/PROBLEM SOLVING
_____	_____	13. Assessing the quality and usefulness of available information when faced with complex problems.
_____	_____	14. Deciding the extent to which others should be included in decision making.
_____	_____	15. Using decision making techniques/problem solving approaches and methods.
_____	_____	16. Using management information systems technologies to solve complex problems.
_____	_____	17. Using statistical tools in planning and day-to-day decision making.
_____	_____	18. Understanding the strengths and weaknesses of the statistical techniques that comptrollers or quality assurance analysts must often use.
_____	_____	19. Understanding how information systems are designed to meet information needs.
_____	_____	20. Analyzing risks/alternatives.
		LEGAL MATTERS
_____	_____	21. Knowing what constitutes a violation of the Uniform Code of Military Justice (UCMJ).
_____	_____	22. Knowing what non-judicial punishments are available under the UCMJ.
_____	_____	23. Initiating appropriate actions for UCMJ violations.
_____	_____	24. Knowing administrative separation authority and procedures.
_____	_____	25. Having a working knowledge of liability, both hospital and professional.
_____	_____	26. Having a working knowledge of environmental impact issues.

MANAGING A MILITARY MEDICAL TREATMENT FACILITY - PART I

CURRENT SKILL LEVEL	REQUIRED SKILL LEVEL	OPERATIONS MANAGEMENT SKILLS
_____	_____	27. Understanding the impact of CHAMPUS requirements on hospital operations.
_____	_____	28. Evaluating the merit of proposals to acquire new technology.
_____	_____	29. Understanding the opportunities and limitations of the DoD/DoN materials management system.
_____	_____	30. Overseeing equipment management programs.
_____	_____	31. Ensuring proper execution of security requirements for the physical plant.
_____	_____	32. Overseeing facilities management.
		ORGANIZATIONAL BEHAVIOR
_____	_____	33. Understanding the support requirements of the operating forces.
_____	_____	34. Developing and communicating a vision for the command.
_____	_____	35. Empowering individuals and work groups.
_____	_____	36. Developing a non-parochial/"generalist" perspective.
_____	_____	37. Building trust.
_____	_____	38. Managing change.
_____	_____	39. Managing conflict.
_____	_____	40. Building teamwork.
_____	_____	41. Developing a positive organizational climate/culture.
_____	_____	42. Motivating people.
_____	_____	43. Employing coordinating mechanisms (e.g., teams, task forces, ad hoc work groups).
_____	_____	44. Developing subordinates: coaching, teaching, mentoring.

MANAGING A MILITARY MEDICAL TREATMENT FACILITY - PART I

CURRENT SKILL LEVEL	REQUIRED SKILL LEVEL	
_____	_____	45. Understanding the role/scope of the job of CO/XO.
_____	_____	46. Promoting innovation and risk taking behavior.
		MANPOWER AND HUMAN RESOURCE MANAGEMENT
_____	_____	47. Managing civilian personnel according to regulations and procedures.
_____	_____	48. Managing military personnel according to regulations and procedures.
_____	_____	49. Evaluating manpower and staffing needs.
_____	_____	50. Managing labor relations (union negotiations, grievances, etc.)
_____	_____	51. Managing multi-cultural diversity in the workplace.
_____	_____	52. Building a climate that promotes ethical practices in clinical and managerial operations.
		COMMUNICATION
_____	_____	53. Writing effectively.
_____	_____	54. Giving positive and negative feedback.
_____	_____	55. Delivering effective oral presentations.
_____	_____	56. Listening effectively.
_____	_____	57. Building and maintaining working and support relationships outside your institution.
_____	_____	58. Representing the organization to external groups, e.g., public relations functions.
_____	_____	59. Fostering a climate of open communication.
_____	_____	60. Conducting meetings effectively.

MANAGING A MILITARY MEDICAL TREATMENT FACILITY - PART I

If a management education program were to be developed for an executive in your role, what level of need would you attach to providing education in each of the following managerial activity groups. Using the scale below, a rating of "1" to "3" indicates a very low level, a rating of "4" to "7" indicates a moderate level, and a rating of "8" to "10" indicates a very high level. Use the numbers within a category to indicate more precisely the level of need.

PRIORITY	MANAGERIAL ACTIVITY GROUPS
_____	Financial/Resource Management
_____	Program Planning and Evaluation
_____	Decision Making/Problem Solving
_____	Legal Issues
_____	Operations Management Issues
_____	Organizational Behavior
_____	Manpower and Human Resource Management
_____	Communication

Please provide below any additional comments you may have.

MANAGING A MILITARY MEDICAL TREATMENT FACILITY - PART II

In addition to the "managerial skill level" questionnaire you have just completed, please provide the demographic data and management education information requested below.

This information is part of the data collection effort and will be collated, in the aggregate, for statistical use only. The anonymity of each survey participant is assured since no need exists and no effort will be made to identify individuals participating in this survey.

Instructions: Please check only those blocks that apply in your individual case and legibly complete any other information in the underlined spaces provided for that purpose.

(1) Demographic Data - blocks involving subspecialty codes should be completed only where codes are formally assigned to you as an individual.

(2) Management Education/Training - check only those courses/programs you have successfully completed.

DEMOGRAPHIC DATA

1. Rank: _____ 2. Gender: ☐ Male ☐ Female

2. Designator: ☐ 21xx ☐ 23xx ☐ Other _____
☐ 22xx ☐ 29xx

4. Subspecialties: _____ _____ _____
(List by code if known)

5. Length of active commissioned service: Years_____ Months_____

6. Degrees completed: ☐ Bachelors - Major _____
☐ Masters - Major _____
☐ Doctorate - Major _____

7. Current position/title _____

8. Facility Size: Beds (Set-up): _____
Outpatient Visits (annual): _____
Teaching Hospital: ☐ Yes ☐ No
Family Practice Residency Only ☐ Yes ☐ No

9. Time served in current position:
☐ Less than 6 months ☐ 6-12 months ☐ Greater than 36 months
☐ 12-24 months ☐ 24-36 months

10. Total months service (past and present) in Commanding Officer billets: _____
Total months service (past and present) in Executive Officer billets: _____

11. Years in current geographical location: _____

12. Number of prior managerial positions: _____
(managerial = >50% of time involved in managerial (non-clinical) tasks)

13. Years service in managerial positions: _____

MANAGEMENT EDUCATION/TRAINING BACKGROUND

DOD Postgraduate Education Programs

- ☐ Armed Forces Staff College
- ☐ Industrial College of the Armed Forces
- ☐ Naval Postgraduate School
  - ☐ Financial Management
  - ☐ Manpower Planning, Training, Analysis
  - ☐ Information Systems Management
  - ☐ Operations Research
  - ☐ Logistics
- ☐ Army-Baylor University
- ☐ Naval War College
  - ☐ Command and Staff
  - ☐ Naval Warfare
- ☐ Marine Corps Command and Staff College
- ☐ Other Intermediate/Senior Service Schools: _____

_____

Other Traditional Undergraduate/Graduate Management Programs

- ☐ MHA
- ☐ MPH
- ☐ MBA
- ☐ BS (HCA)
- ☐ BBA
- ☐ Other _____

Non-Traditional Postgraduate/Executive Management Programs

- ☐ Univ Wisconsin - Madison (MS Admin Medicine)
- ☐ Physicians in Management (PIM) Series, ACPE
- ☐ Management Education for Physicians (MEP), ACMGA
- ☐ Univ North Carolina - Kren Scholar Program
- ☐ Cornell Univ - Health Executives Development Program
- ☐ Johnson & Johnson - Wharton Fellows Program for Nurses
- ☐ Estes Park Institute (annual seminar)
- ☐ Other _____

MANAGING A MILITARY MEDICAL TREATMENT FACILITY - PART II

MANAGEMENT EDUCATION/TRAINING BACKGROUND (cont)

Service Short Courses

- ☐ Prospective Commanding Officer/Executive Officer
- ☐ Interagency Institute for Federal Health Care Executives
- ☐ Leader Development (LMET)
  - ☐ Command
  - ☐ Senior
  - ☐ Intermediate
- ☐ Strategic Medical Readiness and Contingency
- ☐ Management Development
- ☐ Financial & Material Management
- ☐ Patient Services Administration
- ☐ Plans, Operations and Medical Intelligence
- ☐ Manpower Management
- ☐ Professional Military Comptroller
- ☐ Senior Leaders Seminar (TQL)
- ☐ Other _____

MANAGEMENT CERTIFICATION/ FELLOWSHIP

- ☐ ABMM (Board Certified)
- ☐ ACHE (Fellow)
- ☐ ACMGA (Fellow)
- ☐ ACPE (Fellow)
- ☐ AAMA (Fellow)
- ☐ Other _____

Thank you for your participation in this study. Results will form an integral part of research efforts directed at identifying the knowledge and skills needed to effectively manage health care facilities, now and in the future.

Please return your completed survey (both Parts I & II) in the envelope provided for that purpose to the following address:

SUPERINTENDENT Code AS/Or
Naval Postgraduate School
Monterey, CA 93943-5000

APPENDIX B. CATEGORIZATION OF NPS SURVEY QUESTIONS BASED ON DOD APPROACH

General Management

Decision Making/Problem Solving	Question #
Cost-benefit analysis techniques	7
Quality of available information	13
Decision-making participants	14
Decision-making techniques	15
Risks and alternatives	20
Communications	
Develop & communicate vision	34
Writing effectively	53
Providing feedback	54
Oral presentations	55
Listening effectively	56
Building work/support relations	57
Representing the organization	58
Fostering open communications	59
Meeting management	60
Quantitative Analysis	
Statistical tools	17
Techniques used by comptrollers	18
Information Management	
Using management information systems	16
Understanding the MIS design	19
Managing Quality	
Quality improvement methods	11
Strategic Planning	
Models and methods	8
Market analysis	10
Systems approach	12
Support requirements of operating forces	33
Non-parochial perspective	36

Health Resources Management

Financial Management	
Financial statements	1
Funding sources and limitations	2

Managing Change/technology

Managing change 38

Alternative Health Care Delivery Systems

Alternative Health Care Delivery Systems 4

Health Care Law and Policy

Legal Issues

Violations of UCMJ 21
Non-judicial punishments 22
Action under UCMJ 23
Administrative separation authority 24
Hospital and professional liability 25
Environmental impact issues 26

Ethics

Ethical practices 52

APPENDIX C. MEDICAL SERVICE CORPS SPECIALTIES

SPECIALTY CODE	ABBREVIATION	SPECIALTY
0031	Financial Mgt	FINANCIAL MANAGEMENT
0032	Mat'l Log Mgt	MATERIALS AND LOGISTICS MANAGEMENT
0033	MPTA	MANPOWER/PERSONNEL TRAINING ANALYSIS
0037	Educ/Trng Mgt	EDUCATION/TRAINING MANAGEMENT
0042	Ops Research	OPERATIONS RESEARCH
0095	Computer Tech	COMPUTER TECHNICIAN
1800	Hlth Care Adm	HEALTH CARE ADMINISTRATOR
1801	Pt Admin	PATIENT ADMINISTRATION
1802	Med Logistics	MEDICAL LOGISTICS
1803	Med Data Svcs	MEDICAL DATA SERVICES
1804	Med Const Lia	MEDICAL CONSTRUCTION LIAISON
1805	Plans/Ops/Med Int	PLANS/OPERATIONS/MEDICAL INTELLIGENCE

Source: BUMIS, MED-5123, end May 93

APPENDIX D. BASIC PRINCIPLES AND DEVELOPMENT OBJECTIVES

Basic Principles for all MSC officers:

- Professional specialization in accordance with naval service needs, allowing progression to senior grade as required.
- Emphasis on Medical Department contingency capabilities in support of Navy and Marine Corps operations.
- Early development of and continuous attention to communication skills—written, verbal, and "presence."
- Assignment progression based on diversity of function and level of responsibility from junior to senior officer grades.
- Continuous professional development through education, training, and active affiliation with professional societies.
- Continuous development of staff skills and leadership abilities through correspondence, special training courses, service colleges, and varied assignments.

Development Objectives, Basic Phase:

- Develop basic naval officer skills through appropriate watch standing, collateral duties, and training programs.
- Gain broad base of professional specialty experience under qualified mentors and in subsequent independent study.
- Serve in varied tours with Navy/Marine Corps operations, training, research, and fleet support activities.
- Begin subspecialty tracking through training and job assignments.
- Establish initial goals for naval career as Regular or Ready Reserve officer.

Development Objectives, Intermediate Phase:

- Achieve and certify subspecialty qualifications through completed training and job experience (*e.g.*, licensure, AQDs, etc.).
- Assume broader leadership responsibilities (*e.g.*, OIC or department head, or "2XXX" general management).
- Prepare for senior staff officer duties through service college, headquarters duty, or other special training.
- Complete significant specialty utilization and leadership tour.

Development Objectives, Advanced and Senior Phases:

- Expand management responsibilities in professional area (*e.g.*, Director of Administration, Director of Ancillary Services, or department head of larger activity); or
- Execute program management responsibilities (*e.g.*, research and development, education and training, occupational and preventive medicine, medical support activities); or
- Assume "2XXX" command or headquarters executive staff responsibilities (*e.g.*, FMF, fleet, and Navy/Defense Department assignments).

APPENDIX E. MEDICAL SERVICE CORPS CAREER PLANNING CHART

GRADE	YEARS	PHASE	ADMINISTRATIVE / STAFF	CLINICAL (CONSULTATION)	OPERATIONAL	RESEARCH
FLAG	24 - 30	EXECUTIVE	1A Director, Medical Service Corps / Assistant Chief, [illegible]			
			2A CO	2B CO	2C CO	2D CO
CAPT	22 - 30	SENIOR	3A XO 4A OIC 4B Director, Administration 5A Dept Head 5B HQ Directors 5C CO	5D Dept Head	3B XO 4C OIC 5E HQ Major Staff 5F HQ Staff	3C XO 5G Research Management
CDR	16 - 22	ADVANCED	6A XO 7A OIC 8A Director Administration 9A Administrative Officer 9B Dept Head 9C HQ Staff	6B XO 9D Dept Head 9E Asst Dept Head	6C XO 7B OIC 8B HQ Major Staff 9F HQ Staff	6D CO 7C XO 9G Research Management
LCDR	6 - 16	INTERMEDIATE	10A OIC 11A Dept Head 12A HQ Staff 13A Dept Head *DUINS*	11B Dept Head 13B Dept Head *DUINS*	10B XO 11C Staff 13C Company Commander	13D Research Management *DUINS*
ENS - LT	1 - 10	BASIC	14A Asst Dept Head	14B Asst Dept Head 14C Asst Dept Head	14D Staff	14E Specialty Tour

APPENDIX F. EDUCATION AND TRAINING GOALS

Basic Phase (O-1/O-3)

Officer Indoctrination School, Newport, Rhode Island

Basic Military Short Courses/Correspondence Courses (*e.g.*, Navy Regulations, UCMJ), Basic/Advanced Division Officer Course

Membership (active participation) in professional associations

Continuing education courses through professional organizations, academic institutions, correspondence courses, and self study

Short courses related to specialty or interest (*e.g.*, C4 for those assigned to operational tours: FMSS; Financial and Material Management; Patient Administration Courses)

Commence preparation for advanced education or degree

Management Development Course

Graduate Medical Education (medical corps)

Intermediate Phase (O-4)

Continue specialty and leadership courses

Advanced Management Development Course (proposed)

Intermediate Leader Development Course

DUINS for specialty education or advanced degree

Expand participation in professional organizations to include publications and presentations

Intermediate service college

Armed Forces Staff College (AFSC)

Marine Corps Command and Staff College

Continue short courses related to specialty or interest (*e.g.*, C4 for those assigned to operational tours; FMSS; Financial and Material Management; Patient Administration Courses)

Advanced Phase (O-5) and Senior Phase (O-6)

Continue educational courses and professional association participation to maintain current state-of-the-art practices in specialty

Senior Leader Development Course

Strategic Medical Readiness Contingency Course (SMRCC)

Interagency Institute for Federal Health Care Executives

PCO/PXO Course for those enroute to Commanding Officer or Executive Officer positions

Command Leader Development Course

Industrial College of the Armed Forces (ICAF)

Naval War College

Senior Service College

Executive Training Program

Directors' Course (proposed)

Executive Phase (Selected O-6 and Flag)

Capstone Course

Executive Training Program

APPENDIX G. POSTGRADUATE EDUCATION PROGRAMS

Course/Program	Length of Course	Annual Quota	Available to: MC	DC	MSC	NC
Anesthesia Program	9 mos. Didactic 15 mos. Clinical	12				X
Army-Baylor University Program in Health Care Administration	52 wks. Didactic 52 wks. Residency	5			X	X
Armed Forces Staff College (AFSC)[1]	20-24 wks.	Varies	X	X	X	X
Blood Bank Fellowship	52 wks.	1			X	
Education & Training Management	12-18 mos.	Varies			X	X
Graduate Dental Education (GDE)	1-4 yrs.	Varies		X		
Graduate Medical Education (GME)	1-5 yrs.	Varies	X			
Graduate Outservice Programs for Subspecialties	Varies	Varies			X	X
Industrial College of the Armed Forces (ICAF)[1]	40 wks.	2	X	X	X	X
Marine Corps Command and Staff College	43 wks.	2	X	X	X	X
Naval Postgraduate School						
Computer Systems	18 mos.	Varies			X	
Financial Management	12-18 mos.	2			X	
Manpower, Personnel, and Training Analysis	18-22 mos.	Varies			X	X
Material Logistics	12-18 mos.	2			X	
Naval War College						
Command and Staff	10 mos.	1	X	X	X	X
Naval Warfare	10 mos.	1	X	X	X	
Pharmacy Residency	50 wks.	2			X	

APPENDIX H. POSTGRADUATE EDUCATION PROGRAM DESCRIPTIONS

Anesthesia Program

Location: Naval School of Health Sciences, Bethesda, Maryland; George Washington University, Washington, DC

Scope: Training for nurse corps officers leading to a Master of Science in Nurse Anesthesia and certification as a Certified Registered Nurse Anesthetist; skills necessary to manage anesthesia department activities, teach other Medical Department personnel, and provide assistance in medical emergency situations.

Army-Baylor University Program in Health Care Administration

Location: Fort Sam Houston, Texas

Scope: Theories, concepts, and practices in the administration and organization of health care delivery systems; managerial tenets and techniques fundamental to the effective administration of these systems, with emphasis on the military hospital. Specific academic prerequisites apply.

Armed Forces Staff College

Location: Norfolk, Virginia

Scope: Concepts and principles of joint and combined military operations, U.S. military capability and the environment in which it operates, formulation of sound decisions within the parameters of joint doctrine, and established staff practices. Designed for O-4/O-5 officers.

Blood Bank Fellowship

Location: Walter Reed Army Medical Center, Washington, DC; Bowling Green University, Bowling Green, Kentucky

Scope: Preparation of medical technologists to be blood bank directors, including military blood banking, blood grouping, and blood transfusion.

Education and Training/Management

Location: Civilian universities designated by Commander, Naval Education and Training (CNET)

Scope: Management of education and training activities, curriculum development and evaluation, organizational development and personnel management, and applications of computer technology in the education and training arena.

Full-time Outservice Programs for Corps Subspecialties

Location: Accredited civilian colleges and universities

Scope: Undergraduate, graduate, and fellowship programs in corps-specific area of subspecialty based on the needs of the service.

Graduate Dental Education

Location: Naval Dental School, Bethesda, Maryland; naval hospitals; appropriate civilian dental schools.

Scope: Advanced training in general dentistry and most specialties, ranging from 1-year fellowships to 3-year residencies. Additional information is provided in chapter V.

Graduate Medical Education

Location: Naval hospitals with training missions; NAMI; NUMI; other federal institutions; appropriate civilian institutions

Scope: Entire range of formal graduate medical education for physicians; includes internships, flight surgeon and undersea medicine training, residency training in specialties, and fellowship training in subspecialties. Typical internship, residency, and fellowship training opportunities are summarized in appendix B, chapter IV.

Industrial College of the Armed Forces

Location: Fort Lesley J. McNair, Washington, DC

Scope: National security with emphasis on management of national resources under current and predicted environments; national and world interrelated military, economic, political, scientific, and social factors. Designed for O-5/O-6 officers.

Marine Corps Command and Staff School

Location: Marine Corps Development and Education Command, Quantico, Virginia

Scope: Planning and conduct of force-in-readiness operations by the Marine Air-Ground Task Force with emphasis on amphibious operations, leadership, effective communications, programming, budgeting, and the use of computers. Designed for O-4 officers.

Naval Postgraduate School

Location: Monterey, California

Computer Systems

Scope: Evaluation of changes and advances in the management of computers; effective decision-making processes regarding the development and utilization of military computer-based systems. Specific prerequisites apply.

Financial Management

Scope: Financial management in the Armed Forces, inventory management, policy analysis, accounting theory and standards for financial control, cost accounting and estimation, internal control, and auditing. Specific academic prerequisites apply.

Manpower, Personnel and Training Analysis

Scope: Multivariate data analysis, personnel testing and selection, job analysis and personnel training, manpower economics and requirements determination, and manpower/personnel models. Specific academic prerequisites apply.

Material Logistics Support

Scope: Logistics curricula specific to material or inventory management, logistics engineering, production management, contracts management and administration, systems acquisition, and project management.

Naval War College

Location: Newport, Rhode Island

College of Naval Command and Staff

Scope: Military planning and staff procedures with emphasis on the integration and employment of various

platforms into total systems to obtain specific objectives; physical properties and limits of sensors, weapons, and platforms and their relationship to the selection of tactical alternatives. A Master of Arts in National Security and Strategic Studies is awarded. Designed for O-4 officers.

College of Naval Warfare

Scope: Fundamentals of military strategy and foreign policy; political uses of military power; roles of both military and political leaders in policy formulation; military planning, and the conduct of war. A Master of Arts in National Security and Strategic Studies is awarded. Designed for O-5/O-6 officers.

Pharmacy Residency

Location: Naval Hospital, Bethesda, Maryland; Naval Hospital, San Diego, California

Scope: Principles of clinical and administrative aspects of institutional pharmacy.

APPENDIX I. SHORT COURSES

Course/Program	Length of Course	Annual Quota	Available to: MC	DC	MSC	NC
Casualty Treatment Training Course (CTTC)	5 days	20		X		
Cold Weather Medicine	3 wks.	Varies	X	X	X	X
Combat Casualty Care Course (C4)	8 days	800	X	X	X[1]	X
Designing Effective Education Programs for Medical Department Personnel Workshop	1 wk	40	X	X	X	X
Financial & Material Management	12 wks.	30			X	
Interagency Institute for Federal Health Care Executives	2 wks.	18	X	X	X	X
Leader Development						
Command	2 wks.	40	X	X	X	X
Senior	2 wks.	144	X	X	X	X
Intermediate	2 wks.	360	X	X	X	X
Management Development Course (MANDEV)	2 wks.	155	X	X	X	X
Manpower Management	1 wk.	30			X	
Medical Effects of Nuclear Weapons	5 days	Varies	X	X	X	X
Medical Management of Chemical Casualties	3 days	Varies	X	X	X	X
Medical Regulating	1 wk.	30			X	
Operating Forces Management Seminar (OFMS)	1 wk.	Varies		X		
Operating Room Nurse Orientation	6 wks.	Varies				X
Operational Entomology	1 wk.	20	X		X	
Patient Services Administration	4 wks.	30			X	
Plans, Operations and Medical Intelligence (POMI)	2 wks.	60			X	
Practical Comptrollership	2 wks.	Varies			X	

[1]MSC officers serve as tactical officers, rather than students.

Course/Program	Length of Course	Annual Quota	Available to: MC	DC	MSC	NC
Professional Military Comptroller	8 wks.	3			X	
Prospective Commanding Officer/ Executive Officer (PCO/PXO)	3 wks.	Varies	X	X	X	X
Quality Assurance/Risk Management (QA/RM)	1 wk.	25	X	X	X	X
Strategic Medical Readiness and Contingency Course (SMRCC)	2 wks.	100	X	X	X	X
Surface Warfare Medical Officer Indoctrination Course (SWMOIC)	3-4 wks.	Varies	X			
Tropical Medicine	6 wks.	24	X			

APPENDIX J. SHORT COURSE DESCRIPTIONS

Casualty Treatment Training

Location: Naval Dental Centers, Norfolk, Virginia; Great Lakes, Illinois; San Diego, California; Pearl Harbor, Hawaii

Scope: Casualty treatment training for recently appointed dental officers and refresher training for career dental officers.

Cold Weather Medicine

Location: Marine Corps Mountain Warfare Training Center, Bridgeport, California

Scope: Survival and providing medical care in the arctic environment; principles of perception; early recognition and treatment of cold weather injuries/illnesses. Includes strenuous, realistic training.

Combat Casualty Care Course (C4)

Location: Academy of Health Sciences, Fort Sam Houston, San Antonio, Texas

Scope: Initial management of casualties in high-intensity conflict at forward points in the casualty care system; leadership and decision making; tactical aspects of combat. Academically and physically demanding field training; primarily for physicians and dentists; triservice.

Designing Effective Education Programs for Medical Department Personnel Workshop (DEEPMEDDEP)

Location: Naval School of Health Sciences, Bethesda, Maryland

Scope: Provides Medical Department officers serving in education billets with the requisite educational knowledge and skills essential for planning, coordinating, conducting, and evaluating sound training programs.

Financial and Material Management

Location: Naval School of Health Sciences, Bethesda, Maryland

Scope: Basic overview of financial and material management at activities and DOD levels; audit and internal review; activity budget formulation and execution; capital budgeting and property management; Navy Stock Fund; automated data processing systems; and supply operations and purchasing. Designed for health care administration MSCs entering financial management or supply positions. Basic understanding of accounting, business mathematics, and statistics are prerequisites.

Interagency Institute for Federal Health Care Executives

Location: Washington, DC (area)

Scope: Examines current issues in national health care policy and management and explores potential impact on federal health care systems; provides interaction of senior health care executives of Air Force, Army, Navy, Public Health Service, and Veterans Administration with course civilian and DOD faculty.

Leader Development Courses (formerly LMET)

Scope: Development of sequential levels of leadership and management skills at specific career points through problem solving, simulation exploration, and familiarization with competencies needed for outstanding performance.

Command Leader Development

Location: Naval School of Health Sciences, Bethesda, Maryland

Operating Forces Management Seminar

Location: Naval Dental School, Bethesda, Maryland

Scope: Principles unique to management of a dental care delivery system in the fleet (*e.g.*, shipboard supply procedures, legal issues, current policies).

Operating Room Nurse Orientation

Location: Naval Hospital, Charleston, South Carolina

Scope: Orientation to perioperative nursing; operating room environment, procedures, instruments, and equipment; aseptic technique; and nursing management of surgical suites. Graduates will be assigned as an operating room staff nurse.

Operational Entomology

Location: Navy Disease Vector Ecology Control Centers, Alameda, California; Jacksonville, Florida

Scope: Advanced training in vector-borne disease profiles, field epidemiological principles for vector-borne diseases, contingency vector control principles, ground vector control operations and equipment, aerial dispersal, vector surveillance techniques, and contingency planning and problem solving.

Patient Services Administration

Location: Naval School of Health Sciences, Bethesda, Maryland

Scope: Principles of management of patient services programs focused on alternative federal and civilian health care services; health benefits programs and beneficiaries, audits, quality assurance, patient disposition, and decedent affairs.

Plans, Operation, and Medical Intelligence (POMI)

Location: Naval School of Health Sciences, Bethesda, Maryland

Scope: Introduces or updates knowledge and skills required to plan, implement, and monitor command readiness programs; coordinate and execute command medical support for contingency operations (*e.g.*, MMARTs, CMCHS). Designed for incumbents of POMI billets. SECRET clearance required.

Practical Comptrollership

Location: Naval Postgraduate School, Monterey, California

Scope: Overview of all facets of comptrollership: accounting, budgeting, planning, internal review, management evaluation, and performance. For incumbents or those going to financial management billets.

Professional Military Comptroller

Location: Air University Leadership and Management Development Center, Maxwell Air Force Base, Montgomery, Alabama

Scope: A broad, general course emphasizing theoretical, legal, and management concerns within a comptroller organization.

Prospective Commanding Officer/Prospective Executive Officer (PCO/PXO) Shore Station Management

Location: Washington, DC (area) conducted by BUPERS

Scope: For commanding officers and executive officers.

Senior Leader Development

Location: Variable, local area

Scope: For OICs, directors of hospital services, heads of major departments, others in significant supervisory positions.

Intermediate Leader Development

Location: Various locations

Scope: For heads of small departments, division officers, other supervisors at O-3/O-4 level.

Management Development (MANDEV)

Location: Naval School of Health Sciences, Bethesda, Maryland

Scope: Theory and practice of basic management principles as applied to the Navy health care system; realistic decision making exercises. Primarily for officers whose duties have been clinical but are gaining more management responsibility (O-2/O-5).

Manpower Management

Location: Naval School of Health Sciences, Bethesda, Maryland

Scope: Basic instruction in the technical aspects of both military and civilian manpower management functions including Uniform Staffing Methodologies, Commercial Activities and the Navy Manpower Engineering Program.

Medical Effects of Nuclear Weapons

Location: Various locations

Scope: Conducted by the Armed Forces Radiobiology Research Institute (AFRRI), Bethesda, Maryland. Familiarity with history, biomedical effects, and basic principles of nuclear weapons; principles of fallout, acute radiation syndrome, electromagnetic radiation, and diagnosis and treatment of radiation casualties.

Medical Management of Chemical Casualties

Location: Biomedical Laboratory, Chemical Systems Laboratory (Edgewood Area), Aberdeen Proving Ground, Maryland

Scope: Principles of management and treatment of acute chemical warfare agent injuries. For officers, especially physicians and nurses, assigned to areas or contingency units with greatest potential for managing chemical casualties.

Medical Regulating

Location: Naval School of Health Sciences, Bethesda, Maryland, and other sites

Scope: Instruction in the functions and responsibilities of coordinating and controlling the evacuation and movement of patients through the various levels of medical support including operational communication procedures.

Scope: Principles of managing personnel, financial, and facility resources of major shore establishments. PCOs/PXOs usually attend enroute to permanent duty station.

Quality Assurance/Risk Management

Location: Naval School of Health Sciences, Bethesda, Maryland

Scope: In-depth analysis of BUMED and JCAH standards and methods of developing viable assessment tools and performance standards required to implement and sustain a QA/RM program at the activity level. Designed for incumbent or prospective QA/RM coordinators.

Strategic Medical Readiness and Contingency Course

Location: Naval School of Health Sciences, Bethesda, Maryland

Scope: Examines policy development at National, Department of Defense, Navy and Marine Corps, and Medical Department levels; includes overviews of national and international economic and political analysis, joint command organizations, and organizational and operational doctrine and plans. Designed for O-5/O-6 officers; SECRET clearance required.

Surface Warfare Medical Officer Indoctrination Course (SWMOIC)

Location: Naval Schools of Health Sciences, Portsmouth, Virginia; San Diego, California

Scope: To provide Medical Officers newly assigned to surface ships the opportunity to acquire skills in shipboard operations, department head duties, preventive medicine, and clinical aspects of medical practice at sea.

Tropical Medicine

Location: Naval Hospital Roosevelt Roads, Puerto Rico

Scope: Clinical and research aspects of tropical (malarial, diarrheal, parasitic, viral, and nutritional) diseases; practical field experience with the modifying influence of a tropical environment on diseases prevalent in temperate zones.

APPENDIX K. CATEGORIZATION OF ORGANIZATIONAL POSITION

COHORT	RESPONSES
Commanding Officer	Surgeon General Commanding Officer Officer-in-Charge
Executive Officer	Executive Officer
Director	Director for Administration Director for Ancillary Services Director for Branch Clinics Director for Base Operations Director for Coordinated Care Policy Director for Community Health Services Director for Field Operations Director for Health Services Director for Logistics Director for Medical Services Director for Medical Programs Director for Nursing Services Director for Occupational Health Director for Resources Director for Resources, Plans, & Policy Director for Service Medicine Director for Strategic Planning Director for Surgical Services Director Area Dental Labs Assistant Director Medical Services Assistant Director Nursing Services Assistant Director Occupational Health
Department Head	Department Head Comptroller
Operational Forces	Division Surgeon Director Undersea Medicine Fleet Liaison Officer Fleet Surgeon Force Surgeon Wing Medical Officer
Other	Anesthesiologist Assignment Officer Assistant CNR Defense Assistant Chief Technical Operations Assistant Naval Inspector General Assistant Plans and Analysis BUMED Division Officer Clinic Director Chief Naval Dental Corps Director Aerospace Medical Division/BUMED Deputy Assistant Secretary of Defense

Deputy Chief Medical Corps
Deputy Director/Non-Hospital
Deputy Director Nurse Corps
Director Dental Clinic
Director Health Care Planning/BUMED
Dental Officer
Director Officer Indoctrination School
Director Planning/BUMED
Director Professional Development/BUMED
Director Radiobiology Research Institute
Director Tropical Public Health
Environmental Health Officer
Epidemiologist
Force Master Chief
Medical Corps Detailer
Medical Flag Officer
MSC Career Plans Officer/BUMED
Medical Services Officers
Nurse Corps Plans Officer
Navy Liaison OCHAMPUS
Professor Obstetrics and Gynecology
Oral Surgeon
Physician's Assistant
Program Manager
Specialty Adviser
Special Assistant Evaluations
Special Assistant Headquarters Staff
Senior Nurse IG Team
Staff Audiologist
Staff Physician
Student
Surgeon
Total Quality Leadership Coordinator

APPENDIX L. TABLE OF "GOOD" DELTAS, BY MEDICAL COMMUNITY

	n=422	n=93	n=29	n=153	n=50	n=97
	OVERALL	HCA	AH	MC	NC	DC
	GENERAL MANAGEMENT					
	1. DECISION MAKING/ PROBLEM SOLVING					
Q7	34.6	49.5	31	32	18	34
Q13	41	54.8	41.4	41.8	22	36.1
Q14	58	74.2	58.6	52	44	55.7
Q15	44	57	58.6	39.5	46	37.1
Q20	37	43	31	40.5	22	37.1
AVG	42.9	55.7	44.1	41.2	30.4	40
	2. COMMUNICATIONS					
Q34	43	48.8	37.9	39.2	38	46.4
Q53	51	53.8	58.6	51.6	44	47.4
Q54	44	45.2	48.3	39.9	46	40.2
Q55	41	46.2	44.8	41.8	32	32
Q56	44	44.1	41.4	46.4	52	38.1
Q57	43	43	51.7	41.4	46	40.2
Q58	50	50.5	55.2	49	54	44.3
Q59	55	57	65.5	57.5	50	52.6
Q60	43	51.1	58.6	40.5	42	35.1
AVG	46	48.9	51.3	45.3	44.9	41.8
	3. QUANTATIVE ANALYSIS					
Q17	35	40.9	37.9	36.2	12.2	34
Q18	31	39.8	34.5	32.9	12	24.7
AVG	33	40.4	36.2	34.6	12.1	29.4
	4. INFORMATION MANAGEMENT					
Q16	22	31.2	27.6	21.7	6	17.5
Q19	31	47.3	27.6	30.7	18	25.8
AVG	26.5	39.3	27.6	26.2	12	21.7
	5. MANAGING QUALITY					
Q11	39	43	34.5	43.8	22	36.1
	6. STRATEGIC PLANNING					

Q8	26	35.5	27.6	23.5	14	22.7
Q10	29	47.3	17.2	22.5	14	27.8
AVG	27.5	41.4	22.4	23	14	25.3
			7. SYSTEMS PERSPECTIVE			
Q12	50	64.5	44.8	41.2	49	46.4
Q33	52	64.5	51.7	45.8	38	53.6
Q36	59	65.2	65.5	58.2	42.6	64.2
AVG	53.7	64.7	54	48.4	43.2	54.7
			HEALTH RESOURSES MANAGEMENT			
			1. FINANCIAL MANAGEMENT			
Q1	29	52.7	20.7	24.3	12	21.9
Q2	30	49.5	27.6	22.9	14	27.8
Q3	33	51.6	34.5	21.7	18	30.9
Q5	37	43	48.3	29.6	22	40.9
Q6	32	49.5	34.5	24.8	16	28.9
AVG	32.2	49.3	33.1	24.7	16.4	30.1
			2. PERSONNEL MANAGEMENT			
Q47	32	53.8	24.1	24.8	30	22.7
Q48	49	67.7	48.3	35.3	44	45.4
Q49	42	54.3	37.9	32.7	42	45.4
AVG	41	58.6	36.8	30.9	38.7	37.8
			3. MATERIALS MANAGEMENT			
Q28	37	47.3	31	37.3	22	37.1
Q29	32	54.8	27.6	21.7	12	28.1
Q30	43	69.9	34.5	32	34	42.3
AVG	37.3	57.3	31	30.3	22.7	35.8
			4. PRODUCTIVITY/OUTCOMES MANAGEMENT			
Q9	31	45.2	27.6	24.2	20	28.9
			5. FACILITIES MANAGEMENT			
Q27	34	31.2	58.6	35.9	24	32
Q31	43	63.4	44.8	34.6	30	40.2
Q32	44	62.4	48.3	35.3	40	40.2
AVG	40.3	52.3	50.6	35.3	31.3	37.5

ORGANIZATIONAL BEHAVIOR						
1. GROUP DYNAMICS						
Q37	55	58.1	50	54.2	52	53.6
Q40	49	51.6	53.6	49	46	44.3
Q41	44	47.3	37.9	42.5	42	48.5
Q51	48	61.3	48.3	41.2	40	46.4
AVG	49	54.6	47.5	46.7	45	48.2
2. INDIVIDUAL BEHAVIOR						
Q35	54	62.4	55.2	51	38	52.6
Q42	41	45.2	48.3	37.9	40	38.1
Q44	51	52.7	51.7	48.4	54	49.5
Q46	48	49.5	41.4	49.3	36	51.5
AVG	48.5	52.5	49.2	46.7	42	47.9
3. ORGANIZATIONAL DESIGN						
Q43	44	47.3	51.7	40.5	46	40.2
Q45	47	57	48.3	40.5	24	51.5
AVG	45.5	52.2	50	40.5	35	45.9
4. LABOR / MANAGEMENT RELATIONS						
Q50	38	45.2	24.1	20.9	18	27.1
5. CONFLICT RESOLUTION						
Q39	47	43	34.5	32	36	38.1
6. MANAGING CHANGE / TECHNOLOGY						
Q38	45	45.2	48.3	43.1	44	44.3
ALTERNATIVE HEALTH CARE DELIVERY SYSTEMS						
1. ALTERNATIVE HEALTH CARE DELIVERY SYSTEMS						
Q4	30	35.5	37.9	29.6	12	34.7
HEALTH CARE LAW AND POLICY						
1. LEGAL ISSUES						
Q21	47	60.2	34.5	40.1	26	53.6
Q22	52	62.4	44.8	43.8	34	60.8
Q23	50	61.3	48.3	41.8	36	50.5
Q24	45	60.2	41.4	37.9	40	41.2
Q25	49	48.4	27.6	43.8	34	28.9
Q26	32	40.9	51.7	34.6	22	24.7
AVG	45.8	55.6	41.4	40.3	32	43.3
2. ETHICS						
Q52	55	58.1	58.6	53.6	48	58.8

APPENDIX M. TABLE OF EDUCATIONAL BACKGROUND VARIABLES

	n=93	n=30	n=50	n=154	n=97	
EDUCATION	MSC/HCA	MSC/AH	NC	MC	DC	TOTALS
DOD POSTGRAD						
ARMED FORCES STAFF	8	0	0	0	0	8
IND COL ARM FOR	2	0	2	4	1	9
NPS	7	1	4	0	0	12
ARMY BAYLOR	2	0	2	1	0	5
NWC	13	0	1	4	2	20
MC CSC	6	1	0	0	2	9
OTHER	20	3	4	8	2	37
TRAD GRAD MAN						
MHA	21	0	0	1	0	22
MPH	4	8	0	27	2	41
MBA	23	1	3	0	1	28
BS/HCA	20	3	1	0	1	25
BBA	3	0	0	0	0	3
OTHER	26	4	7	12	4	53
NON TRAD MAN						
UNIV WISC-MAD	0	0	0	0	0	0
PIM SERIES	0	0	0	35	0	35
MEP	0	0	0	1	0	1
UNIV NC KRON SCHOLAR	0	0	0	0	0	0
CORNELL HEDP	4	0	3	2	3	12
J&J WHARTON NURSES	0	0	3	0	0	3
ESTES PARK SEMINAR	0	0	0	0	0	0
OTHER	10	2	2	12	6	32
	SERVICE SHORT COURSES					
PROS CO/XO	24	7	5	42	29	107
INTER INST FHCE	15	3	15	27	22	82
LMET	64	18	38	101	88	309
COMMAND	27	8	5	41	41	122
SENIOR	34	7	29	63	67	200

INTERMEDIATE	30	10	14	38	28	120
STRAT MRC	48	15	31	89	67	250
MAN DEV	10	13	8	16	0	47
FIN & MAT MAN	16	3	2	0	0	21
PAT SVC ADMIN	18	0	0	1	0	19
PLAN OPS MED INT	10	0	0	2	0	12
MAN MGT	7	0	0	1	1	9
PROF MIL COMPT	5	3	0	0	0	8
SEN LEAD SEM (TQL)	45	8	22	60	40	175
OTHER	20	8	11	32	13	84

APPENDIX N. TABLE OF "GOOD" DELTAS FOR HCA COHORT BY "SOME," VERSUS "NONE" MANAGEMENT EDUCATION

ONLY MSC (HCA) COHORT SOME VS NO MGT EDUCATION		
	n=23	n=70
	NONE	SOME
GENERAL MANAGEMENT		
1. DECISION MAKING/ PROBLEM SOLVING		
Q7	47.8	50
Q13	56.5	54.3
Q14	87	70
Q15	69.6	52.9
Q20	60.9	37.1
AVG	64.4	52.9
2. COMMUNICATIONS		
Q34	56.5	45.7
Q53	60.9	51.4
Q54	43.5	45.7
Q55	56.5	42.9
Q56	52.2	41.4
Q57	52.2	40
Q58	60.9	47.1
Q59	73.9	51.4
Q60	60.9	47.8
AVG	57.5	45.9
3. QUANTATIVE ANALYSIS		
Q17	43.5	40
Q18	39.1	40
AVG	41.3	40
4. INFORMATION MANAGEMENT		
Q16	30.4	31.4
Q19	52.2	45.7
AVG	41.3	38.6

5. MANAGING QUALITY		
Q11	43.5	42.9
6. STRATEGIC PLANNING		
Q8	34.8	35.7
Q10	60.9	42.9
AVG	47.8	39.3
7. SYSTEMS PERSPECTIVE		
Q12	73.9	61.4
Q33	60.9	65.7
Q36	78.3	60.9
AVG	71	62.7
HEALTH RESOURSES MANAGEMENT		
1. FINANCIAL MANAGEMENT		
Q1	56.5	51.4
Q2	47.8	50
Q3	47.8	52.9
Q5	34.8	45.7
Q6	52.2	48.6
AVG	47.8	49.7
2. PERSONNEL MANAGEMENT		
Q47	43.5	57.1
Q48	82.6	62.9
Q49	60.9	52.2
AVG	62.3	57.4
3. MATERIALS MANAGEMENT		
Q28	56.5	44.3
Q29	52.2	55.7
Q30	69.6	70
AVG	59.4	56.7
4. PRODUCTIVITY/OUTCOMES MANAGEMENT		
Q9	34.8	48.6
5. FACILITIES MANAGEMENT		
Q27	43.5	27.1
Q31	65.2	62.9
Q32	60.9	62.9
AVG	56.5	51

ORGANIZATIONAL BEHAVIOR		
1. GROUP DYNAMICS		
Q37	69.6	54.3
Q40	73.9	44.3
Q41	78.3	37.1
Q51	65.2	60
AVG	71.7	48.9
2. INDIVIDUAL BEHAVIOR		
Q35	87	54.3
Q42	60.9	40
Q44	69.6	47.1
Q46	65.2	44.3
AVG	70.7	46.4
3. ORGANIZATIONAL DESIGN		
Q43	56.5	44.3
Q45	78.3	50
AVG	67.4	47.1
4. LABOR / MANAGEMENT RELATIONS		
Q50	43.5	45.7
5. CONFLICT RESOLUTION		
Q39	60.9	37.1
6. MANAGING CHANGE / TECHNOLOGY		
Q38	52.2	42.9
ALTERNATIVE HEALTH CARE DELIVERY SYSTEMS		
1. ALTERNATIVE HEALTH CARE DELIVERY SYSTEMS		
Q4	39.1	34.3
HEALTH CARE LAW AND POLICY		
1. LEGAL ISSUES		
Q21	56.5	61.4
Q22	60.9	62.9
Q23	65.2	60
Q24	60.9	60
Q25	56.5	45.7
Q26	43.5	40
AVG	57.2	55

2. ETHICS		
Q52	65.2	55.7

APPENDIX O. TABLE OF "GOOD" DELTAS FOR NUMBER OF SHORT COURSES TAKEN FOR HCA COHORT

NUMBERS OF SHORT COURSES TAKEN			
N=93	n=27	n=42	n=24
	0 to 2	3 to 4	5 or more
GENERAL MANAGEMENT			
1. DECISION MAKING/ PROBLEM SOLVING			
Q7	59.3	33.3	66.7
Q13	63	45.2	62.5
Q14	85.2	61.9	83.3
Q15	59.3	45.2	75
Q20	55.6	33.3	45.8
AVG	64.4	43.8	66.7
2. COMMUNICATIONS			
Q34	48.2	33.3	75
Q53	55.6	47.6	62.5
Q54	51.9	45.2	37.5
Q55	48.2	38.1	58.3
Q56	44.4	42.9	45.8
Q57	40.7	33.3	62.5
Q58	55.6	33.3	75
Q59	63	47.6	66.7
Q60	48.2	46.3	62.5
AVG	50.6	40.9	60.6
3. QUANTATIVE ANALYSIS			
Q17	51.9	28.6	50
Q18	48.2	26.2	54.2
AVG	50	27.4	52.1
4. INFORMATION MANAGEMENT			
Q16	33.3	31	29.2
Q19	40.7	45.2	58.3
AVG	37	38.1	43.8
5. MANAGING QUALITY			
Q11	33.3	40.5	58.3

	6. STRATEGIC PLANNING		
Q8	37.1	26.2	50
Q10	48.2	38.1	62.5
AVG	42.6	32.1	56.3
	7. SYSTEMS PERSPECTIVE		
Q12	66.7	52.4	83.3
Q33	63	57.1	79.2
Q36	70.4	56.1	75
AVG	66.7	55.2	79.2
	HEALTH RESOURSES MANAGEMENT		
	1. FINANCIAL MANAGEMENT		
Q1	66.7	38.1	62.5
Q2	59.3	40.5	54.2
Q3	59.3	38.1	66.7
Q5	40.7	35.7	58.3
Q6	59.3	38.1	58.3
AVG	57	38.1	60
	2. PERSONNEL MANAGEMENT		
Q47	48.2	45.2	75
Q48	70.4	57.1	83.3
Q49	59.3	42.9	69.6
AVG	59.3	48.4	76
	3. MATERIALS MANAGEMENT		
Q28	55.6	35.7	58.3
Q29	48.2	52.4	66.7
Q30	74.1	57.1	87.5
AVG	59.3	48.4	70.8
	4. PRODUCTIVITY/OUTCOMES MANAGEMENT		
Q9	40.7	33.3	70.8
	5. FACILITIES MANAGEMENT		
Q27	25.9	23.8	50
Q31	70.4	50	79.2
Q32	70.4	45.2	83.3
AVG	55.6	39.7	70.8
	ORGANIZATIONAL BEHAVIOR		
	1. GROUP DYNAMICS		
Q37	63	50	66.7

Q40	51.9	45.2	62.5
Q41	44.4	40.5	62.5
Q51	70.4	54.8	62.5
AVG	57.4	47.6	63.5
2. INDIVIDUAL BEHAVIOR			
Q35	74.1	50	70.8
Q42	40.7	38.1	62.5
Q44	48.2	50	62.5
Q46	59.3	40.5	54.2
AVG	55.6	44.6	62.5
3. ORGANIZATIONAL DESIGN			
Q43	48.2	38.1	62.5
Q45	51.9	45.2	83.3
AVG	50	41.7	72.9
4. LABOR / MANAGEMENT RELATIONS			
Q50	44.4	35.7	62.5
5. CONFLICT RESOLUTION			
Q39	40.7	35.7	58.3
6. MANAGING CHANGE / TECHNOLOGY			
Q38	44.4	38.1	58.3
ALTERNATIVE HEALTH CARE DELIVERY SYSTEMS			
1. ALTERNATIVE HEALTH CARE DELIVERY SYSTEMS			
Q4	44.4	23.8	45.8
HEALTH CARE LAW AND POLICY			
1. LEGAL ISSUES			
Q21	63	57.1	62.5
Q22	63	59.5	66.7
Q23	59.3	57.1	70.8
Q24	48.2	59.5	75
Q25	48.2	42.9	58.3
Q26	37	38.1	50
AVG	53.1	52.4	63.9
2. ETHICS			
Q52	63	50	66.7

APPENDIX P. TABLE OF "GOOD" DELTAS FOR YEARS IN A MANGEMENT POSITION FOR HCA COHORT

	YEARS IN A MANAGEMENT POSITION			
N=93	n=22	n=29	n=25	n=17
	0 TO 10	10.5 TO 15	16 TO 20	OVER 20
	GENERAL MANAGEMENT			
	1. DEC ISION MAKING/ PROBLEM SOLVING			
Q7	31.8	44.8	60	64.7
Q13	50	62.1	52	52.9
Q14	81.8	79.3	52	88.2
Q15	59.1	62.1	48	58.8
Q20	31.8	55.2	32	52.9
AVG	50.9	60.7	48.8	63.5
	2. COMMUNICATIONS			
Q34	45.5	41.4	48	64.7
Q53	59.1	62.1	48	41.2
Q54	36.4	58.6	44	35.3
Q55	50	44.8	48	41.2
Q56	40.9	44.8	52	35.3
Q57	54.6	37.9	40	41.2
Q58	50	51.7	48	52.9
Q59	50	65.5	56	52.9
Q60	45.5	53.6	56	47.1
AVG	48	51.2	48.9	45.8
	3. QUANTATIVE ANALYSIS			
Q17	31.8	37.9	56	35.3
Q18	22.7	44.8	44	47.1
AVG	27.3	41.4	50	41.2
	4. INFORMATION MANAGEMENT			
Q16	31.8	27.6	36	29.4
Q19	54.6	44.8	40	52.9
AVG	43.2	36.2	38	41.2

	5. MANAGING QUALITY			
Q11	36.4	41.4	36	64.7
	6. STRATEGIC PLANNING			
Q8	22.7	37.9	44	35.3
Q10	40.9	44.8	44	64.7
AVG	31.8	41.4	44	50
	7. SYSTEMS PERSPECTIVE			
Q12	63.6	69	56	70.6
Q33	54.6	58.6	68	82.4
Q36	59.1	69	60	75
AVG	59.1	65.5	61.3	76
	HEALTH RESOURSES MANAGEMENT			
	1. FINANCIAL MANAGEMENT			
Q1	40.9	37.9	56	88.2
Q2	22.7	51.7	44	88.2
Q3	31.8	44.8	56	82.4
Q5	31.8	37.9	36	76.5
Q6	45.5	34.5	52	76.5
AVG	34.5	41.4	48.8	82.4
	2. PERSONNEL MANAGEMENT			
Q47	40.9	44.8	68	64.7
Q48	59.1	72.4	68	70.6
Q49	50	48.3	58.3	64.7
AVG	50	55.2	64.8	66.7
	3. MATERIALS MANAGEMENT			
Q28	31.8	44.8	52	64.7
Q29	40.9	48.3	68	64.7
Q30	54.6	58.6	84	88.2
AVG	42.4	50.6	68	72.6
	4. PRODUCTIVITY/OUTCOMES MANAGEMENT			
Q9	27.3	41.4	56	58.8
	5. FACILITIES MANAGEMENT			
Q27	31.8	20.7	32	47.1
Q31	40.9	72.4	72	64.7
Q32	36.4	58.6	80	76.5
AVG	36.4	50.6	61.3	62.7

	ORGANIZATIONAL BEHAVIOR			
	1. GROUP DYNAMICS			
Q37	50	55.2	60	70.6
Q40	54.6	55.2	48	47.1
Q41	50	44.8	48	47.1
Q51	50	72.4	68	47.1
AVG	51.1	56.9	56	52.9
	2. INDIVIDUAL BEHAVIOR			
Q35	59.1	69	52	70.6
Q42	50	44.8	36	52.9
Q44	45.5	55.2	56	52.9
Q46	40.9	58.6	48	47.1
AVG	48.9	56.9	48	55.9
	3. ORGANIZATIONAL DESIGN			
Q43	44.5	51.7	52	35.3
Q45	54.6	55.2	56	64.7
AVG	49.5	53.4	54	50
	4. LABOR / MANAGEMENT RELATIONS			
Q50	22.7	48.3	52	58.8
	5. CONFLICT RESOLUTION			
Q39	40.9	48.3	32	52.9
	6. MANAGING CHANGE / TECHNOLOGY			
Q38	36.4	44.8	48	52.9
	ALTERNATIVE HEALTH CARE DELIVERY SYSTEMS			
	1. ALTERNATIVE HEALTH CARE DELIVERY SYSTEMS			
Q4	27.3	31	28	64.7
	HEALTH CARE LAW AND POLICY			
	1. LEGAL ISSUES			
Q21	40.9	69	60	70.6
Q22	36.4	72.4	64	76.5
Q23	50	65.5	64	64.7
Q24	36.4	65.5	64	76.5
Q25	40.9	44.8	40	76.5
Q26	31.8	34.5	48	52.9
AVG	39.4	58.6	56.7	69.6
	2. ETHICS			
Q52	40.9	65.5	64	58.8

APPENDIX Q. TABLE OF "GOOD" DELTAS FOR NUMBER OF MANAGEMENT POSITIONS FOR HCA COHORT

NUMBER OF MANAGEMENT POSITIONS			
N=93	n=26	n=33	n=34
	0 TO 4	5 TO 7	8 AND UP
GENERAL MANAGEMENT			
1. DECISION MAKING/ PROBLEM SOLVING			
Q7	38.5	45.5	61.8
Q13	46.2	69.7	47.1
Q14	80.8	75.8	67.7
Q15	57.7	60.6	52.9
Q20	42.3	51.5	35.3
AVG	53.1	60.6	52.9
2. COMMUNICATIONS			
Q34	50	48.5	47.1
Q53	57.7	60.6	44.1
Q54	50	48.5	38.2
Q55	53.9	45.5	41.2
Q56	42.3	51.5	38.2
Q57	46.2	45.5	38.2
Q58	46.2	54.6	50
Q59	50	72.7	47.1
Q60	50	56.3	47.1
AVG	49.6	53.7	43.5
3. QUANTATIVE ANALYSIS			
Q17	38.5	36.4	47.1
Q18	26.9	39.4	50
AVG	32.7	37.9	48.5
4. INFORMATION MANAGEMENT			
Q16	26.9	36.4	29.4
Q19	53.9	39.4	50
AVG	40.4	37.9	39.7
5. MANAGING QUALITY			
Q11	46.2	39.4	44.1

	6. STRATEGIC PLANNING		
Q8	19.2	42.4	41.2
Q10	42.3	48.5	50
AVG	30.8	45.5	45.6
	7. SYSTEMS PERSPECTIVE		
Q12	61.5	69.7	61.8
Q33	61.5	57.6	73.5
Q36	57.7	78.8	57.6
AVG	60.3	68.7	64.3
	HEALTH RESOURSES MANAGEMENT		
	1. FINANCIAL MANAGEMENT		
Q1	42.3	48.5	64.7
Q2	26.9	57.6	58.8
Q3	34.6	48.5	67.7
Q5	26.9	54.6	44.1
Q6	38.5	45.5	61.8
AVG	33.8	50.9	59.4
	2. PERSONNEL MANAGEMENT		
Q47	42.3	51.5	64.7
Q48	65.4	66.7	70.6
Q49	50	57.6	54.6
AVG	52.6	58.6	63.3
	3. MATERIALS MANAGEMENT		
Q28	38.5	45.5	55.9
Q29	42.3	54.6	64.7
Q30	69.2	54.6	85.3
AVG	50	51.5	68.6
	4. PRODUCTIVITY/OUTCOMES MANAGEMENT		
Q9	26.9	51.5	52.9
	5. FACILITIES MANAGEMENT		
Q27	30.8	33.3	29.4
Q31	46.2	75.8	64.7
Q32	50	57.6	76.5
AVG	42.3	55.6	56.9
	ORGANIZATIONAL BEHAVIOR		
	1. GROUP DYNAMICS		
Q37	53.9	60.6	58.8

Q40	57.7	60.6	38.2
Q41	50	48.5	44.1
Q51	57.7	63.6	61.8
AVG	54.8	58.3	50.7
2. INDIVIDUAL BEHAVIOR			
Q35	69.2	66.7	52.9
Q42	53.9	42.4	41.2
Q44	53.9	54.6	50
Q46	42.3	60.6	44.1
AVG	54.8	56.1	47.1
3. ORGANIZATIONAL DESIGN			
Q43	42.3	57.6	41.2
Q45	42.3	69.7	55.9
AVG	42.3	63.6	48.5
4. LABOR / MANAGEMENT RELATIONS			
Q50	23.1	57.6	50
5. CONFLICT RESOLUTION			
Q39	50	48.5	32.4
6. MANAGING CHANGE / TECHNOLOGY			
Q38	38.5	51.5	44.1
ALTERNATIVE HEALTH CARE DELIVERY SYSTEMS			
1. ALTERNATIVE HEALTH CARE DELIVERY SYSTEMS			
Q4	19.2	42.4	41.2
HEALTH CARE LAW AND POLICY			
1. LEGAL ISSUES			
Q21	53.9	63.6	61.8
Q22	50	63.6	70.6
Q23	53.9	66.7	61.8
Q24	42.3	63.6	70.6
Q25	46.2	51.5	47.1
Q26	38.5	45.5	38.2
AVG	47.4	59.1	58.3
2. ETHICS			
Q52	57.7	57.6	58.8

APPENDIX R. TABLE OF "GOOD" DELTAS FOR MONTHS AS AN EXECUTIVE OFFICER FOR HCA COHORT

MONTHS AS AN EXECUTIVE OFFICER (HCA)			
N=87	N=38	N=26	N=23
	NONE	1 to 24	OVER 24
GENERAL MANAGEMENT			
1. DECISION MAKING/ PROBLEM SOLVING			
Q7	44.7	38.5	69.6
Q13	47.4	57.7	60.9
Q14	76.3	65.4	73.9
Q15	52.6	61.5	56.5
Q20	42.1	38.5	47.8
AVG	52.6	52.3	61.7
2. COMMUNICATIONS			
Q34	39.5	50	56.5
Q53	52.6	50	56.5
Q54	55.3	38.5	34.8
Q55	50	46.2	30.4
Q56	50	34.6	39.1
Q57	42.1	34.6	43.5
Q58	44.7	46.2	60.9
Q59	57.9	53.9	56.5
Q60	54.1	42.3	47.8
AVG	49.6	44	47.3
3. QUANTATIVE ANALYSIS			
Q17	44.7	46.2	30.4
Q18	39.5	34.6	47.8
AVG	42.1	40.4	39.1
4. INFORMATION MANAGEMENT			
Q16	36.8	30.8	21.7
Q19	44.7	46.2	43.5
AVG	40.8	38.5	32.6
5. MANAGING QUALITY			
Q11	44.7	34.6	47.8

	6. STRATEGIC PLANNING		
Q8	34.2	30.8	43.5
Q10	47.4	46.2	47.8
AVG	40.8	38.5	45.7
	7. SYSTEMS PERSPECTIVE		
Q12	68.4	53.9	60.9
Q33	57.9	61.5	73.9
Q36	68.4	69.2	60.9
AVG	64.9	61.5	65.2
	HEALTH RESOURSES MANAGEMENT		
	1. FINANCIAL MANAGEMENT		
Q1	50	50	65.2
Q2	44.7	42.3	69.6
Q3	44.7	53.8	65.2
Q5	36.8	53.9	47.8
Q6	50	42.3	56.5
AVG	45.3	48.5	60.9
	2. PERSONNEL MANAGEMENT		
Q47	50	50	60.9
Q48	65.8	61.5	73.9
Q49	50	52	60.9
AVG	55.3	54.5	65.2
	3. MATERIALS MANAGEMENT		
Q28	47.4	38.5	56.5
Q29	57.9	50	60.9
Q30	71.1	57.7	82.6
AVG	58.8	48.7	66.7
	4. PRODUCTIVITY/OUTCOMES MANAGEMENT		
Q9	39.5	46.2	56.5
	5. FACILITIES MANAGEMENT		
Q27	23.7	26.9	43.5
Q31	63.2	61.5	60.9
Q32	57.9	53.9	73.9
AVG	48.2	47.4	59.4

ORGANIZATIONAL BEHAVIOR			
1. GROUP DYNAMICS			
Q37	60.5	50	60.9
Q40	50	57.7	47.8
Q41	44.7	46.2	47.8
Q51	73.7	46.2	52.2
AVG	57.2	50	52.2
2. INDIVIDUAL BEHAVIOR			
Q35	63.2	69.2	56.5
Q42	42.1	42.3	43.5
Q44	63.2	42.3	43.5
Q46	50	46.2	52.2
AVG	54.6	50	48.9
3. ORGANIZATIONAL DESIGN			
Q43	44.7	50	39.1
Q45	52.6	50	65.2
AVG	48.7	50	52.2
4. LABOR / MANAGEMENT RELATIONS			
Q50	34.2	50	56.5
5. CONFLICT RESOLUTION			
Q39	44.7	38.5	39.1
6. MANAGING CHANGE / TECHNOLOGY			
Q38	44.7	46.2	43.5
ALTERNATIVE HEALTH CARE DELIVERY SYSTEMS			
1. ALTERNATIVE HEALTH CARE DELIVERY SYSTEMS			
Q4	26.3	38.5	47.8
HEALTH CARE LAW AND POLICY			
1. LEGAL ISSUES			
Q21	57.9	46.2	78.3
Q22	57.9	50	82.6
Q23	65.8	50	69.6
Q24	50	53.9	78.3
Q25	55.3	30.8	56.5
Q26	42.1	26.9	47.8
AVG	54.8	42.9	68.8
2. ETHICS			
Q52	65.8	57.7	47.8

APPENDIX S. TABLE OF "GOOD" DELTAS FOR MONTHS AS A COMMANDING OFFICER FOR HCA COHORT

MONTHS AS A COMMANDING OFFICER (HCA)			
N=85	N=55	N=15	N=15
	NONE	1 to 24	OVER 24
GENERAL MANAGEMENT			
1. DECISION MAKING/ PROBLEM SOLVING			
Q7	43.6	46.7	73.3
Q13	52.7	40	66.7
Q14	72.7	80	73.3
Q15	54.6	53.3	60
Q20	41.8	33.3	60
AVG	53.1	50.7	66.7
2. COMMUNICATIONS			
Q34	40	60	60
Q53	54.6	53.3	53.3
Q54	47.3	33.3	46.7
Q55	43.6	53.3	46.7
Q56	41.8	53.3	40
Q57	41.8	46.7	40
Q58	47.3	53.3	60
Q59	52.7	66.7	53.3
Q60	50	53.3	40
AVG	46.6	52.6	48.9
3. QUANTATIVE ANALYSIS			
Q17	45.5	33.3	40
Q18	45.5	26.7	40
AVG	45.5	30	40
4. INFORMATION MANAGEMENT			
Q16	36.4	26.7	26.7
Q19	49.1	46.7	46.7
AVG	42.7	36.7	36.7
5. MANAGING QUALITY			
Q11	41.8	40	46.7

	6. STRATEGIC PLANNING		
Q8	36.4	33.3	20
Q10	47.3	26.7	66.7
AVG	41.8	30	43.3
	7. SYSTEMS PERSPECTIVE		
Q12	61.8	66.7	60
Q33	61.8	73.3	66.7
Q36	63.6	71.4	66.7
AVG	62.4	70.5	64.4
	HEALTH RESOURSES MANAGEMENT		
	1. FINANCIAL MANAGEMENT		
Q1	47.3	53.3	73.3
Q2	45.5	60	60
Q3	47.3	53.3	66.7
Q5	43.6	46.7	53.3
Q6	49.1	60	53.3
AVG	46.5	54.7	61.3
	2. PERSONNEL MANAGEMENT		
Q47	50.9	53.3	53.3
Q48	65.5	73.3	60
Q49	50.9	64.3	60
AVG	55.8	63.7	57.8
	3. MATERIALS MANAGEMENT		
Q28	49.1	33.3	53.3
Q29	61.8	40	53.3
Q30	70.9	66.7	73.3
AVG	60.6	46.7	60
	4. PRODUCTIVITY/OUTCOMES MANAGEMENT		
Q9	45.5	40	60
	5. FACILITIES MANAGEMENT		
Q27	27.3	20	53.3
Q31	61.8	73.3	60
Q32	54.6	80	73.3
AVG	47.9	57.8	62.2
	ORGANIZATIONAL BEHAVIOR		
	1. GROUP DYNAMICS		
Q37	54.6	60	66.7

Q40	49.1	46.7	66.7
Q41	41.8	40	60
Q51	69.1	46.7	40
AVG	53.6	48.3	58.3
2. INDIVIDUAL BEHAVIOR			
Q35	63.6	53.3	66.7
Q42	40	46.7	53.3
Q44	50.9	46.7	60
Q46	45.5	46.7	66.7
AVG	50	48.3	61.7
3. ORGANIZATIONAL DESIGN			
Q43	45.5	46.7	46.7
Q45	49.1	66.7	66.7
AVG	47.3	56.7	56.7
4. LABOR / MANAGEMENT RELATIONS			
Q50	38.2	60	53.3
5. CONFLICT RESOLUTION			
Q39	40	46.7	46.7
6. MANAGING CHANGE / TECHNOLOGY			
Q38	41.8	53.3	46.7
ALTERNATIVE HEALTH CARE DELIVERY SYSTEMS			
1. ALTERNATIVE HEALTH CARE DELIVERY SYSTEMS			
Q4	30.9	40	53.3
HEALTH CARE LAW AND POLICY			
1. LEGAL ISSUES			
Q21	60	60	53.3
Q22	60	53.3	73.3
Q23	61.8	46.7	73.3
Q24	54.6	60	66.7
Q25	49.1	33.3	60
Q26	38.2	26.7	60
AVG	53.9	46.7	64.4
2. ETHICS			
Q52	60	60	46.7

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7.	Lt. Jerry L. Gardner ATTN: Manpower 6000 West Highway 98 Pensacola, FL 32512-0003	5