

Manual M-1, Operations. Part IX, Staffing Guidelines and Productivity Enhancements

**Chapter 17, Nuclear Medicine Service Staffing Guidelines, RCS 10-0747
(Paragraphs 17.01 through 17.07; Appendix 17A and Appendix 17B)**

This document includes:

Title page for M-1, Part IX, dated **April 21, 1989**

Foreword for M-1, Part IX, dated **April 21, 1989**

Introduction for M-1, Part IX, dated **April 21, 1989**

Contents pages for M-1, Part IX, dated **April 21, 1989**

Contents pages and Rescissions page for M-1, Part IX, dated **August 22, 1991**

Contents page for Chapter 17, dated **April 21, 1989**

Text for Chapter 17, dated **April 21, 1989**

Text for Appendix 17A and Appendix 17B, dated **April 21, 1989**

Transmittal sheet located at the end of the document:

Sheet dated **April 21, 1989**

**Department of
Veterans Affairs**

OPERATIONS

Staffing Guidelines and Productivity Enhancements

**M-1, Part IX
April 21, 1989**

**Veterans Health Services and
Research Administration
Washington, DC**

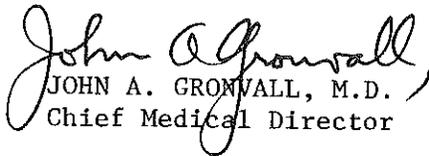
FOREWORD

This manual has been written to provide guidelines to equitably and effectively allocate manpower resources based on workload and the level of service to eligible veteran patients. The guidelines represent a viable mechanism for estimating manpower resource requirements in most program areas.

The Manpower Planning Division has developed, tested, and refined the guidelines as necessary as workload data was made available through published reporting requirements.

Prior to this document, guidelines were transmitted, tested, and implemented via VHS&RA circulars. With the exception of first generation guidelines, which are required in the development and testing of the staffing criteria, all guidelines thereafter are to become a part of this manual.

In addition to staffing guidelines, this manual provides guidance and procedures with regard to new management and productivity improvement initiatives and re-emphasizes existing initiatives which, heretofore, had not been fully implemented. These initiatives are: Circular No. A-76, "Performance of Commercial Activities," Cost Containment, Efficiency Review Program, and Productivity Improvement Program. These initiatives are identified as "Productivity Enhancements."

 M.D.
JOHN A. GRONVALL, M.D.
Chief Medical Director

INTRODUCTION

The development of guidelines for allocating staff to the medical facilities of the VHS&RA (Veterans Health Services and Research Administration) has been an evolutionary one in VA since the early 1960's, reflecting state-of-the-art advances since that time. These developmental efforts began with the formulation, through "work measurement" studies, of staffing guidelines for specific medical center activities, such as those engaged in by Dietetic and Supply Services. In the 1970's, the formulation of "core staffing ratios" ("x" staff per "y" patients) was introduced for all VHS&RA medical facilities.

The 1970's saw the publication of two major reports on VA's health care system that relied heavily on the core staffing concept. The first, ^{1/}published in response to a Presidential directive, resulted in substantial increases in key medical facility professional and support staff. In 1977, the NAS (National Academy of Sciences) presented a report, ^{2/}pursuant to Public Law 93-82, Section 201(c), of an extensive study of health care for American veterans, carried out over a 3-year period. The purpose of the NAS study was ". . . to determine a basis for the optimum number and categories of personnel and other resources to ensure the provision to eligible veterans of high quality care . . ." Unfortunately, the NAS study failed in this objective, touching only lightly on the central question of staffing requirements in VA's medical facilities. Instead of providing the VA with staffing guidelines based on the latest management engineering techniques, the NAS study simply utilized VA's own core staffing ratios. In fact, the NAS report recommended that "the VA develop procedures for assessment of patient needs and use them for staffing...that VA Central Office judiciously apply and continually refine existing instruments..." (pps. 286-7). In other words, the NAS recommended that VA undertake a task the NAS itself was asked to accomplish in its contract. In its response to Congress, ^{3/}VA concurred with this recommendation and thus committed itself to the development of staffing guidelines that would replace core staffing ratios, though cautioning that "extensive revisions and modifications will be required before even limited application can be made of existing methodologies" (pps. 22-23). Hence, VA began the task of replacing the existing core staffing ratios, which were not refined enough to enable precise staffing needs to be defined for complex medical facilities and programs. Subsequently, a number of different approaches to standards development in the private health care sector were studied. Much valuable information and experience were thus acquired by VA personnel who were eventually incorporated into a new organizational unit in VHS&RA. Thus, in 1981, Management Systems Service was organized for the purpose of developing, testing, refining, and implementing staffing guidelines for all medical facility activities. Since 1981, Management Systems Service has been engaged in work on staffing guidelines, the magnitude of which is unparalleled in the health care industry.

During 1984 and 1985, productivity effectiveness was repeatedly stressed and emphasized, predominantly by the Office of Management and Budget. At the direction of OMB, VHS&RA began to address productivity effectiveness through several new initiatives, i.e., most efficient organization, productivity improvement program, and efficiency reviews; and re-emphasized existing initiatives such as Circular No. A-76, "Performance of Commercial Activities," and cost containment. These functions are assigned to the Strategic Planning Office, Manpower Planning Division.

1/ Report of Special Survey of Level of Quality of Patient Care in VA Hospitals, House Committee Print No. 163, Washington, DC, October 1974

2/ Health Care for American Veterans, NAS, Washington, DC, June 1977

3/ VA Response to the Study of Health Care for American Veterans, Senate Committee Print No. 7, Washington, DC, September 1977

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5. (Reserved.) BIOMEDICAL ENGINEERING STAFFING GUIDELINES
6. (Reserved.) BUILDING MANAGEMENT STAFFING GUIDELINES
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RESCISSIONS

1. Complete Rescissions

Circulars

10-84-71 and supplements
10-85-119
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CHAPTER 17. NUCLEAR MEDICINE SERVICE STAFFING GUIDELINES, RCS 10-0747**17.01 MISSION**

The VHS&RA (Veterans Health Services and Research Administration) Nuclear Medicine Service utilizes the nuclear properties of radioactive and stable nuclides to make diagnostic evaluations of the anatomic and/or physiologic conditions of the body and to provide therapy with unsealed sources. These evaluations require a wide range of services, encompassing patient consultation and examination, determination of metabolic functions, drug levels and body constituents, imaging computerization and interdisciplinary teaching, research and clinical support. The Nuclear Medicine Service usually consists of several functional units that include clinical imaging and immunoassay. These units as well as additional activities in programs for Ultrasound, Positron Emission Tomography/Cyclotron, Magnetic Resonance Imaging and Nuclear Magnetic Resonance Spectroscopy exist as needed to provide inpatient and outpatient procedures and to fulfill the mission of the service in the context of the local medical center's goals and objectives.

17.02 APPLICABILITY

This guideline is applicable to all facilities where the Nuclear Medicine Service is under the administrative control of VHS&RA. It includes all assigned personnel except physicians and residents. It does not include any staff time funded for research activities.

17.03 METHOD OF DEVELOPMENT

a. The staffing criteria are developed utilizing relationships between selected facility characteristics and the manhours expended in support of all Nuclear Medicine functions at these facilities. Correlation and regression analysis was the primary method used to identify and measure these relationships. Sample data was obtained from 30 medical centers, which were selected based on recommendations from Nuclear Medicine Service's (115) management staff. These medical centers were accepted as given with the understanding that they represent a cross section of Nuclear Medicine Services in terms of size, equipment, staff configuration, complexity, etc., and that they were appropriately staffed for all Nuclear Medicine responsibilities and were functioning efficiently and effectively.

b. An exhaustive list of facility characteristics presumed to impact on manpower requirements was prepared. The value of these characteristics and the respective existing Nuclear Medicine manpower for each of the selected medical centers were obtained and a correlation matrix was constructed. Those characteristics having low correlation with Nuclear Medicine manpower were dropped, and selected predictor variables (workload indicators) were chosen from those remaining. This procedure resulted in the identification of three Workload Indicators which when used together are capable of adequately predicting required manpower.

c. Unit values (coefficients) resulting from regressions do not represent actual task times for corresponding workload items, and should not be used to evaluate individual productivity or performance.

17.04 WORKLOAD INDICATORS AND UNIT VALUES

<u>WORKLOAD INDICATOR</u>	<u>UNIT VALUE</u>
Supply Costs	0.020 FTEE per 1000 dollars
Number of Gamma Cameras	0.9793 FTEE per Gamma Camera
Imaging and Radioimmunoassay Functions (Workload)	0.117 FTEE per 1000 completed Unit count

17.05 ESTIMATING METHODOLOGY

a. Staffing requirements may be determined by using the following equation:

$$Y = b_1x_1 + b_2x_2 + b_3x_3 \text{ where:}$$

Y = Total paid FTEE

b = Unit value for each workload indicator

x = the number of work units for each workload indicator

b. Quarterly earned FTEE can be calculated by using the following procedure:

EXAMPLE

(1) Multiply volume x unit value for each workload indicator

<u>WORKLOAD INDICATOR</u>	<u>UNIT VALUE</u>	x	<u>DATA FOR THE QUARTER</u>	=	<u>EARNED FTEE</u>
SUPPLY COSTS	0.020 FTEE per \$1000	x	106.792	=	2.13
GAMMA CAMERAS	0.9793 FTEE PER GAMMA CAMERA	x	4	=	3.91
IMAGING & RIA WORKLOAD	0.117 FTEE PER 1000 COMPLETED UNIT COUNT	X	5.040	=	<u>.59</u>

(2) EARNED FTEE: 6.63

c. Quarterly actual FTEE can be calculated by using the following procedure:

EXAMPLE

(1) Divide Paid Hours (e.g., 2600) By 520 Hours Per Quarter	=	5.0 FTEE
(2) Add Borrowed FTEE (e.g., 246 hours divided by 438*)	=	.56 FTEE
(3) Subtract Loaned FTEE (e.g., 0 hours divided by 438)	=	0.00 FTEE
(4) Actual FTEE:	=	5.56 FTEE

*Standard man-hour availability factor: The average time actually worked by one FTEE in a quarter after deducting for all types of leave and holidays.

17.06 GLOSSARY

a. **Supply Costs.** Include operating supplies and material costs; other medical and dental supplies costs; drugs, medicine, and chemical supply costs; contractual services costs, etc..

b. **Gamma Cameras.** Includes the number of operational cameras currently in use.

c. **Imaging/Radioimmunoassay Workload Procedures.** An imaging workload procedure includes the time required from the production of materials to the completion of the study. It includes: Radionuclide production; radiopharmaceutical preparation; processing request; patient preparation and handling; static or dynamic imaging; process and film review. A radioimmunoassay workload procedure includes the time required to obtain specimens, perform tests, and report results. It includes: collection and preparation of samples; preparation of test equipment and protocol; performing the assay and placing samples in counting equipment; and documentation of data.

d. **Man-hours Borrowed/Loaned.** Enter the number of manhours borrowed by or loaned to Nuclear Medicine Service between services; i.e., Radiology, Pharmacy etc., in order to perform the Nuclear Medicine function. Manhours loaned from Nuclear Medicine Service (to another service) or borrowed from another service may perform such functions as: Waste disposal, training, radiation safety, radiopharmacy, computer support, research, etc.

17.07 WORKLOAD DATA SOURCE

a. All facilities will report their staffing data on a quarterly basis in accordance with the instructions contained in chapter 2 . The data must be entered on the VA Form 10-0057h, Nuclear Medicine Service Staffing Utilization Worksheet, prior to transcribing to VA Form 10-0067, Workload Statistics Codesheet, to be keypunched and transmitted to the Austin DPC. The data for this report are reported under RCS 10-0747. A blank copy of VA Form 10-0057h is contained in appendix 17A and a partially completed example of VA Form 10-0067 is contained in appendix 17B.

b. VA Form 10-0067 is available from the VA Forms and Publications Depot and can be obtained through normal supply channels. Because of the rapidly changing nature of VA Form 10-0067, an exception has been granted and the blank VA Form 10-0057h contained in appendix 17A is authorized for local reproduction. Once the data to be gathered have stabilized, the form will be printed and stocked in VA Forms and Publications Depot.

NUCLEAR MEDICINE SERVICE STAFFING
UTILIZATION WORKSHEET
RCS 10-0747

VAMC: _____ FACILITY NUMBER: _____
 QUARTER ENDING: _____ FISCAL YEAR: _____
 SERVICE CHIEF: _____ FTS NUMBER: _____

WORKLOAD DATA

DESCRIPTION	ACTIVITY CODE	DATA FOR QUARTER
SUPPLY COSTS Report operating supplies and material costs; other medical and dental supplies costs; drugs; medicine and chemical supply costs; contractual services costs, etc.	525	_____ DOLLARS
GAMMA CAMERAS Report the number of operational cameras currently in use.	526	_____ CAMERAS
IMAGING/RADIOIMMUNOASSAY WORKLOAD PROCEDURES Report imaging/Radioimmunoassay procedures performed during the report period. These are the same procedures used to generate the Nuclear Medicine Annual Report; RCS 10-0010, CPT-4 codes.	527	_____ PROCEDURES

STAFFING UTILIZATION DATA

TOTAL HOURS WORKED Report hours actually worked performing Nuclear Medicine activities; i.e., hours spent on the job. These hours should include the normal duty hours, and overtime/compensatory hours, and uncompensated hours worked by employees, work-study students, WOC appointed personnel, etc.	530	_____ HOURS
VOLUNTEER HOURS WORKED Report time devoted to activities of Nuclear Medicine Service by formal volunteers.	452	_____ HOURS

VAMC: _____

FACILITY NUMBER: _____

QUARTER ENDING: _____

FISCAL YEAR: _____

STAFFING UTILIZATION DATA--Continued

DESCRIPTION	ACTIVITY CODE	DATA FOR QUARTER
TOTAL PAID HOURS Report the number of man-hours paid during the report period for all Nuclear Medicine Service employees except Physicians, Residents and Researchers. Include hours for authorized paid overtime, leave and holidays.	531	_____ HOURS
PAID OVERTIME HOURS Report the paid hours worked by Nuclear Medicine Service employees in excess of eight hours in a day or forty hours in an administrative workweek. These hours should be included in the total paid hours.	532	_____ HOURS
COP (CONTINUATION OF PAY) HOURS (45 days or less) Report the total number of COP hours due to job-related injuries for all employees whose paid hours are charged to Nuclear Medicine Service. These hours should be included in the total paid hours.	454	_____ HOURS
TOTAL UNPAID LWOP (LEAVE WITHOUT PAY) AND AND AWOL (ABSENCE WITHOUT LEAVE) HOURS Report the total number of hours officially recorded as LWOP or AWOL for all employees assigned to Nuclear Medicine Service.	453	_____ HOURS
TOTAL FUNDED FTEE Record the full-time employee equivalents of Nuclear Medicine Service for the total number of positions that are filled, plus any additional positions for which funds are available for recruitment and and placement as of the end of the report period.	504	_____ HOURS

April 21, 1989

M-1, Part IX
Chapter 17
APPENDIX 17A

VAMC: _____

FACILITY NUMBER: _____

QUARTER ENDING: _____

FISCAL YEAR: _____

STAFFING UTILIZATION DATA--Continued

DESCRIPTION	ACTIVITY CODE	DATA FOR QUARTER
MAN-HOURS BORROWED Report the hours spent performing Nuclear Medicine Service activities by employees assigned to another Service.	533	_____ HOURS
MAN-HOURS LOANED Report the hours spent by employees of Nuclear Medicine Service performing activities of another Service.	534	_____ HOURS

VA FORM 10-0057h
SEPTEMBER 1988

NUCLEAR MEDICINE

SYSTEM ID		FACILITY NUMBER		REPORT PERIOD		PERIOD ENDING				SERVICE			SECTION				COST CENTER				PAGE NUMBER		EOM									
M	Q	P	/	3	5	2	/	0	3	/	0	6	3	0	8	9	/	N	U	C	M	/	9	9	9	9	9	/	0	1	:	
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SEP 21 1989

April 21, 1989

1. Transmitted is a new Veterans Health Services and Research Administration's Manual M-1, "Operations," Part IX, "Staffing Guidelines and Productivity Enhancements," Chapter 1, "General;" Chapter 2, "Quarterly Reporting Requirements," Chapter 4, "Audiology and Speech Pathology Staffing Guidelines;" Chapter 8, "Dietetic Service Staffing Guidelines;" Chapter 9, "EEG (Electroencephalographic) Laboratory Staffing Guidelines;" Chapter 11, "Fiscal Service Staffing Guideline;" "Chapter 16, "Medical Service Staffing Guidelines;" Chapter 17, "Nuclear Medicine Service Staffing Guidelines;" Chapter 20, "Personnel Service Staffing Guidelines;" Chapter 21, "Pharmacy Service Staffing Guidelines;" Chapter 26, "Recreation Service Staffing Guideline;" Chapter 28, "Security Service Staffing Guidelines;" and Chapter 29, "Social Work Service Staffing Guidelines".

2. Principal policies are:

a. **Paragraph 1.01:** Defines staffing guidelines as an analytical method for determining FTEE requirements based on predetermined workload time values.

b. **Paragraph 1.03:** Cites the delegation of authority for developing, refining and implementing staffing guidelines to the Planning and Evaluation Service under the Director (ACMD), Strategic Planning, (10A4)).

3. Filing Instructions:

Insert pages

Cover through vi

1-i through 1-2

2-i thru 2-9

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9-i thru 9B-1

11-i thru 11B-1

16-i thru 16G-1

17-i thru 17B-1

20-i thru 20B-1

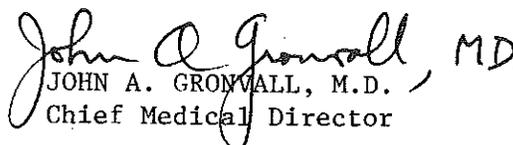
21-i thru 21B-7

26-i thru 26B-1

28-i thru 28C-1

29-i thru 29B-1

4. **RESCISSIONS:** Attachments A, B, E, I, J, K and M to Circular 10-84-14, dated February 6, 1984; Circular 10-84-171, dated October 3, 1984 and all supplements; Circular 10-84-216, dated December 20, 1984, and all supplements; Circular 10-85-119, dated July 25, 1985, and all supplements; Circular 10-85-122, dated August 6, 1985, and all supplements; Circular 10-86-70, dated June 5, 1986, and all supplements; Circular 10-85-120, dated July 26, 1985, and all supplements; Circular 10-87-98, dated August 27, 1987, and all supplements.


JOHN A. GRONVALL, M.D.
Chief Medical Director

Distribution: RPC: 1150 is assigned
FD

Printing Date: 8/89