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# TASKS OF THE SHIPBOARD INDEPENDENT DUTY HOSPITAL CORPSMAN: TASK TRAINING ADEQUACY AND PERFORMANCE FREQUENCY

T. P. STEELE

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NAVAL MEDICAL RESEARCH AND DEVELOPMENT COMMAND  
BETHESDA, MARYLAND

Tasks of the Shipboard Independent Duty Hospital Corpsman:

Task Training Adequacy and Performance Frequency\*

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### Summary

The present study was conducted in response to a need for empirical data to facilitate the identification of essential independent duty corpsman (IDC) knowledge and skills and to enable for such purposes due consideration of unusual or infrequent clinical conditions/disorders and non-routine contingencies, such as combat casualty care, as well as routine IDC tasks. The specific objectives of the study were to (a) assess IDC senior medical department representative (SMDR) perceptions of the adequacy of their formal Navy preparation for shipboard duty independent of a physician, (b) identify individual, organizational, and operational discriminators of SMDR ratings of training adequacy, and (c) based on an extensive task inventory, document for reference use the frequency of specific disorder/condition encounters and shipboard medical department tasks.

Findings from this study indicated that, in general, fleet experienced IDCs perceived their formal Navy preparation for serving as shipboard SMDRs as adequate. Exceptions to this finding for both surface ship and submarine SMDRs were mean ratings of inadequate training in the following areas: (a) Psychological Disorders/Conditions, (b) Podiatric Conditions, (c) Advanced Emergency Care, (d) Advanced Nursing Care, and (e) Non-medical File Maintenance. Although statistically significant differences in training adequacy emerged between surface ship and submarine SMDRs and between first tour SMDRs and more experienced SMDRs on several categories of tasks, it was concluded that these differences were not large enough to be of practical import. Attention could more profitably be placed on reviewing training requirements in the task categories identified above as inadequately trained.

In addition to the foregoing findings, it is anticipated that the detailed appendices provided in this report, containing breakdowns of mean training adequacy and task frequency ratings for the major classes of ships on which IDCs serve as SMDRs, can be used as decision aids for determining appropriate IDC responsibilities and consequent training requirements.

Further research on the IDC is needed in the following distinct but related areas: (a) decision-making processes, (b) job performance testing, and (c) program evaluation.



**Tasks of the Shipboard Independent Duty Hospital Corpsman:  
Task Training Adequacy and Performance Frequency**

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**Introduction**

Increasing attention from both military and civilian quarters has been focused in recent years on the performance of shipboard independent duty hospital corpsmen (IDCs). This critical focus has become particularly keen following the widely publicized fatalities aboard the frigate Davidson and the cruiser Worden in 1985. In both instances IDCs were serving as the senior medical department representatives (SMDRs) aboard these ships. Subsequent medical investigations of the performance of the responsible IDCs in these two cases found evidence of procedural errors and clinical skill deficits.

Following the June, 1985 fatality aboard the Worden, the Naval Military Personnel Command (NMPC) conducted a review of the personnel records of all IDCs to assess their qualifications and preparedness for shipboard SMDR duty. As a result of the review, 16% of the HM-8425 and 2% of the HM-8402 corpsmen were disqualified from SMDR duty. Although the NMPC quality control review revealed vulnerabilities in the screening and assignment of IDCs (which have since been specifically remedied), it did not provide information regarding the efficacy of the formal Navy preparation IDCs receive prior to assignment as shipboard SMDR. Furthermore, there remained unfulfilled the need for some definitive specification of IDC clinical responsibilities as well as a correspondent means to assess and ensure IDC competency prior to the occurrence of a shipboard medical mishap or IDC relief for cause.

Until quite recently there was no comprehensive description of IDC clinical accountabilities and performance expectations beyond, by default, the Advanced Hospital Corps School (AHCS) IDC curriculum and rather broad definitions of corpsman Naval Enlisted Classification (NEC) specialty functions. Moreover, there was no formal requirement for periodic measurement of the clinical competence of IDCs assigned to operational duty; medical inspections consequently focused on administration. This lack of emphasis on

clinical performance evaluation has adversely affected (a) the assessment and documentation of IDC clinical competence, (b) the direct evaluation of IDC training program efficacy, and (c) the identification of emergent fleet training requirements for the IDC training program.

To fill the void that existed with regard to IDC performance standards, a Personnel Qualification Standard (PQS) Program for IDCs was officially implemented by the Naval Medical Command (NAVMEDCOM) in October, 1986. Developed as a mechanism to supplement medical quality assurance within the forces afloat, the PQS Program consists of a manual and an initial qualification and periodic requalification process. The PQS manual itself contains implementation guidance and provides a "compilation of the minimum knowledge and skills (standards) required to qualify as an IDC" (NAVEDTRA 43427).

Although the development of PQS for IDCs represents a significant first step toward comprehensively identifying what an IDC should know and be able to perform, its effective utilization has been stymied by several significant limitations. Deficiencies in the PQS program that have been cited by multiple sources within the Navy Medical Department include: (a) insufficient program guidance -- current guidance does not effect uniformity of PQS application, nor does it define a coherent quality assurance program (i.e., support a sea-shore cycle of clinical training/experience necessary to meet operational duty standards); (b) a breadth and scope of required clinical expertise that exceeds reasonable expectations (given the training resources applied) for IDCs assigned to operational forces afloat; and (c) a lack of specific, observable, and measurable criteria for reliably ascertaining competence in each identified medical evolution. These shortcomings in the PQS Program for IDCs, among others, have resulted in its tacit rescission and the Program is currently under NAVMEDCOM review.

Clearly, the problems identified with regard to establishing useful IDC performance measures point to a continuing and critical need for definitive data regarding what an IDC actually does as a shipboard SMDR (i.e., is responsible for and must be prepared to do) as well as indicators of the IDC's preparedness for operational duty. Such data would facilitate making systematic and informed policy decisions regarding the specification of essential

IDC knowledge and skills and enable due consideration of (a) routine tasks, (b) unusual or infrequent clinical conditions/disorders, such as cardiac arrest or malaria, and (c) non-routine contingencies, such as combat casualty care. The purpose of the present report was to respond to this need for more information by publishing the results of a task analysis of the shipboard IDC job as well as examining the extant level of IDC formal preparation for specific shipboard tasks.

### **Prior Studies**

A study by Nice and Hilton (1986) described job characteristics of the shipboard IDC SMDR and provided a much needed view of the nature and distribution of IDC work activities. For example, they found that administrative duties accounted for 51% of an 85 hour (on the average) workweek at sea. Direct patient care tasks comprised 21% and other organizational requirements (e.g., collateral duties, meetings, drills) accounted for 28% of at-sea work. Thus, according to Nice and Hilton's (1986) data, shipboard IDCs spend over 40 hours a week at sea performing administrative tasks alone. This information documented what many IDCs have increasingly been saying for some time; it has increased awareness, both within the Navy Medical Department and in the line Navy community, of the monumental challenges IDCs face when deployed; and it has spurred the implementation of remedial actions to relieve portions of the IDC's workload. The Nice and Hilton (1986) report, however, did not provide information regarding the performance of specific individual tasks. Thus, additional, more task specific information is required to support policy decisions which can definitively specify the essential knowledge and skills a shipboard SMDR must possess. Once shipboard IDC responsibilities have been delineated (and, in a sense, delimited), the AHCS curriculum and IDC refresher training can employ such operationally relevant criteria as training objectives.

Two previous NHRC studies (Hilton, 1986; Steele, 1987) examined the relevance and training adequacy of topical elements in the AHCS curriculum for IDCs. Hilton (1986) found that both AHCS instructors and students rated the IDC curriculum to be generally above average in relevance and perceived both classroom and practical training to be adequate for shipboard duty. In a follow-up study of experienced fleet SMDRs, Steele (1987) also found support

for the overall relevance of the IDC curriculum. However, unlike the findings from the prior study of AHCS instructors and students, shipboard SMDRs indicated a need for increased training emphasis in virtually all curriculum topics, particularly with regard to practical/lab training.

Although the two foregoing studies were informative as indicators of potential problems and as general assessments of the AHCS curriculum, they were somewhat limited in their utility for suggesting specific curriculum modifications in that they did not assess IDC training for discrete tasks. The present study ameliorates this previous limitation by providing training adequacy information for specific tasks in addition to evaluating training adequacy within more general task content categories.

### **Study Objectives**

This report is the sixth in a series published by the Naval Health Research Center (NHRC) that focuses directly on issues pertinent to the IDC (Advanced Hospital Corpsman HM-8425 and Nuclear Submarine Medicine Technician HM-8402). The specific objectives of the present study were to (a) assess SMDR perceptions of the adequacy of their formal Navy preparation for shipboard duty independent of a physician, (b) identify individual, organizational, and operational discriminators of SMDR ratings of training adequacy, and (c) based on an extensive inventory, document for reference use the frequency of specific disorder/condition encounters and shipboard medical department tasks.

### **Method**

#### **Sample**

The present study was based on responses to a 1985 Navy-wide survey of shipboard IDCs serving independent of a physician as senior medical department representatives (SMDRs). Various demographic characteristics of that sample have been reported previously (viz., Hilton, Nice, & Hilton, 1986; Nice & Hilton, 1986; Steele, 1987). Nevertheless, sample descriptive statistics have been included in Table 1 to facilitate use of the present report as a relatively complete reference document.

**Table 1**  
**Sample Characteristics Broken Down by Fleet and Force**

	Atlantic		Pacific		Row Totals
	Surface	Submarine	Surface	Submarine	
Mean Age:	34.3	33.5	34.1	33.6	34.0
Mean Years as IDC:	6.5	6.0	5.9	5.4	6.1
<b>Tours as SMDR:</b>					
One Tour	91* (72%)**	36 (52%)	90 (80%)	20 (59%)	237 (70%)
Two or More Tours	35 (28%)	33 (48%)	22 (20%)	14 (41%)	104 (30%)
<b>Paygrade:</b>					
E-6	43 (34%)	27 (39%)	52 (46%)	13 (38%)	135 (39%)
E-7	78 (62%)	36 (52%)	55 (48%)	19 (56%)	188 (55%)
E-8	5 (4%)	6 (9%)	7 (6%)	2 (6%)	20 (6%)
<b>Education:</b>					
HS/GED	48 (36%)	23 (34%)	57 (51%)	10 (30%)	138 (41%)
AA Degree	48 (38%)	28 (42%)	39 (35%)	16 (49%)	131 (39%)
BA/BS	27 (22%)	15 (22%)	12 (11%)	7 (21%)	61 (18%)
MA/MS	2 (2%)	1 (2%)	4 (3%)	---	7 (2%)
<b>Ship Class:</b>					
AE/AO	8	---	9	---	17
ARS	4	---	3	---	7
ATF/ATS	2	---	4	---	6
CG	7	---	11	---	18
DD/DDG	37	---	25	---	62
FF/FFG	50	---	44	---	94
LSD/LST	12	---	13	---	25
MSO	10	---	8	---	18
SS	---	1	---	3	4
SSBN	---	25	---	---	25
SSN	---	42	---	29	71
Miscellaneous	---	3	1	2	6

\* Counts may vary due to missing values.  
 \*\* All percentages apply to within column counts.

**Measures**

The measures of primary interest in this study consisted of two Likert-type rating scales assessing SMDR perceptions of task training adequacy and frequency of task performance for each of 222 specific shipboard IDC tasks. The questionnaire inventory of tasks was derived from a 1977 Navy Occupational Development and Analysis Center (NODAC) task analysis of the Hospital Corpsman rating and from structured interviews with 12 SMDRs assigned to Surface Force Pacific (SURFPAC) units. Based on the SMDR interviews and item analyses of the NODAC data, four major classes of IDC tasks were identified: 1) clinical conditions, 2) clinical procedures, 3) patient management / patient care, and 4) administrative tasks.

Task training adequacy was assessed by a three-point response format indicating an evaluation of the amount of "formal Navy preparation" received to perform the specified task. Ratings on this scale were defined as: (1) "inadequate", (2) "adequate", (3) "outstanding". Task performance frequency was measured by a six-point response scale format for each task with the following anchors for task frequency: (1) "rarely", (2) "about quarterly", (3) "1 to 3 per month", (4) "1 or 2 per week", (5) "nearly every day". When making task frequency ratings, respondents were instructed to average both inport and at-sea periods during the 6 months prior to the survey administration.

For completing the documentation objective of the present report, additional data were analyzed from a supplementary set of 96 task frequency ratings pertaining to shipboard medical department reports, radiation health program tasks, and occupational health program tasks. Training adequacy ratings were not available for these tasks.

### **Analyses**

As a means for providing management information support, detailed appendices (A through G) have been included in this report. The appendices contain breakdowns and comparisons, by ship class, of mean training adequacy and mean frequency ratings for all tasks included in the survey inventory. Development of a reduced set of meaningful, homogenous task performance frequency scales for assessing subgroup differences was problematic. Thus, it is expected that the detailed appendices will be very useful for examining differences in frequency of task performance across ship-types. The remainder of the analyses described in this report pertain only to the task training adequacy composite criteria.

Perceptions of task training adequacy were evaluated using composite scale mean scores derived through principal components (PC) analyses of each of the four major classes of tasks previously identified. The PC analyses were conducted in order to reduce the number of criteria within each of the four task classes for further comparative analyses. Subsequent multivariate analyses of variance (MANOVA) were computed to test for differences in perceptions of training adequacy between SMDR subgroups of interest.

## Results

### Training Adequacy of Specific Tasks

Table 2 lists mean training adequacy scores, mean frequency of performance, and the proportion of SMDRs reporting specific task training as inadequate for shipboard performance. In Table 2 it can be seen that 18 tasks were rated considerably below the scale midpoint for training adequacy. It can also be seen that the majority of the listed tasks, particularly those pertaining to Clinical Procedures and Patient Care, are rarely, if ever, performed. In the event a policy decision is made that the IDC should be competent in performing these tasks, additional training is clearly necessary.

**Table 2**  
**Specific Tasks Reported as Inadequately Trained**

<u>Clinical Conditions</u>	<u>Mean Training<sup>*</sup></u> <u>Adequacy</u>	<u>% Reporting</u> <u>Inadequate</u>	<u>Mean Performance<sup>**</sup></u> <u>Frequency</u>
Cardiovascular Conditions	1.75	35%	1.15
Internal Hemorrhage	1.73	35%	1.01
Diabetic Conditions	1.78	28%	1.02
Mental/Psychiatric Disorders	1.70	39%	1.68
Stress Related Emotional Problems	1.77	35%	2.14
Foot Disorders	1.64	45%	2.34
<u>Clinical Procedures</u>			
Apply Orthopedic Brace	1.65	45%	1.12
Perform Cardiac Defibrillation (LIFPAK)	1.40	67%	1.00
Insert Chest Tube	1.43	62%	1.00
Perform Blood Transfusion	1.24	79%	1.00
Tooth Extraction	1.50	56%	1.00
Cricothyrectomy	1.70	41%	1.00
<u>Patient Care / Patient Management</u>			
Apply Rotating Tourniquet	1.75	39%	1.00
Monitor Blood Transfusion	1.54	54%	1.00
<u>Administrative Tasks</u>			
Maintain/update Enlisted Dist Verif Report (EDVR)	1.69	45%	1.26
Maintain/update Sailing List	1.60	49%	1.34
Draft & follow-up Ships Maint Actions (3-M SMAFs)	1.61	48%	1.83
Draft & follow-up Internal Work Requests (3-M IWRs)	1.66	44%	1.86

<sup>\*</sup> Adequacy scale: 1 = "inadequate", 2 = "adequate", 3 = "outstanding"  
<sup>\*\*</sup> Frequency scale: 1 = "rarely", 2 = "about quarterly", 3 = "1 to 3 per month", 4 = "1 or 2 per week", 5 = "nearly every day"

### Development of Composite Task Training Adequacy Scales

For the purpose of developing a reduced set of criteria for assessing SMDR subgroup differences, all task training adequacy ratings within each major task class were subjected to factor analysis. Scree plots and factor

interpretability were used as the criteria for determining the final number of factors in the terminal varimax solutions. Table 3 lists the factors that emerged and the variance accounted for within each major task class. Composite scales were created by computing the mean of the specific tasks loading  $\geq$  .40 on each component. (See Appendix A for the items comprising each composite task scale.)

**Table 3**  
**Principal Components Analyses Results with Training Adequacy**  
**Composite Scales Reliability Estimates**

<u>Composite Scale/Components</u>	<u># Items</u>	<u>Alpha</u>
<b>A. <u>Medical/Dental Conditions</u> (68% variance accounted for):</b>		
A1. Dental Conditions	8	.95
A2. General Medical	11	.90
A3. Acute Medical	9	.87
A4. Reactions/Side-Effects	4	.82
A5. Psychological Disorders/Conditions	4	.80
A6. Eye & ENT Conditions	3	.72
A7. Heat Related Conditions	2	.93
A8. Burn Injuries	3	.73
A9. Podiatric Conditions	2	.58
A10. Radiation Exposure	1	NA
<b>B. <u>Clinical Procedures</u> (70% variance accounted for):</b>		
B1. Injury Treatment	13	.95
B2. Sterile Technique	5	.93
B3. Orthopedic Procedures	6	.89
B4. Advanced Emergency Care	8	.83
B5. Emergency Care	6	.86
B6. Heat/Cold Therapy	2	.89
<b>C. <u>Patient Care / Patient Management</u> (76% variance accounted for):</b>		
C1. Nursing Care	17	.96
C2. Advanced Nursing Care	3	.83
C3. Patient Screening	7	.96
C4. Medications	8	.94
C5. Medical Evacuations	6	.92
C6. Patient Indoctrination	6	.91
C7. Nutrition (special diets)	1	NA
<b>D. <u>Administrative Tasks</u> (73% variance accounted for):</b>		
D1. Supply	10	.96
D2. Training	7	.92
D3. Medical Records	8	.93
D4. File Maintenance	7	.89
D5. Supervision	5	.91
D6. Consults/Inspections Requests	5	.92
D7. Correspondence	3	.89



### Assessing Subgroup Differences

As stated previously, one of the objectives of the present study was to identify individual, organizational, and operational factors that discriminate IDC perceptions of the adequacy of formal Navy preparation to serve as a shipboard SMDR. Toward that end, preliminary regression analyses were conducted in which selected background variables (i.e., age, paygrade, education, fleet, ship-type, surface ship versus submarine, number of years as an IDC, number of tours as an SMDR) were regressed on overall composite mean training adequacy scores for each of the four major classes of tasks in the inventory. Only two variables, surface ships versus submarines and number of tours as SMDR, were statistically significant in any of these analyses. Based on these preliminary results, a series of two-way multivariate analyses of variance (MANOVAs) were conducted across the four major task classes to assess more specific differences between surface ships and submarines and between number of tours as an SMDR. Table 4 contains the results of significant univariate comparisons that were conducted following significant MANOVA results.

**Table 4**  
**Significant Univariate Comparisons of Training Adequacy**  
**Composite Scales Within Major Task Classes**

	<u>F(1,322)</u>	<u>Prob.</u>	<u>Mean (SD)</u>	<u>Mean (SD)</u>
<b><u>Clinical Conditions:</u></b>				
Heat-Related Conditions	10.15	.002	Surface 2.42 (.52)	Submarine 2.25 (.48)
Radiation Exposure	167.80	.000	1.59 (.61)	2.59 (.57)
Dental Conditions	10.23	.002	One Tour 2.02 (.48)	> One Tour 1.83 (.49)
Burn Injuries	10.75	.001	2.14 (.42)	1.97 (.46)
<b><u>Clinical Procedures:</u></b>				
Heat/Cold Therapy	5.75	.017	Surface 2.22 (.55)	Submarine 2.07 (.52)
Advanced Emergency Care	3.74	.054	1.57 (.39)	1.66 (.47)
<b><u>Patient Care / Patient Mgmt Tasks:</u></b>				
Advanced Nursing Care	3.90	.049	Surface 1.65 (.56)	Submarine 1.83 (.56)
Medications	5.63	.018	2.33 (.48)	2.22 (.44)
<b><u>Administrative Tasks:</u></b>				
Supervisory Tasks	7.71	.006	Surface 2.11 (.50)	Submarine 1.94 (.54)
Supply Activities	4.92	.035	One Tour 2.21 (.49)	> One Tour 2.08 (.53)

Clinical Conditions. Results from the MANOVA computed for training adequacy composite scores in the major task class of Clinical Conditions indicated significant effects for surface ships versus submarines and for number of tours as an SMDR ( $F_{[10,313]} = 21.93$ ,  $p = .000$  and  $F_{[10,313]} = 2.05$ ,  $p = .028$ , respectively). Examination of the univariate statistics summary for Clinical Conditions (Table 4) shows that surface ship SMDRs rated training adequacy as higher than submariners for Heat-Related Conditions. Despite this difference, training does appear to be better than adequate for both groups. Conversely, submarine SMDRs rated training in Radiation Exposure quite high whereas surface ship SMDRs rated such training as inadequate. This apparent discrepancy probably reflects legitimate training emphasis that is appropriate to operational characteristics. This interpretation is substantiated by task frequency ratings which show that submarine IDCs encounter this condition about one to three times per month while surface ship IDCs rarely, if ever, encounter it. (See Appendix A for a complete listing of both surface ship and submarine training adequacy and task frequency means.)

Significant differences based on number of tours as an SMDR were found for two composite scales, Dental Conditions and Burn Injuries. In both cases, IDCs serving a second or later shipboard tour as an SMDR rated training as somewhat lower on these two categories of tasks than IDCs on their first tour as an SMDR. These results suggest that increased refresher emphasis may be warranted for conditions/disorders in these two areas.

Figure 1 shows the mean training adequacy ratings for all of the composite scales within the Clinical Conditions class of tasks. For the most part, it appears that IDC training is adequate for dealing with the majority of clinical condition encounters identified in the survey inventory. Two exceptions where additional training may be appropriate for both surface ship and submarine SMDRs are the general areas of Psychological Disorders/Conditions and Podiatric Conditions. By referring to Appendix A, it can be seen that several specific clinical conditions (i.e., stress related emotional problems, substance abuse, foot disorders) within these two areas are encountered about quarterly, and one, athlete's foot, is encountered approximately one to three times per month. Certainly, at least for non-critical medical

conditions, the frequency of IDC encounters with particular disorders should suggest an appropriate level of training emphasis.

## CLINICAL DISORDERS/CONDITIONS

(Surface Ships vs. Submarines)

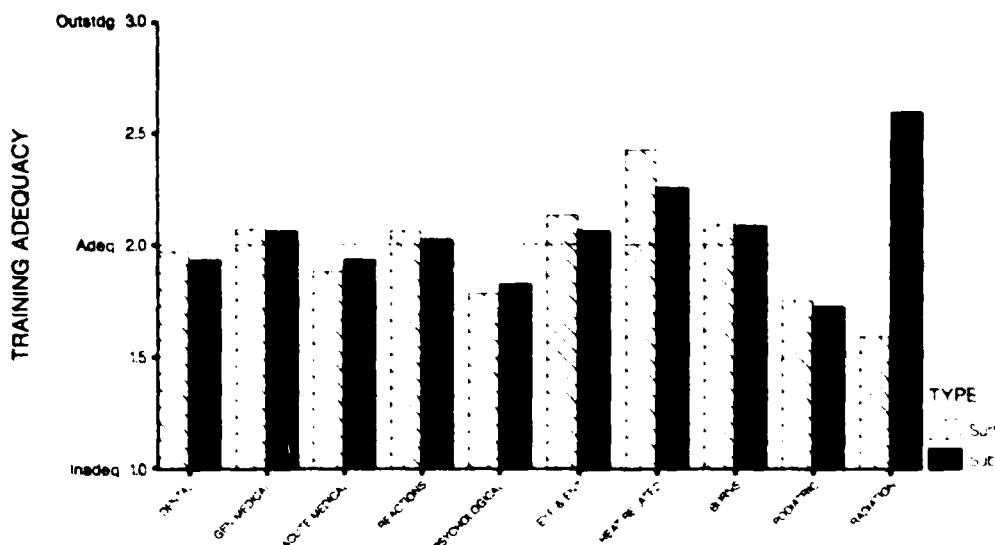


Figure 1. Composite clinical condition training adequacy means.

Clinical Procedures. The two-way MANOVA computed for the task adequacy composite scales within the major task class of Clinical Procedures revealed a significant effect only for surface ships versus submarines ( $F[6,329] = 3.27, p = .004$ ). The main effect for number of SMDR tours and the interaction term were not significant. Subsequent univariate comparisons of the task adequacy composites revealed significantly better training in Heat-Cold Therapy for surface ship SMDRs than for submariners. Submarine SMDRs, on the other hand, reported relatively better training in Advanced Emergency Care than surface ship SMDRs.

Figure 2 graphically depicts the level of training adequacy for all of the Clinical Procedures composite ratings. Although two statistically significant differences were detected, they do not appear to warrant concern

from a practical standpoint because of their consistency in evaluative direction. Of greater practical interest is the relatively inadequate training reported for the category of Advanced Emergency Care shown in Figure 2. (Refer also to results discussed previously in Table 2.) Training in general Injury Treatment and Emergency Care, however, is rated somewhat above average for Clinical Procedures included in the survey inventory.

## CLINICAL PROCEDURES

(Surface Ships vs. Submarines)

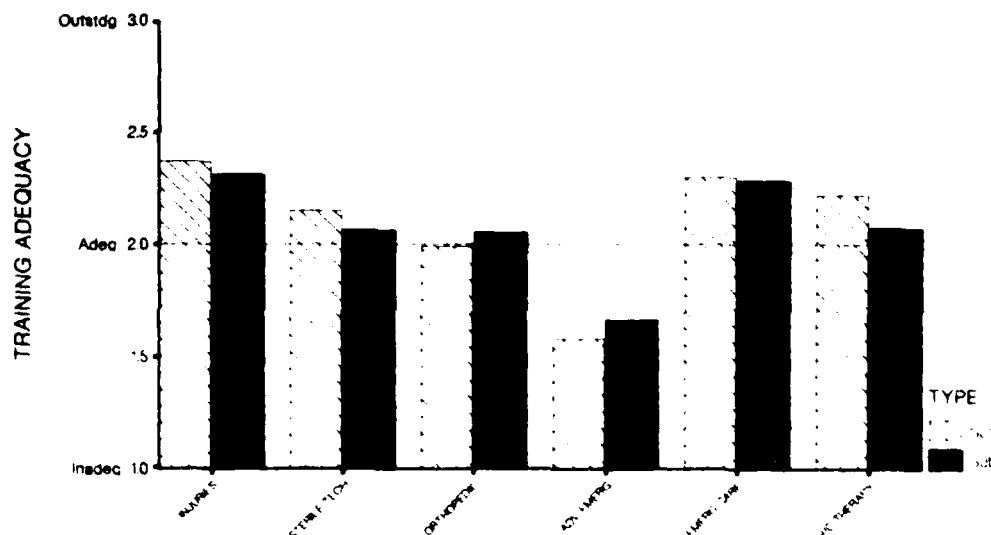


Figure 2. Composite clinical procedures training adequacy means.

Patient Care / Patient Management Tasks. Similar to the previous results, the two-way MANOVA for Patient Care / Patient Management composite tasks showed a significant effect only for surface ships versus submarines ( $F[7,318] = 3.13, p = .003$ ). Significant univariate comparisons were found for the composite scales of Advanced Nursing Care and Medications. With regard to Advanced Nursing tasks, submarine SMDRs reported greater formal preparation for shipboard performance than surface ship SMDRs. Nevertheless, as Figure 3 illustrates, increased training emphasis is warranted for both groups should competency in these tasks be determined as appropriate for

IDCs. Likewise, training in Nutrition (special diets) may merit additional emphasis.

### PATIENT CARE / PATIENT MANAGEMENT

(Surface Ships vs. Submarines)

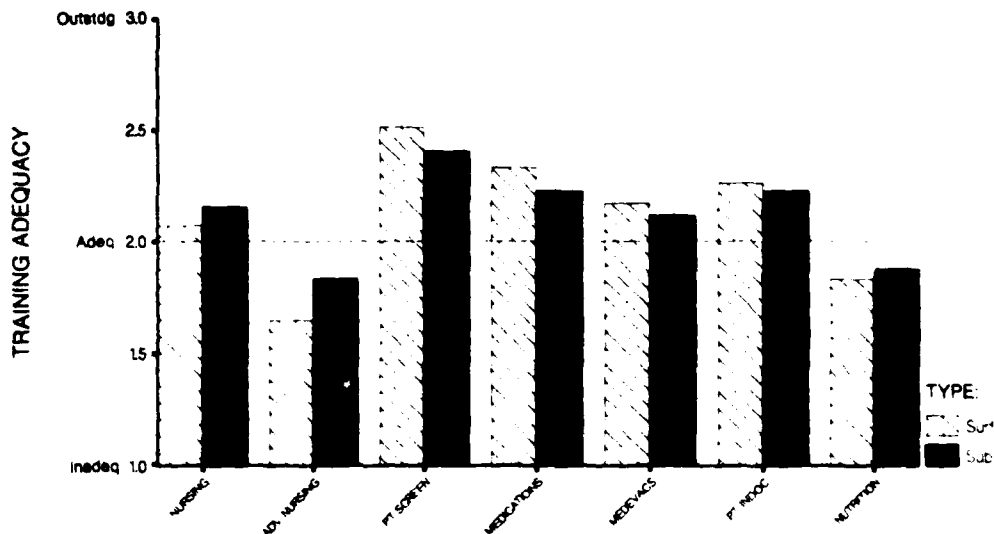


Figure 3 Composite pt care/pt management training adequacy means

Further examination of Figure 3 suggests that the difference between surface ship and submarine SMDR perceptions of training in the area of Medications is probably not large enough to warrant training review. In fact, training in the areas of Medications, Patient Screening, and Patient Indoctrination is indicated, on the average, as better than adequate.

Administrative Tasks. The two-way MANOVA for Administrative tasks showed significant overall differences for both main effects (surface vs. submarine:  $F[7,311] = 3.55, p = .001$ ; number of SMDR tours:  $F[7,311] = 2.26, p = .03$ ). Referring back to Table 4, it can be seen that surface ship SMDRs rated training higher on supervisory tasks than did submarine SMDRs. This somewhat higher rating can be interpreted as positive, given that surface

ship SMDRs are much more likely to have subordinates and, therefore, more opportunity to engage in supervisory behaviors than submarine SMDRs. (See task frequency ratings in Appendix A.)

The univariate results for the number of tours as an SMDR variable revealed only one composite with a statistically significant difference, namely, Supply Activities. IDCs who had served more than one tour as an SMDR reported, on the average, lower training adequacy than IDCs serving on their first SMDR tour. However, for both groups of SMDRs training in Supply tasks does not appear to represent a significant problem area.

An examination of Figure 4 indicates that, despite statistically significant differences in perceptions of training in the area of Supervisory Tasks, training appears reasonably adequate in all Administrative task areas except File Maintenance. Referring to the means for File Maintenance tasks in Appendix A, it can be seen that there is a strong positive correlation

### ADMINISTRATIVE TASKS

(Surface Ships vs. Submarines)

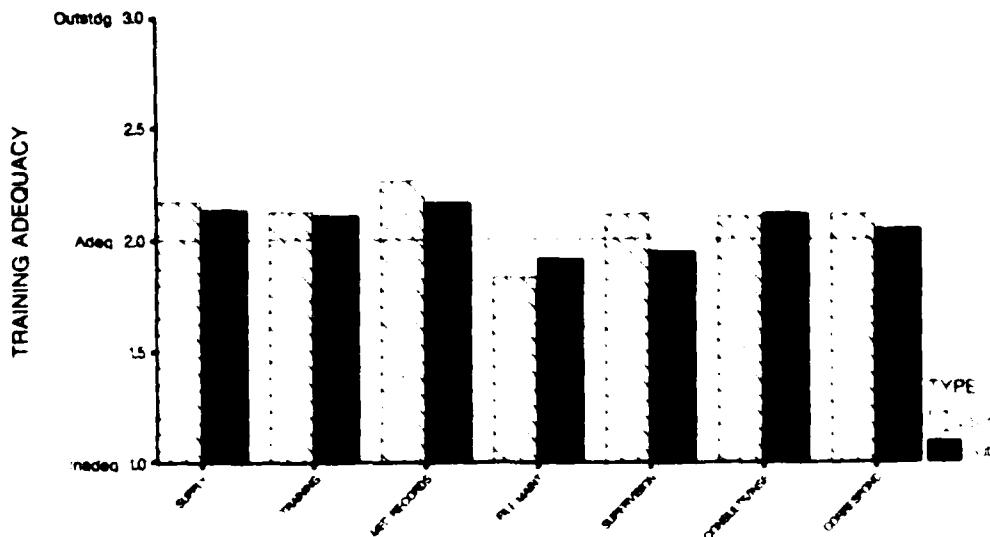


Figure 4 Composite administrative tasks training adequacy means

(rho = .71) between frequency of specific task performance and perceptions of task training adequacy. This indicates that the relatively frequently performed tasks in the File Maintenance category appear adequately trained but that tasks that are performed about quarterly or less may well merit somewhat increased training emphasis.

### Discussion

Findings from this study indicated that, in general, fleet experienced IDCs perceived their formal Navy preparation for serving as shipboard SMDRs as adequate. There were, however, several notable exceptions to this generalization. Tasks within the following categories were rated by both surface ship and submarine SMDRs as being relatively inadequately trained: (a) Psychological Disorders/Conditions, (b) Podiatric Conditions, (c) Advanced Emergency Care, (d) Advanced Nursing Care, and (e) Non-medical File Maintenance.

For the most part, tasks within the above categories were indicated as seldom or never performed by the majority of SMDRs. Common sense suggests that training emphasis should be, at least in part, determined by the frequency of required task performance on the job. However, simple frequency of task performance or frequency of encounters with specific disorders/conditions should obviously not be the only determinant of a training requirement. Task difficulty and task criticality should also be taken into consideration (cf. Bownas, Bosshardt, & Donnelly, 1985). Unfortunately, systematically obtained, empirical data are not currently available to inform decision makers on these two additional relevant variables. Nevertheless, the detailed appendices provided in this report, containing breakdowns of mean training adequacy and task frequency ratings for the major classes of ships on which IDCs serve as SMDRs, can be used as one set of tools for facilitating the determination of appropriate IDC responsibilities and consequent training requirements.

Results of analyses to identify individual, organizational, and operational discriminators of training adequacy revealed several differences between surface ships and submarines and between first tour SMDRs and more experienced SMDRs. Although the few differences found were statistically

significant, interpretation of graphic results indicated that the differences were probably not of great practical significance. Attention could more profitably be placed on examining training requirements in the aforementioned task categories rated as inadequately trained by both surface ship and submarine SMDRs.

#### **Future Research**

The reality of today's concerns for credible quality assurance and penetrating exposure by the media require that senior Navy Medical Department personnel address the difficult issues attendant to and impinging upon the job of the IDC. Determining the limits of IDC responsibility remains a fundamental issue. That is, not only must specific IDC skills be targeted as essential but the exact nature and degree of competency for correspondent tasks must be clarified. The classic appendicitis example illustrates this point well. It is one thing for an IDC to be able to diagnose and manage a case of appendicitis, but clearly another order of expertise entirely for him to (a) determine surgical removal is necessary and (b) actually operate. Given the ever-present potential for similar problematic situations, medical "rules of engagement" must be defined and fully comprehended. As the example illustrates, appropriate application of IDC clinical knowledge and skills may sometimes consist of acknowledging a need for more expert and better equipped medical assistance; but care must be taken not to cripple contingency capabilities.

There is an immediate need for programmatic research on the IDC in three distinct but related areas: (a) job performance testing, (b) problem-solving and self-regulatory processes, and (c) program evaluation. As implied throughout this report, complete confidence in the capability of IDCs to meet operational medicine expectations hinges on Navy Medicine's ability to administer reliable and valid job performance tests. Only with such testing can competency be credibly specified and verified. The development of job performance tests would allow the identification of IDC success predictors based on actual job performance, rather than relying on simple attrition and/or success in training (which is primarily based on paper and pencil test grades that are far removed from the job context and actual job performance). In addition, valid job performance tests would provide the necessary linkage



between the medical requirements of the forces afloat and the IDC AHCS curriculum and enable rigorous evaluation of IDC AHCS training and refresher training efficacy. (A supplemental but often neglected test of the transfer of trained skills and individual capability is to evaluate ability to function under stressful conditions, which for an IDC might include high noise or heat, limited space, time pressures, or casualty overload.)

Clearly, IDC job performance can not be adequately assessed through simple checklist procedures alone; and training IDCs with emphasis in rote application of clinical protocols is not sufficient to assure reasoned application of knowledge and sound clinical judgement in infrequently encountered or unusual situations (cf. Barrows, 1983; Glaser, 1984; Beck & Bergman, 1986). In the absence of opportunity for acquiring requisite clinical exposure and administrative experience prior to assignment to the operational forces, research needs to focus on IDC problem-solving skills. That is, work needs to be done to identify general cognitive processes and concepts that are problematic for many IDCs, explore techniques to improve IDC skills in these areas, and develop methods to measure performance (c.f. Chipman, Segal, & Glaser, 1985; Segal, Chipman, & Glaser, 1985).

Training an IDC to be prepared for every possible contingency is not practicable; however, to pursue as a fundamental objective of the training process, inculcation of the value of and skills for continued IDC self-directed learning will help "to ensure that graduates will continue to modify and expand their knowledge and skills" (Barrows, 1983, p. 3080). So too, ensuring the IDC's ability to recognize the limits of his competence, when to seek a consult, or when to MEDEVAC a patient may provide the only satisfactory resolution to a critical situation.

Another example of a potentially fruitful application of such research is in the area of IDC administrative tasks. Although problems with the performance of administrative tasks are typically not interpreted as training related (because most such tasks represent relatively easily understood requirements), Hilton and Hilton (1985), in a study of factors contributing to shipboard IDC job failures, reported that 38% of the performance related reliefs in their sample were due to inspection failures (administrative

deficiencies). In addition, as noted earlier, Nice and Hilton (1986) reported that the majority of an IDC's time is taken up with performing administrative tasks. Certainly, reducing administrative requirements and adding computer support are two obvious solutions, but perhaps there may also be a training remedy -- namely, training in time-management strategies such as goal setting and establishing task priorities (Wexley & Latham, 1981). Moreover, potentially useful methods for measuring such amorphous skills presently exist in the personnel management literature (cf. Cascio, 1982).

The third avenue for ongoing research, vigorous, proactive program evaluation, provides a mechanism to objectively assess program interventions and identify indicated policy adjustments. This form of decision support can facilitate the development of policy, enhance the utility of resource allocations, and foster a systems approach to quality healthcare delivery to the fleet.

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Appendices A through G

APPENDIX A

MEAN RATINGS OF IDC TASK TRAINING ADEQUACY AND TASK PERFORMANCE FREQUENCY  
(Surface Ships [253] vs. Submarines [100])

A. Medical/Dental Conditions

	Training Adequacy			Task Frequency		
	All	Surf	Sub	All	Surf	Sub
<b>A1. Dental Conditions</b>						
41. Pericoronitis (tooth crown)	1.86	1.86	1.87	1.29	<b>1.33</b>	<b>1.17</b>
42. Dry socket	2.01	2.02	1.99	1.21	1.26	1.25
43. Pulpitis	1.90	1.91	1.88	1.25	<b>1.31</b>	<b>1.16</b>
44. Tooth fractures	1.90	1.93	1.83	1.28	1.30	1.24
45. Periodontosis	1.86	1.85	1.86	1.30	1.33	1.22
46. Lost filling	2.10	2.11	2.08	1.83	<b>1.91</b>	<b>1.69</b>
47. Toothache/cavity	2.03	2.05	2.01	1.89	<b>2.04</b>	<b>1.56</b>
48. Abscessed gums	1.99	2.00	1.96	1.32	<b>1.37</b>	1.22
<b>A2. General Medical</b>						
7. Upper respiratory infections	2.35	2.36	2.31	4.18	<b>4.19</b>	<b>3.93</b>
13. Gastrointestinal maladies	2.18	2.17	2.20	2.76	2.82	2.61
19. Venereal disease	2.46	<b>2.51</b>	<b>2.33</b>	2.20	<b>2.42</b>	<b>1.68</b>
20. Genitourinary diseases/disorders	2.12	2.12	2.10	2.05	<b>2.18</b>	<b>1.74</b>
24. Shock	2.34	2.33	2.34	1.13	1.14	1.10
25. Electrical shock	2.29	2.29	2.29	1.05	1.06	1.05
27. Orthopedic injuries	2.07	2.09	2.04	2.57	2.64	2.40
28. Musculoskeletal injury/strain	2.26	2.28	2.20	3.41	<b>3.56</b>	<b>3.04</b>
29. Soft tissue injuries	2.31	2.31	2.31	3.42	<b>3.52</b>	<b>3.18</b>
39. Headaches	2.21	<b>2.27</b>	<b>2.09</b>	3.87	<b>3.95</b>	<b>3.68</b>
40. Influenza	2.20	2.21	2.18	2.74	2.80	2.59
<b>A3. Acute Medical</b>						
8. Respiratory conditions such as pneumothorax	2.00	1.98	2.04	1.04	1.05	1.04
9. Cardiovascular conditions	1.75	1.72	1.82	1.15	<b>1.20</b>	<b>1.03</b>
22. Spinal cord injuries	1.93	<b>1.89</b>	<b>2.02</b>	1.01	<b>1.00</b>	<b>1.02</b>
23. Seizure disorders	1.86	1.83	1.93	1.01	1.01	1.00
26. Head & neck injuries	2.12	2.15	2.06	1.39	1.43	1.29
30. Injuries to the genitalia	1.93	1.94	1.90	1.16	<b>1.20</b>	<b>1.09</b>
32. Acute abdominal/thoracic/injuries/conditions	1.93	1.91	1.98	1.25	1.28	1.24
33. Internal hemorrhage	1.73	1.70	1.79	1.01	1.02	1.00
36. Diabetic conditions	1.78	1.77	1.80	1.02	1.02	1.03
<b>A4. Reactions/Side-Effects</b>						
4. Reaction to medication	2.04	2.05	2.03	1.07	<b>1.09</b>	<b>1.03</b>
5. Medication side-effects	2.00	2.03	1.93	1.23	1.27	1.24
6. Immunization reactions	2.07	2.07	2.07	1.09	1.10	1.04
18. Bites & stings	2.08	2.09	2.05	1.43	1.44	1.41
<b>A5. Psychological Disorders/Conditions</b>						
31. Mental psychiatric disorders	1.70	1.67	1.77	1.68	<b>1.74</b>	<b>1.54</b>
35. Stress related emotional problems	1.77	1.76	1.79	2.14	2.15	2.11
37. Acute drug/chemical intoxication	1.30	1.79	1.83	1.16	<b>1.19</b>	<b>1.07</b>
38. Substance abuse and related problems	1.92	1.92	1.92	2.07	<b>2.20</b>	<b>1.76</b>
<b>A6. Eye &amp; ENT Conditions</b>						
1. Eye injuries	2.10	2.13	2.01	2.53	<b>2.71</b>	<b>2.11</b>
2. Eye disease/disorders	2.00	2.02	1.93	2.01	2.05	1.91
3. Ear, nose, & throat disease/disorders	2.23	2.23	2.21	3.92	<b>4.00</b>	<b>3.75</b>

Adequacy scale: 1 = "inadequate", 2 = "adequate", 3 = "outstanding";

Frequency scale: 1 = "rarely", 2 = "about quarterly", 3 = "1 to 3 per month", 4 = "1 or 2 per week", 5 = "nearly every day"

Numbers in bold indicate significantly different ( $p < .05$ ) subgroup means

	<u>Training Adequacy</u>			<u>Task Frequency</u>		
	All	Surf	Sub	All	Surf	Sub
<b>A7. Heat Related Conditions</b>						
10. Heatstroke	2.35	2.41	2.22	1.02	1.03	1.02
11. Heat exhaustion/heat cramps	2.38	2.43	2.28	1.10	1.09	1.12
<b>A8. Burn Injuries</b>						
16. Chemical burns	2.05	2.04	2.08	1.30	1.34	1.20
17. Thermal burns	2.20	2.26	2.21	1.84	1.87	1.77
31. Cold weather injuries	2.00	2.07	1.96	1.04	1.03	1.06
<b>A9. Podiatric Conditions</b>						
14. Foot disorders	1.64	1.65	1.61	2.34	2.49	2.10
15. Common skin disease (e.g., athlete's foot)	1.84	1.83	1.83	3.30	3.33	3.23
<b>A10. Radiation</b>						
21. Radiation exposure	1.80	1.59	2.59	1.40	1.05	2.59

## B. Clinical Procedures

	Training Adequacy			Task Frequency		
	All	Surf	Sub	All	Surf	Sub
<b>B1. Injury Treatment</b>						
51. Irrigate ears/eyes	2.39	2.33	2.31	2.86	<b>3.09</b>	2.33
52. Irrigate wound	2.34	2.37	2.26	2.42	<b>2.56</b>	2.10
53. Apply tourniquet	2.34	2.37	2.28	1.00	1.03	1.05
54. Apply sutures	2.36	2.41	2.32	2.19	<b>2.58</b>	<b>2.26</b>
55. Remove sutures	2.46	2.49	2.39	2.54	<b>2.62</b>	<b>2.35</b>
56. Evaluate for antibiotic coverage	2.26	2.28	2.23	2.72	<b>2.83</b>	<b>2.45</b>
57. Apply/change sterile dressing	2.46	2.48	2.40	2.98	<b>3.11</b>	<b>2.68</b>
58. Apply/change bandages	2.45	2.48	2.40	3.12	<b>3.26</b>	<b>2.80</b>
59. Reinforce dressings	2.32	2.34	2.37	2.36	<b>2.49</b>	<b>2.06</b>
63. Apply arm sling	2.35	2.35	2.31	1.83	<b>1.83</b>	<b>1.56</b>
73. Remove superficial foreign bodies	2.32	2.33	2.31	2.40	<b>2.52</b>	<b>2.15</b>
76. Administer local anesthetic	2.33	2.33	2.33	2.30	<b>2.39</b>	<b>2.09</b>
78. Perform minor surgery (other than removal of superficial foreign bodies)	2.07	2.07	2.07	1.90	1.94	1.78
<b>B2. Sterile Technique</b>						
68. Drape table, stand, and equipment with sterile material	2.16	<b>2.20</b>	<b>2.05</b>	1.81	<b>1.98</b>	1.45
69. Conduct pre- and post-operative cleaning of operating/treatment room	1.98	2.00	1.91	1.55	<b>1.72</b>	<b>1.17</b>
70. Don sterile surgical gown and gloves	2.19	2.21	2.13	1.65	<b>1.75</b>	<b>1.42</b>
71. Assist others in donning sterile surgical gown and gloves	2.03	2.10	2.06	1.17	<b>1.21</b>	<b>1.05</b>
72. Prepare/sterilize/open instrument trays/packs	2.19	2.22	2.13	2.29	<b>2.49</b>	<b>1.85</b>
<b>B3. Orthopedic Procedures</b>						
61. Apply casts	1.96	1.95	1.98	1.12	1.14	1.08
62. Remove casts	2.13	2.13	2.14	1.15	1.16	1.12
63. Apply traction splint	2.02	1.99	2.10	1.04	1.05	1.02
65. Apply splints	2.26	2.27	2.25	1.47	<b>1.56</b>	<b>1.29</b>
66. Apply orthopedic brace	1.65	<b>1.61</b>	<b>1.76</b>	1.07	1.09	1.02
67. Apply splint boards	2.01	1.99	2.06	1.01	1.01	1.00
<b>B4. Advanced Emergency Care</b>						
90. Provide oxygen therapy	2.06	2.03	2.14	1.07	1.08	1.05
81. Perform cardiac defibrillation (life-pak)	1.40	1.40	1.40	1.00	1.00	1.01
82. Insert a chest tube	1.33	<b>1.37</b>	<b>1.58</b>	1.00	1.00	1.00
83. Perform blood transfusion	1.21	1.21	1.31	1.00	1.00	1.00
84. Install intravenous fluids	2.10	2.09	2.12	1.22	1.23	1.19
85. Perform tooth extraction	1.50	<b>1.44</b>	<b>1.64</b>	1.00	1.00	1.00
88. Perform endotracheal intubation	1.84	1.85	1.80	1.00	1.00	1.00
89. Perform cricothyrotomy	1.70	1.67	1.78	1.00	1.00	1.00
<b>B5. Emergency Care</b>						
60. Perform emergency care for head and neck injuries	2.16	2.17	2.14	1.21	1.25	1.14
74. Perform cardiopulmonary resuscitation	2.47	2.49	2.43	1.01	1.02	1.02
77. Treat for external hemorrhage, other than tourniquet	2.41	2.43	2.36	2.33	<b>2.45</b>	<b>2.08</b>
79. Perform mouth-to-mouth resuscitation	2.50	2.52	2.45	1.00	1.00	1.00
86. Perform pulmonary resuscitation using the bag-mask resuscitator	2.13	2.12	2.15	1.01	1.00	1.02
87. Insert oral airway	2.11	2.10	2.13	1.00	1.00	1.01
<b>B6. Heat/Cold Therapy</b>						
49. Provide cold therapy	2.14	<b>2.19</b>	<b>2.03</b>	2.06	<b>2.18</b>	<b>1.77</b>
50. Provide heat therapy	2.21	<b>2.25</b>	<b>2.11</b>	2.19	<b>2.36</b>	<b>1.81</b>



C. Patient Care / Patient Management Activities

	Training Adequacy			Task Frequency		
	1977	1978	1979	1977	1978	1979
<b>C1. Nursing Care</b>						
100. Administer mouth & deep breathe patient	2.00	2.00	2.00	1.31	1.31	1.31
100. Provide nursing care for bedridden patient	2.09	2.09	2.22	1.37	1.37	1.37
101. Perform irrigation therapy for patient in hand with care	2.00	2.00	2.00	1.31	1.31	1.31
102. Administer patient's oral care	2.00	2.00	2.00	1.31	1.31	1.31
103. Monitor oxygen by all patient	2.00	2.00	2.00	1.31	1.31	1.31
104. Escort to shower and hair	2.22	2.22	2.22	1.37	1.37	1.37
107. Perform postoperative care	2.00	2.00	2.00	1.31	1.31	1.31
108. Conduct oral care for intubated	1.93	1.93	2.10	1.31	1.31	1.31
109. Conduct daily debridements for burn patient	2.00	2.00	2.00	1.31	1.31	1.31
110. Chart intake & output of fluids	2.25	2.21	2.35	1.37	1.37	1.37
111. Perform catheterization	2.00	2.00	2.00	1.31	1.31	1.31
112. Provide urinary catheter care	2.00	2.00	2.00	1.31	1.31	1.31
113. Monitor indwelling cath	2.20	2.20	2.20	1.38	1.38	1.38
114. Provide intravenous site care	2.00	2.00	2.00	1.31	1.31	1.31
115. Assist patient with personal hygiene	2.00	2.00	2.00	1.31	1.31	1.31
120. Perform tube change	1.81	1.96	2.00	1.31	1.31	1.31
121. Perform care for patients in traction	2.00	2.00	2.00	1.31	1.31	1.31
<b>C2. Advanced Nursing Care</b>						
117. Apply rotating technique	1.70	1.70	1.86	1.31	1.31	1.31
118. Monitor blood transfusions	1.49	1.49	1.66	1.31	1.31	1.31
119. Apply continuous/intermittent suction	1.77	1.77	1.97	1.31	1.31	1.31
<b>C3. Patient Screening</b>						
90. Conduct sick-call for crew	2.00	2.00	2.00	4.00	4.00	4.00
91. Obtain information on presenting complaint	2.00	2.00	2.00	4.00	4.00	4.00
92. Obtain a medical history	2.00	2.00	2.00	4.00	4.00	4.00
93. Review medical record for prior condition	2.50	2.50	2.38	4.00	4.00	4.00
94. Take & record temperature, pulse, & respiration rate	2.00	2.00	2.00	4.00	4.00	4.00
95. Take & record blood pressure	2.00	2.00	2.00	4.00	4.00	4.00
96. Perform head-to-toe physical examination	2.39	2.26	2.00	3.16	2.85	2.85
<b>C4. Medications</b>						
142. Administer medications by injection	2.48	2.48	2.32	2.70	2.91	2.20
143. Administer rectal medications	2.25	2.21	2.23	2.70	1.45	1.24
144. Administer topical/external medications	2.00	2.00	2.00	3.00	3.42	3.00
145. Administer intravenous medications	2.10	2.10	2.00	1.20	1.27	1.00
146. Administer oral medications	2.00	2.50	2.35	1.00	4.53	4.30
147. Administer inhalation medication	2.00	2.00	2.00	1.00	1.00	1.00
148. Administer instillation medication (e.g., eye drops)	2.44	2.44	2.29	1.00	3.10	2.54
149. Administer sublingual medication	2.00	2.00	2.00	1.00	1.04	1.00
<b>C5. Medical Evacuations</b>						
131. Transport patient from scene of a accident with special equipment	2.20	2.20	2.10	1.37	1.42	1.22
134. Coordinate medical evacuations	2.10	2.10	2.00	1.37	1.50	1.12
135. Prepare patients for medical evacuations	2.10	2.10	2.00	1.37	1.37	1.13
136. Escort patient for medical evacuations	2.10	2.10	2.00	1.37	1.15	1.00
137. Consult with a medical officer by radio	2.00	2.00	1.90	1.35	1.33	1.03
139. Request consultations from other medical facilities	2.00	2.00	2.00	1.30	1.47	1.11
<b>C6. Patient Indoctrination</b>						
122. Indoctrinate patients in use of crutches	2.00	2.00	2.00	1.30	1.57	1.28
123. Indoctrinate patients on proper hygiene	2.00	2.00	2.00	2.00	2.00	2.00
124. Indoctrinate patients in transmission of disease	2.00	2.00	2.00	2.00	2.70	2.19
125. Indoctrinate patients on breathing techniques	1.90	1.90	2.00	1.30	1.30	1.10

C6. Patient Indoctrination (cont'd)	Training Adequacy			Task Frequency		
	All	Self	Sub	All	Self	Sub
126. Indoctrinate patients on treatment of self-care	2.23	2.24	2.20	2.63	2.76	2.35
127. Indoctrinate patients on use of prescribed medication	2.39	2.42	2.30	4.37	4.49	4.11
C7. Nutrition						
128. Prescribe special diets for patients	1.34	1.93	1.87	1.70	1.70	1.71

**D. Administrative Tasks**

	Training Adequacy			Task Frequency		
	All	Diff	Out	All	Diff	Out
<b>D1. Supply</b>						
205. Procure/Order purchase medical supplies	2.07	2.06	2.01	1.85	1.85	1.81
206. Submit and monitor supply request units	2.21	2.24	2.17	2.50	3.66	3.30
207. Store medical supplies	2.22	2.23	2.17	2.67	2.78	3.47
208. Inventory battle dressing stations	2.05	2.17	2.00	2.17	2.04	2.26
209. Survey lost/damaged equipment	2.00	2.00	2.00	1.97	1.99	1.95
210. Dispose of supplies/instruments/equipment after expiration date	2.10	2.17	2.10	2.20	2.17	2.17
211. Replenish supplies/instruments/equipment after expiration date	2.07	2.23	2.12	2.33	2.45	2.59
212. Comply with AMAL requirement	2.04	2.03	2.06	2.09	3.10	2.97
213. Prepare supplemental AMAL	2.05	2.03	2.10	1.97	2.04	1.81
214. Manage OPTAR for medical department	2.16	2.21	2.04	2.49	3.45	1.93
<b>D2. Training</b>						
178. Prepare lesson guide	2.05	2.09	2.00	2.31	2.32	2.29
179. Prepare audiovisual aids	2.07	2.08	1.90	1.72	1.82	1.49
180. Prepare training reports	2.00	2.01	1.97	2.24	2.37	1.91
181. Serve as instructor for training session	2.05	2.33	2.20	3.28	3.59	2.55
182. Prepare tests/examinations	2.11	2.09	2.17	1.91	1.91	1.91
183. Administer grade tests/examinations	2.12	2.09	2.19	1.80	1.85	1.83
184. Validate practical factors/PAPC completion	2.10	2.12	2.09	1.77	1.91	1.42
<b>D3. Medical Records</b>						
151. Verify dental records	2.19	2.19	2.19	2.94	3.05	2.69
152. Verify health records	2.30	2.38	2.30	3.21	3.27	3.05
153. Transcribe doctor's orders	2.01	2.02	2.10	1.44	1.45	1.48
154. Open health records	2.01	2.03	2.03	1.93	1.97	1.93
155. Close health records	2.00	2.40	2.17	2.02	2.26	1.45
156. Open dental records	2.17	2.15	2.06	1.17	1.26	1.16
160. Close dental records	2.11	2.16	2.00	1.69	1.97	1.27
161. Open temporary health or dental record	2.15	2.30	2.14	1.30	1.44	1.18
<b>D4. File Maintenance</b>						
150. Maintain/update medical tickler file	2.00	2.02	2.06	2.97	3.97	3.25
163. Destroy classified material	1.97	1.95	1.92	1.40	1.42	1.35
167. Monitor ship's weight control program	2.00	2.05	2.11	3.20	3.20	2.20
170. Maintain/update mailing list	2.00	2.00	2.00	1.99	1.20	1.67
171. Maintain/update medical department I/M schedule	1.91	1.91	1.91	3.50	3.78	2.91
172. Draft and follow up on ship's maintenance action (COMAFS)	2.04	2.09	1.99	1.93	2.03	1.36
173. Draft and follow up on internal work requests (IWRs)	1.90	1.90	1.91	1.86	2.10	1.28
<b>D5. Supervision</b>						
215. Write/review enlisted performance evaluations	2.00	2.05	1.89	1.32	1.41	1.11
217. Assign work priorities	2.19	2.22	2.02	3.72	4.05	2.97
218. Counsel personnel on performance	2.02	2.17	2.01	2.41	2.73	1.70
219. Justify augmentation request for personnel logistics resources	1.90	1.87	1.82	1.36	1.47	1.11
222. Assign work to subordinates	2.10	2.23	1.99	3.29	3.97	1.72
<b>D6. Consults/Inspections Requests</b>						
185. Request consultations from other medical facilities	2.17	2.23	2.18	3.25	3.37	3.00
186. Request noise health survey	2.00	2.02	1.97	1.22	1.22	1.20
187. Request microwave health survey	2.00	1.99	2.02	1.10	1.31	1.37
189. Request TYCOM medical inspection (MPI/MPE, etc.)	2.09	2.08	2.09	1.28	1.34	1.14
196. Request EPMU technical assist visit	2.22	2.20	2.26	1.92	1.40	1.41

**D7. Correspondence**

- 199. Draft messages
- 200. Draft letters
- 201. Draft instructions/notices

Training Adequacy

Task Frequency

	1977	1978	1979	1977	1978	1979
199. Draft messages	2.06	2.03	1.99	2.31	2.44	2.02
200. Draft letters	2.13	2.20	2.13	2.33	2.68	3.05
201. Draft instructions/notices	2.02	2.04	2.00	1.82	1.81	1.84

APPENDIX B

MEAN RATINGS OF IDC TASK TRAINING ADEQUACY AND TASK PERFORMANCE FREQUENCY  
(SSRN 125) (N = 100)

A. Medical/Dental Conditions

	Training Adequacy			Task Frequency		
	All	SSRN	SSN	All	SSRN	SSN
<b>A1. Dental Conditions</b>						
11. Badly worn teeth/dentures	1.92	<b>1.92</b>	<b>1.84</b>	1.94	1.94	1.14
12. Gum disease	2.00	1.90	1.87	1.91	1.90	1.11
13. Pulpitis	1.99	1.92	1.87	1.95	<b>1.82</b>	<b>1.12</b>
14. Tooth fractures	1.91	1.88	1.79	1.92	<b>1.48</b>	<b>1.17</b>
15. Periodontitis	1.95	1.88	1.81	1.80	1.81	1.13
16. Lost fillings	1.97	2.00	2.10	1.83	<b>1.92</b>	<b>1.59</b>
17. Toothache cavity	2.01	1.94	1.84	1.85	<b>1.76</b>	<b>1.45</b>
18. Abscessed gums	1.96	1.90	1.83	1.92	1.82	1.16
<b>A2. General Medical</b>						
19. Upper respiratory infection	2.10	2.12	2.11	2.19	2.02	1.93
19a. Gastrointestinal maladies	2.01	2.01	2.00	2.07	2.01	2.01
20. Genereal disease	2.07	2.00	2.02	2.09	1.74	1.95
20a. Genitourinary diseases/disorders	2.01	2.03	2.11	2.09	1.82	1.73
21. Chock	2.31	2.10	2.12	1.17	<b>1.20</b>	<b>1.06</b>
25. Medical chock	2.07	2.12	2.25	1.05	1.12	1.03
27. Orthopedic injuries	2.03	<b>2.16</b>	<b>1.99</b>	2.57	2.42	2.32
28. Musculoskeletal injury/strain	2.19	2.24	2.17	3.41	2.08	3.00
29. Soft tissue injuries	2.31	2.32	2.30	3.42	3.21	3.18
30. Headaches	2.10	2.12	2.10	3.87	3.76	3.48
30a. Influenza	2.17	2.24	2.14	2.74	2.96	2.45
<b>A3. Acute Medical</b>						
31. Respiratory conditions such as pneumonia	2.05	2.14	2.01	1.04	1.08	1.03
32. Cardiovascular conditions	1.81	1.74	1.83	1.15	1.04	1.04
33. Spinal cord injuries	2.03	2.00	2.01	1.01	1.07	1.00
33a. Seizure disorders	1.95	1.97	1.96	1.01	1.00	1.00
34. Head & neck injuries	2.05	2.03	2.10	1.19	1.14	1.25
35. Injuries to the genitalia	1.91	1.83	1.83	1.14	1.08	1.09
36. Acute abdominal/thoracic injuries/conditions	2.00	2.12	1.99	1.25	1.28	1.23
37. Internal hemorrhage	1.80	1.83	1.79	1.01	1.00	1.00
38. Diabetic condition	1.90	1.88	1.77	1.02	1.00	1.01
<b>A4. Reactions/Side Effects</b>						
39. Reaction to medication	1.94	1.17	1.99	1.07	1.04	1.03
40. Medication side-effects	1.97	1.88	1.93	1.23	1.33	1.23
41. Immunization reactions	2.09	<b>1.96</b>	<b>2.10</b>	1.63	<b>1.12</b>	<b>1.01</b>
18. Bites & stings	2.03	2.03	2.03	1.43	1.56	1.38
<b>A5. Psychological Disorders/Conditions</b>						
42. Mental psychiatric disorders	1.90	1.83	1.74	1.48	1.50	1.53
45. Stress-related emotional problem	1.90	1.92	1.76	2.14	2.24	2.13
47. Acute drug/chemical intoxication	1.84	1.90	1.83	1.14	1.08	1.01
48. Substance abuse and related problems	1.95	1.90	1.90	2.07	<b>2.00</b>	<b>1.65</b>
<b>A6. Eye &amp; ENT Conditions</b>						
49. Eye injuries	2.05	2.20	2.00	2.53	2.32	2.03
50. Eye disease/disorders	1.96	1.83	1.99	2.01	2.08	1.84
51. Ear, nose, & throat disease/disorders	2.00	2.13	2.23	3.92	3.62	3.75

Adequacy scales: 1 = "inadequate", 2 = "adequate", 3 = "outstanding"

Frequency scales: 1 = "rarely", 2 = "about quarterly", 3 = "1 to 3 per month", 4 = "1 or 2 per week", 5 = "nearly every day"

Numbers in bold indicate significantly different ( $p < .05$ ) subgroup means

	Training Adequacy		Task Frequency	
	1971	1972	1971	1972
<b>A7. Heat Related Condition:</b>				
1. Heat Stroke	1.00	1.00	1.00	1.00
2. Heat Exhaustion/Heat Cramp	1.00	1.00	1.10	1.28
<b>A8. Burn Injuries</b>				
1. Chemical Burn	2.12	2.06	1.40	1.14
2. Thermal Burn	2.28	2.17	1.40	1.14
3. Electrical Burn	1.00	1.00	1.21	1.01
<b>A9. Pediatric Conditions:</b>				
1. Fracture/Dislocation	1.00	1.00	1.00	1.00
2. Other Pediatric Injuries	1.00	1.00	3.40	3.56
<b>A10. Radiation</b>				
1. Radiation Emergency	1.00	1.00	1.40	1.96

## B. Clinical Procedures

	Training Adequacy			Task Frequency		
	ATI	CCNY	CCU	ATI	CCNY	CCU
<b>B1. Injury Treatment</b>						
61. Irrigate eye	2.21	2.21	2.27	2.24	2.20	2.21
62. Irrigate wound	2.26	2.26	2.26	2.21	2.32	2.01
63. Apply tourniquet	2.27	2.27	2.27	2.27	2.09	1.66
64. Apply suture	2.28	2.28	2.31	2.29	2.64	2.14
65. Perform suture	2.28	2.28	2.31	2.28	2.64	2.27
66. Evaluate for shock, fluid overload	2.28	2.28	2.27	2.28	2.72	2.35
67. Apply change sterile dressing	2.27	2.27	2.27	2.28	3.08	2.54
68. Apply change bandage	2.27	2.27	2.27	2.27	2.21	2.70
69. Perform a tie sling	2.27	2.27	2.28	2.27	2.21	2.21
70. Apply arm sling	2.27	2.27	2.27	2.27	1.84	1.43
71. Remove superficial foreign bodies	2.27	2.27	2.27	2.27	2.21	2.21
72. Administer local anesthetic	2.27	2.27	2.27	2.27	2.52	1.96
73. Perform minor surgery other than removal of superficial foreign bodies	2.27	2.27	2.27	2.27	2.00	1.66
<b>B2. Sterile Technique</b>						
69. Prepare table, stand, and equipment with sterile material	2.27	2.27	2.27	2.21	1.72	1.34
70. Perform pre- and post-operative cleaning of operating treatment room	2.27	2.27	2.27	2.27	1.43	1.06
71. Don sterile surgical gown and gloves	2.27	2.27	2.27	2.27	1.54	1.39
72. Assist others in donning sterile surgical gown and gloves	2.27	2.27	2.04	2.27	1.13	1.03
73. Prepare/sterilize open instrument trays/packs	2.27	2.27	2.27	2.29	2.25	1.69
<b>B3. Orthopedic Procedures</b>						
41. Apply cast	2.29	2.29	2.03	2.12	1.24	1.03
42. Remove cast	2.17	2.27	2.11	2.15	1.24	1.09
43. Apply traction splint	2.20	2.01	2.04	2.04	1.00	1.03
44. Apply splint	2.26	2.22	2.23	2.47	1.40	1.24
45. Apply orthopedic brace	2.22	2.20	2.21	2.07	1.00	1.03
47. Apply splint boards	2.07	2.28	2.00	2.01	1.00	1.00
<b>B4. Advanced Emergency Care</b>						
60. Provide oxygen therapy	2.15	2.20	2.13	2.07	1.12	1.03
61. Perform cardiac defibrillation (life pack)	2.21	2.22	2.22	2.00	1.00	1.01
62. Insert oropharyngeal airway	2.22	2.20	2.22	2.00	1.00	1.00
63. Perform blood transfusion	2.22	2.22	2.22	2.00	1.00	1.00
64. Install intravenous fluid	2.22	2.22	2.22	2.00	1.40	1.14
65. Perform tooth extraction	2.22	2.22	2.22	2.00	1.00	1.00
66. Perform endotracheal intubation	2.22	2.22	2.22	2.00	1.00	1.00
67. Perform thyroidectomy	2.22	2.22	2.22	2.00	1.00	1.00
<b>B5. Emergency Care</b>						
40. Perform emergency care for head and neck injuries	2.22	2.22	2.22	2.21	1.28	1.09
74. Perform cardiopulmonary resuscitation	2.22	2.22	2.22	2.01	1.04	1.00
75. Treat for external hemorrhage, other than tourniquet	2.22	2.22	2.22	2.02	2.40	1.99
76. Perform mouth-to-mouth resuscitation	2.22	2.22	2.22	2.00	1.00	1.00
76. Perform pulmonary resuscitation using the bag-mask resuscitator	2.22	2.22	2.22	2.01	1.00	1.01
87. Insert oral airway	2.22	2.22	2.22	2.00	1.00	1.01
<b>B6. Heat/Cold Therapy</b>						
49. Provide cold therapy	2.22	2.22	2.22	2.00	2.08	1.67
50. Provide heat therapy	2.22	2.22	2.22	2.12	2.08	1.73

C. Patient Care / Patient Management Activities

Task	Training Adequacy			Task Frequency		
	ALL	SSRN	SSN	ALL	SSRN	SSN
<b>C1. Nursing Care</b>						
101. Turn, cough, & deep-breathe patient	2.17	2.19	2.17	2.18	2.20	2.18
102. Provide nursing care for bedridden patient	2.17	2.21	2.21	2.03	2.07	2.01
103. Perform circulation checks for patients in hand-off care	2.17	2.19	2.18	2.18	2.18	2.18
104. Administer patient exercises (range of motion)	2.17	2.20	2.20	2.17	2.18	2.18
105. Monitor seriously ill patient	2.17	2.19	2.19	2.09	2.10	2.09
106. Assist with shower and head	2.17	2.21	2.20	2.04	2.11	2.01
107. Perform post-operative care	2.17	2.18	2.18	2.07	2.08	2.08
108. Insert nasal-gastric intubation	2.17	2.08	2.18	2.01	1.98	2.00
109. Conduct daily debridements for burn victim	2.17	2.12	2.09	2.17	2.20	2.07
110. Chart intake & output of fluid	2.17	2.20	2.20	2.03	2.07	2.03
111. Perform catheterization	2.17	1.96	2.27	2.01	1.98	2.01
112. Provide urinary catheter care	2.17	2.07	2.27	2.01	2.00	2.00
113. Monitor intravenous care	2.17	2.08	2.27	1.18	1.24	1.06
114. Provide intravenous site care	2.17	2.08	2.28	1.17	1.24	1.09
115. Assist patient with postural drainage	2.17	1.92	2.14	1.93	1.98	2.00
116. Perform tracheotomy care	2.17	2.08	2.08	2.00	2.01	2.00
117. Perform care for patients in traction	2.17	2.02	2.08	2.00	2.00	2.00
<b>C2. Advanced Nursing Care</b>						
117. Apply rotating techniques	2.28	2.27	2.06	2.00	2.00	2.00
118. Monitor blood transfusion	2.27	2.24	1.71	2.00	2.20	2.00
119. Apply continuous/intermittent suction	2.08	2.09	2.01	2.01	2.03	2.00
<b>C3. Patient Screening</b>						
120. Conduct sick-call for crew	2.29	2.29	2.13	4.29	5.00	5.00
121. Obtain information on presenting complaint	2.28	2.35	2.46	4.24	5.00	4.83
122. Obtain a medical history	2.28	2.35	2.46	4.23	5.00	4.85
123. Review medical record for prior conditions	2.28	2.30	2.40	3.82	4.76	4.62
124. Take & record temperature, pulse, & respiration rate	2.50	2.51	2.51	4.80	4.96	4.59
125. Take & record blood pressure	2.51	2.48	2.51	4.63	4.72	4.41
126. Perform head to toe physical examination	2.39	2.26	2.31	3.07	2.96	2.76
<b>C4. Medications</b>						
127. Administer medications by injection	2.33	2.29	2.33	2.70	2.36	2.11
128. Administer rectal medications	2.27	2.27	2.21	2.30	1.28	1.12
129. Administer topical/sutaneous medication	2.22	2.20	2.21	2.23	3.22	2.23
130. Administer intravenous medications	2.08	2.08	2.08	1.23	1.20	1.12
131. Administer oral medication	2.27	2.22	2.20	3.16	3.21	3.23
132. Administer inhalation medications	2.25	2.22	2.10	1.20	1.40	1.12
133. Administer instillation medications (e.g., eye drops)	2.26	2.21	2.21	2.23	2.64	2.55
134. Administer sublingual medications	2.21	2.16	2.23	2.01	1.03	1.01
<b>C5. Medical Evacuations</b>						
135. Transport patient from scene of accident with special equipment	2.19	2.21	2.15	2.25	2.32	2.19
136. Coordinate medical evacuation	2.08	2.07	2.07	2.28	1.16	1.10
137. Prepare patients for medical evacuations	2.17	2.17	2.11	1.30	1.20	1.09
138. Escort patient for medical evacuations	2.18	2.18	2.15	2.13	1.08	1.01
139. Consult with a medical officer by radio	2.20	2.25	1.33	1.22	1.00	1.03
140. Request consultations from other medical facilities	2.22	2.21	2.21	2.30	3.48	2.96
<b>C6. Patient Indoctrination</b>						
123. Indoctrinate patients in use of clutches	2.20	2.21	2.18	1.18	1.64	1.16
124. Indoctrinate patients on proper hygiene	2.31	2.31	2.31	2.35	2.36	2.35
125. Indoctrinate patients in transmission of disease	2.40	2.33	2.32	2.55	2.08	1.13
126. Indoctrinate patients on breathing techniques	2.06	2.00	2.08	1.22	1.32	1.13



C6. Patient Indoctrination (cont'd)	Training Adequacy			Task Frequency		
	ATL	2014	2015	ATL	2014	2015
126. Indoctrinate patients on treatment of self-care	2.22	2.23	2.24	2.03	2.00	2.20
127. Indoctrinate patients on use of prescribed medication	2.32	2.30	2.31	4.37	4.24	4.00
<b>C7. Nutrition</b>						
38. Prescribe special diets for patients	1.80	1.83	1.91	1.70	2.00	1.59

**D. Administrative Tasks**

	Training Adequacy			Task Frequency		
	All	SSRN	SSN	All	SSRN	SSN
<b>D1. Supply</b>						
205. Procure "open-purchase" medical supplies	2.07	2.07	2.04	2.95	2.91	2.89
206. Submit and monitor supply request charts	2.14	2.19	2.14	2.53	2.56	2.54
207. Store medical supplies	2.17	2.20	2.15	3.67	3.71	3.71
208. Inventory battle dressing stations	2.13	2.21	2.12	2.71	2.77	2.75
209. Survey and damaged equipment	2.07	2.12	2.00	1.77	1.64	1.36
210. Dispose of supplies/instruments/equipment after expiration date	2.14	2.19	2.12	2.10	2.11	2.11
211. Replenish supplies/instruments/equipment after expiration date	2.02	2.06	2.09	2.49	2.44	2.41
212. Comply with AMAL requirements	2.29	2.30	2.25	2.64	2.70	2.69
213. Prepare supplemental AMAL	2.10	2.16	2.07	1.97	1.99	1.83
214. Manage OPTAR for medical department	2.04	2.10	2.00	2.93	2.12	2.79
<b>D2. Training</b>						
178. Prepare lesson guides	2.14	2.19	2.15	2.91	2.91	2.87
179. Prepare individual aids	2.07	2.07	2.01	1.72	1.61	1.52
180. Prepare training reports	2.09	2.08	2.04	2.21	2.04	1.87
181. Serve as instructor for training sessions	2.12	2.08	2.13	2.39	2.77	2.51
182. Prepare tests/examinations	2.18	2.21	2.14	1.81	2.07	1.90
183. Administer grade tests or examinations	2.10	2.09	2.15	1.81	2.12	1.93
184. Validate practical factor PAFS completion	2.04	2.04	2.01	1.77	1.44	1.30
<b>D3. Medical Records</b>						
151. Verify dental records	2.14	2.04	2.12	2.94	2.70	2.60
152. Verify health records	2.21	2.25	2.32	3.21	3.39	3.00
153. Transcribe doctor's orders	2.20	2.16	2.21	1.31	2.14	1.25
157. Open health records	2.12	2.17	2.16	1.33	1.48	1.17
158. Close health records	2.17	2.13	2.18	2.02	1.70	1.64
159. Open dental records	2.07	2.08	2.07	1.17	1.33	1.03
160. Close dental records	2.01	2.00	2.00	1.44	1.34	1.23
161. Open temporary health or dental record	2.14	2.13	2.14	1.31	1.48	1.06
<b>D4. File Maintenance</b>						
160. Maintain update medical tickler file	2.16	2.17	2.15	2.97	2.39	2.87
163. Destroy classified materials	2.01	2.00	2.01	1.30	1.83	1.23
167. Monitor ship's weight control program	2.10	2.12	2.09	2.22	3.44	3.12
170. Maintain update sailing list	1.90	2.00	1.87	1.34	1.87	1.69
171. Maintain update medical department PMC schedule	1.89	2.13	1.81	2.52	2.63	2.64
172. Draft and follow-up on ship's maintenance actions (SMAS)	1.63	1.75	1.56	1.83	1.61	1.29
173. Draft and follow-up on internal work requests (IWRs)	1.68	1.79	1.59	1.86	1.52	1.20
<b>D5. Supervision</b>						
215. Write/review enlisted performance evaluations	1.90	1.92	1.99	1.32	1.28	1.04
217. Assign work priorities	2.02	2.00	2.03	3.73	3.69	3.89
218. Counsel personnel on performance	2.01	1.99	2.03	2.41	2.21	1.48
219. Justify augmentation request for personnel/logistics resources	1.83	1.75	1.81	1.30	1.69	1.13
222. Assign work to subordinates	1.98	1.96	1.99	2.24	2.13	1.51
<b>D6. Consults/Inspections Requests</b>						
185. Request consultations from other medical facilities	2.16	2.16	2.14	2.25	3.28	2.01
186. Request noise health survey	1.95	1.99	1.93	1.22	1.71	1.20
187. Request microwave health survey	1.99	2.12	1.94	1.42	1.56	1.26
188. Request TICOM medical inspection (MPE, MPE, etc.)	1.83	2.12	2.04	1.38	1.24	1.10
196. Request AFMU technical assist visit	2.27	2.32	2.25	1.32	1.87	1.27

**D7. Correspondence**

199. Draft messages  
200. Draft letters  
201. Draft instructions/notices

**Training Adequacy**

<u>ALL</u>	<u>SSBN</u>	<u>SSN</u>
1.97	2.04	1.94
2.12	2.16	2.10
1.99	2.04	1.97

**Task Frequency**

<u>All</u>	<u>SSBN</u>	<u>SSN</u>
2.31	1.63	2.17
2.79	3.08	3.16
1.82	2.42	1.73

APPENDIX C

SURFACE SHIP MEAN RATINGS OF IDC TASK TRAINING ADEQUACY\*\*

A. Medical/Dental Conditions

	All	AE/AO (17)	CG (18)	DD/DDG (62)	FF, FFG (91)	LSD/LST (25)	MSO (18)
		A	B	C	D	E	F
<b>A1. Dental Conditions</b>							
41. Pericoronitis (tooth crown)	1.96	1.77	2.00	1.97	1.88	1.64	2.00
42. Dry socket	2.02	1.94	2.11	2.03	2.07	1.84	2.17
43. Pulpitis	1.91	1.71	2.07	1.93	1.95	1.76	2.06
44. Tooth fractures	1.93	1.82	2.05	1.97	1.98	1.76	2.11
45. Periodontitis	1.85	1.65	2.00	1.79	1.88	1.84	2.06
46. Lost filling	2.11	2.12	2.11	2.12	2.11	1.96	2.28
47. Toothache/cavity	2.05	2.00	2.06	2.03	2.04	2.00	2.17
48. Abscessed gums	2.00	1.88	2.06	1.97	2.06	1.92	2.11
<b>A2. General Medical Conditions</b>							
7. Upper respiratory infections	2.36	2.35	2.33	2.32	2.36	2.52	2.23
13. Gastrointestinal maladies	2.17	2.23	2.11	2.12	2.19	2.24	2.11
19. Venereal disease	2.51	2.31	2.50	2.37	2.51	2.68	2.50
20. Genitourinary diseases/disorders	2.12	2.12	2.06	2.10	2.12	2.24	2.11
24. Shock	2.33	2.23	2.39	2.32	2.31	2.44	2.44
25. Electrical shock	2.29	2.18	2.22	2.26	2.30	2.48	2.39
27. Orthopedic injuries	2.09	2.23	2.11	1.92	2.09	2.20	2.22
28. Musculoskeletal injury/strain	2.28	2.41	2.28	2.14 <sup>E</sup>	2.27	2.44	2.39
29. Soft tissue injuries	2.31	2.31 <sup>B</sup>	2.17	2.25	2.29 <sup>E</sup>	2.48	2.39
33. Headaches	2.27	2.47 <sup>B</sup>	2.06 <sup>E</sup>	2.23	2.20 <sup>E</sup>	2.48	2.44
38. Influenza	2.21	2.23	2.17	2.12 <sup>E</sup>	2.20	2.44	2.28
<b>A3. Acute Medical Conditions</b>							
8. Respiratory conditions such as pneumothorax	1.98	1.82	2.06	1.97	2.04	2.16	1.94
9. Cardiovascular conditions	1.72	1.65	1.87	1.70	1.74	1.72	1.61
22. Spinal cord injuries	1.89	1.77	2.11	1.80	1.92	1.92	1.89
23. Seizure disorders	1.83	1.77	1.89	1.70	1.87	1.92	1.94
26. Head & neck injuries	2.15	2.18	2.11	2.03	2.16	2.28	2.28
30. Injuries to the genitalia	1.94	1.94	1.94	1.85	2.00	1.96	2.00
32. Acute abdominal/thoracic injuries conditions	1.91	1.88	1.94	1.87	1.96	1.96	1.94
33. Internal hemorrhage	1.70	1.74	1.72	1.65	1.75	1.72	1.72
36. Diabetic conditions	1.77	1.65	1.72	1.71	1.81	1.92	1.78
<b>A4. Reactions/Side-Effects</b>							
4. Reaction to medication	2.05	2.06	2.11	1.93	2.12	2.04	1.94
5. Medication side-effects	2.03	1.94	1.94	1.95	2.12	1.88	2.11
6. Immunization reactions	2.07	2.12	2.06	1.95	2.11	2.16	2.11
18. Bites & stings	2.09	2.00	2.00	2.00	2.17	2.13	2.11
<b>A5. Psychological Disorders/Conditions</b>							
34. Mental/psychiatric disorders	1.67	1.74	1.61	1.55 <sup>F</sup>	1.73	1.52 <sup>F</sup>	2.00
35. Stress related emotional problems	1.76	1.93	1.67	1.57 <sup>D</sup>	1.86	1.67	1.89
37. Acute drug/chemical intoxication	1.79	1.88	1.89	1.72	1.77	1.92	1.89
39. Substance abuse and related problems	1.92	2.00 <sup>F</sup>	1.99 <sup>F</sup>	1.77 <sup>F</sup>	1.88 <sup>F</sup>	2.04 <sup>F</sup>	2.44
<b>A6. Eye &amp; ENT Conditions</b>							
1. Eye injuries	2.13	2.20	2.17	2.13	2.11	2.20	2.17
2. Eye disease/disorders	2.02	2.12	2.11	1.97	2.00	2.20	2.06
3. Ear, nose, throat disease/disorders	2.23	2.29	2.39	2.23	2.17	2.28	2.33

\*Adequacy scale: 1 = "inadequate", 2 = "adequate", 3 = "outstanding"  
 Letters between columns designate a significant difference (p < .05, Duncan method) between the item mean in the column and the noted comparison group.

	All	AE/NO A	CG B	DD/DDG C	FF/FFG D	LSF/LSF E	M50 F
<b>A7. Heat Related Conditions</b>							
10. Heatstroke	2.41	2.25	2.50	2.40	2.40	2.64	2.14
11. Heat exhaustion/heat cramps	2.42	2.29	2.33	2.43	2.42	2.60	2.56
<b>A8. Burn Injuries</b>							
16. Chemical burns	2.04	2.09	2.22	1.92	2.09	2.03	2.06
17. Thermal burns	2.20	2.06	2.29	2.12	2.26	2.12	2.28
31. Cold weather injuries	2.02	1.53	2.06	2.00	1.99	2.20	2.11
<b>A9. Podiatric Conditions</b>							
14. Foot disorders	1.65	1.59	1.50	1.52	1.64	1.80	1.77
15. Common skin disease (e.g., athlete's foot)	1.84	2.18 <sup>C</sup>	1.67	1.68	1.85	1.96	2.00
<b>A10. Radiation</b>							
21. Radiation exposure	1.59	1.53	1.83	1.48	1.44	1.72	1.50

**B. Clinical Procedures**

	All	AL/AC A	OP B	LD/DDS C	FP/FFG D	LDD/LDT E	MOO F
<b>B1. Injury Treatment</b>							
51. Irrigate ears/eyes	2.43	2.47	2.33	2.43	2.46	2.60	2.44
52. Irrigate wound	2.37	2.29	2.30	2.35	2.35	2.52	2.48
53. Apply tourniquet	2.37	2.24	2.29	2.25	2.43	2.48	2.33
54. Apply sutures	2.41	2.59	2.30	2.33	2.39	2.60	2.61
55. Remove suture	2.14	2.07	2.39	2.38	2.47	2.64	2.67
56. Evaluate for antibiotic coverage	2.28	2.27	2.33	2.20	2.32	2.40	2.23
57. Apply/change sterile dressing	2.48	2.57	2.56	2.56	2.47	2.68	2.61
58. Apply/change bandages	2.48	2.52	2.50	2.47	2.47	2.63	2.61
59. Reinforce dressings	2.14	2.07	2.25	2.32	2.39	2.63	2.58
63. Apply arm sling	2.35	2.29	2.50	2.32	2.29	2.48	2.50
73. Remove superficial foreign bodies	2.33	2.35	2.33	2.32	2.27	2.44	2.50
76. Administer local anesthetic	2.33	2.41	2.33	2.29	2.33	2.44	2.39
78. Perform minor surgery (excluding superficial foreign body removal)	2.07	1.88	2.17	2.07	2.08	2.12	2.17
<b>B2. Sterile Technique</b>							
68. Drape table, stand, and equipment with sterile material	2.20	2.12	2.00	2.19	2.20	2.34	2.27
69. Conduct pre and post operative cleaning of operating room	2.00	1.98	1.93	2.04	2.01	1.96	2.11
70. Don sterile surgical gown and gloves	2.21	2.17	2.27	2.27	2.16	2.38	2.28
71. Assist others in donning sterile surgical gown and gloves	2.10	2.00	2.17	2.12	2.16	2.08	2.17
72. Prepare/sterilize/open instrument trays/packs	2.22	2.24	1.88	2.27	2.18	2.36	2.28
<b>B3. Orthopedic Procedures</b>							
61. Apply casts	1.95	2.04	2.06	1.88	1.89	1.96	2.17
62. Remove casts	2.13	2.09	2.11	2.12	2.10	2.12	2.28
63. Apply traction splint	1.99	2.00	2.11	1.98	1.95	2.08	2.07
65. Apply splints	2.27	2.23	2.50 <sup>CD</sup>	2.20	2.24	2.32	2.48
66. Apply orthopedic brace	1.61	1.50	1.94 <sup>CD</sup>	1.50	1.55	1.64	1.83
67. Apply splint boards	1.99	1.82	2.00	1.93	1.98	2.20	2.17
<b>B4. Advanced Emergency Care</b>							
80. Provide oxygen therapy	2.03	2.04	2.11	2.02	2.02	1.94	2.22
71. Perform cardiac defibrillation (LIFPAK)	1.40	1.35	1.56	1.30 <sup>F</sup>	1.44	1.29	1.67
72. Insert a chest tube	1.37	1.24	1.39	1.42	1.39	1.25	1.44
83. Perform blood transfusion	1.24	1.12	1.11	1.12 <sup>F</sup>	1.24	1.24	1.39
84. Install intravenous fluids	2.09	2.00	1.99	2.08	2.12	2.16	2.29
85. Perform tooth extraction	1.44	1.27	1.44	1.43	1.44	1.44	1.61
86. Perform endotracheal intubation	1.85	1.77	2.00	1.92	1.88	1.76	1.93
89. Perform cricothyrotomy	1.67	1.71	1.78	1.75	1.69	1.56	1.61
<b>B5. Emergency Care</b>							
60. Emergency care for head/neck injury	2.17	2.24	2.33 <sup>F</sup>	2.00 <sup>EF</sup>	2.14 <sup>F</sup>	2.32	2.39
75. Cardiopulmonary resuscitation	2.49	2.59	2.39 <sup>F</sup>	2.30 <sup>F</sup>	2.38 <sup>F</sup>	2.52	2.63
77. Treat for external hemorrhage, other than tourniquet	2.44	2.53	2.44	2.42	2.38	2.52	2.61
79. Mouth-to-mouth resuscitation	2.52	2.47	2.56	2.34	2.51	2.56	2.72
86. Perform pulmonary resuscitation using the bag-mask resuscitator	2.12	2.06	2.06	2.11	2.17	2.12	2.22
87. Insert oral airway	2.10	2.17	2.11	2.13	2.15	1.96	2.17
<b>B6. Heat/Cold Therapy</b>							
49. Provide cold therapy	2.19	2.12	2.30	2.15	2.20	2.20	2.17
50. Provide heat therapy	2.25	2.29	2.39	2.18	2.27	2.32	2.28

**C. Patient Care / Patient Management Activities**

	All	AGE 40 A	50 B	60-69 C	70-79 D	80-89 E	90-99 P
<b>C1. Nursing Care</b>							
99. Turn, cough & deep-breathe patients	2.08	2.04	2.06	2.08	2.05	2.14	2.09
100. Provide nursing care for bedridden patients	2.02	2.01	2.12	2.00 <sup>F</sup>	2.08 <sup>P</sup>	2.16	2.04
101. Perform circulation check for patients in hard soft cases	2.23	2.29	2.27	2.17	2.23	2.26	2.56
102. Administer patient exercises range of motion	1.93	2.08	1.91	1.97 <sup>F</sup>	1.95	2.00	2.17
105. Monitor seriously ill patient	2.13	2.11	2.17 <sup>F</sup>	2.07 <sup>F</sup>	2.12 <sup>P</sup>	2.20	2.11
106. Escort to showers and head	2.18	2.12 <sup>F</sup>	2.17 <sup>F</sup>	2.13 <sup>F</sup>	2.17 <sup>P</sup>	2.21	2.55
107. Perform postoperative care	2.09	2.00	2.06	2.08	2.07	2.28	2.30
108. Conduct nasogastric intubation	1.97	1.97	1.99	1.90	1.96	1.96	2.11
109. Conduct daily debridements for burn victims	1.97	1.94	1.91	1.95	2.01	2.04	2.00
110. Chart intake & output of fluids	2.21	2.23	1.91	2.20	2.21	2.14	2.56
111. Perform catheterization	2.05	1.93	1.91	2.11	2.04	2.04	2.22
112. Provide urinary catheter care	2.05	1.91	2.06	2.08	2.07	1.94	2.29
113. Monitor intravenous site	2.26	2.18	2.21	2.27	2.29	2.14	2.44
114. Provide intravenous site care	2.24	2.17	2.17	2.22	2.28	2.16	2.47
115. Assist patient with postural drainage	1.98	1.97	1.83	1.98	1.96	2.04	2.28
120. Perform tracheotomy care	1.91	1.81	1.79	1.80	1.85	1.68 <sup>F</sup>	2.11
121. Care for patients in traction	1.85	1.77	1.69	1.78	1.82	1.88	2.17
<b>C2. Advanced Nursing Care</b>							
119. Apply rotating tourniquets	1.70	1.53 <sup>F</sup>	1.94	1.68 <sup>F</sup>	1.67	1.72	1.83
118. Monitor blood transfusions	1.74	1.21 <sup>F</sup>	1.67	1.33 <sup>F</sup>	1.50	1.52	1.83
117. Apply continuous/intermittent suction	1.77	1.54 <sup>F</sup>	1.93	1.75 <sup>F</sup>	1.78 <sup>P</sup>	1.67 <sup>P</sup>	2.22
<b>C3. Patient Screening</b>							
90. Conduct sick-call for crew	2.49	2.31	2.37	2.44 <sup>F</sup>	2.46 <sup>P</sup>	2.60	2.67
91. Obtain info on presenting complaints	2.51	2.37	2.44	2.45 <sup>F</sup>	2.46 <sup>P</sup>	2.64	2.78
92. Obtain a medical history	2.50	2.47	2.50	2.47	2.45	2.60	2.67
93. Review medical record for prior conditions	2.50	2.41	2.39	2.37	2.49	2.64	2.67
94. Take & record temperature, pulse, & respiration rate	2.56	2.37	2.44	2.55	2.52 <sup>P</sup>	2.64	2.72
95. Take & record blood pressure	2.59	2.37	2.50	2.57	2.55 <sup>P</sup>	2.61	2.83
96. Perform head to toe physical exam	2.39	2.31	2.33	2.37	2.30	2.41	2.61
<b>C4. Medications</b>							
142. Administer meds by injection	2.18	2.53	2.31	2.51	2.10 <sup>P</sup>	2.54	2.72
143. Administer rectal medications	2.31	2.39	2.29	2.32	2.29	2.25	2.44
144. Administer topical/cutaneous meds	2.42	2.31	2.29	2.46	2.39	2.37	2.61
145. Administer intravenous medications	2.18	2.15	2.17	2.18	2.25	2.04	2.22
146. Administer oral medications	2.50	2.37	2.53	2.53	2.47	2.50	2.67
147. Administer inhalation medications	2.05	2.06	2.12	1.97	2.07	2.00	2.17
148. Administer instillation medications (e.g., eye drop)	2.44	2.53	2.35	2.46	2.40	2.46	2.61
149. Administer sublingual medications	2.30	2.29	2.35	2.29	2.28	2.30	2.44
<b>C5. Medical Evacuations</b>							
131. Transport patient from scene of accident with special equipment	2.23	2.29	2.27	2.20	2.22	2.21	2.44
134. Coordinate medical evacuations (MEDEVAC)	2.15	2.31	2.18	2.08 <sup>F</sup>	2.20	1.94 <sup>F</sup>	2.34
135. Prepare patients for MEDEVAC	2.14	2.19	2.18	2.10	2.22	2.08	2.22
136. Escort patient for MEDEVAC	2.14	2.06	2.17	2.10	2.19	2.08	2.28
137. Radio consult with medical officer	2.05	2.11	2.06	2.07	2.11	1.99	1.94
139. Request consultations from other medical facilities	2.31	2.21	2.24	2.33	2.27 <sup>P</sup>	2.33	2.61

	All	AE No A	CC B	IE ICG C	FE FFG D	LSD LSI E	WFO F
<b>C6. Patient Indoctrination</b>							
121. Indoctrinate patients in use of crutches	2.23	2.18	2.18	2.20	2.25	2.36	2.33
123. Indoctrinate patients on proper hygiene	2.38	2.29	2.35	2.40	2.37	2.52	2.34
124. Indoctrinate patients in transmission of disease	2.39	2.35	2.37	2.41	2.35	2.48	2.56
125. Indoctrinate patients on breathing techniques	1.96	2.00	2.17	1.93	1.90	2.08	2.06
126. Indoctrinate patients on treatment or self-care	2.21	2.18	2.28	2.21	2.27	2.32	2.39
127. Indoctrinate patients on use of prescribed medication	2.42	2.35	2.35	2.43	2.34	2.44	2.67
<b>C7. Nutrition</b>							
95. Prescribe special diets for patients	1.37	1.82	1.78	1.80	1.78	1.92	2.11



**D. Administrative Tasks**

	All	AE-AE A	BB B	DD-DEG C	FF-FFG D	LSB-LSF E	MSO F
<b>D1. Supply</b>							
205. Procure "open-purchase" medical supplies	2.00	2.00	2.06	1.93	1.98	2.00	2.05
206. Submit and monitor supply request chits	2.23	2.04	2.17	2.22	2.24	2.21	2.50
207. Store medical supplies	2.24	2.12	2.21	2.23 <sup>F</sup>	2.22 <sup>F</sup>	2.17 <sup>F</sup>	2.22
209. Inventory battle dressing stations	2.27	2.36	2.17	2.25	2.26	2.21	2.56
209. Survey lost/damaged equipment	2.09	1.99	2.17	1.95	2.12	2.04	2.12
210. Dispose of supplies/instruments/equipment after expiration date	2.17	2.12	2.17	2.08 <sup>F</sup>	2.12	2.03 <sup>F</sup>	2.51
211. Replenish supplies/instruments/equipment after expiration date	2.23	2.13 <sup>F</sup>	2.22 <sup>F</sup>	2.21 <sup>F</sup>	2.24 <sup>F</sup>	2.06 <sup>F</sup>	2.56
212. Comply with AMAL requirements	2.23	2.13	2.00 <sup>F</sup>	2.21	2.20 <sup>F</sup>	2.21	2.51
213. Prepare supplemental AMAL	2.03	2.00	1.93	1.95	2.03	2.03	2.21
214. Manage OPTAR for medical department	2.21	2.13	2.17	2.26	2.19	2.15	2.59
<b>D2. Training</b>							
178. Prepare lesson guides	2.28	2.25	2.04	2.24	2.24	2.26	2.31
179. Prepare audiovisual aids	1.94	1.93	1.79	1.90	1.95	2.12	1.93
180. Prepare training reports	2.01	2.00	1.93	1.98	2.03	2.20	2.11
181. Serve as instructor for training sessions	2.33	2.29	2.04	2.27	2.32	2.40	2.67
182. Prepare tests/examinations	2.09	2.07	1.89	2.12	2.11	2.20	2.17
183. Administer/grade tests or examinations	2.09	2.00	2.00	2.17	2.19	2.16	2.22
184. Validate practical factors/PAPS completion	2.12	2.00	2.00	2.16	2.12	2.28	2.17
<b>D3. Medical Records</b>							
151. Verify dental records	2.19	2.21	2.00	2.15	2.16	2.26	2.22
152. Verify health records	2.38	2.29	2.28	2.24	2.26	2.28	2.61
153. Transcribe doctor's orders	2.22	2.17	2.17	2.22	2.22	2.16	2.44
157. Open health records	2.33	2.35	2.14	2.33	2.27	2.36	2.39
158. Close health records	2.40	2.31	2.44	2.38	2.29	2.32	2.39
159. Open dental records	2.51	2.27	2.11	2.10	2.12	2.22	2.17
160. Close dental records	2.16	2.23	2.06	2.13	2.16	2.16	2.11
161. Open temporary health or dental record	2.30	2.20	2.00	2.28	2.25	2.37	2.39
<b>D4. File Maintenance</b>							
166. Maintain update medical tickler file	2.27	2.12	2.11	2.17 <sup>F</sup>	2.27	2.26	2.50
168. Destroy classified materials	1.95	1.89	2.09	2.17	1.93	1.82	1.89
169. Monitor ship's weight control program	2.05	2.06	1.93	1.96	2.12	2.12	2.17
170. Maintain update sailing list	1.48	1.44	1.56	1.71	1.52	1.56	1.44
171. Maintain update medical department IWC schedule	1.91	2.06	1.89	1.75 <sup>F</sup>	1.91	2.00	2.22
172. Draft and follow-up on ship's maintenance actions (SMAFs)	1.59	1.63	1.67	1.62	1.52	1.51	1.72
173. Draft and follow-up on internal work requests (IWRs)	1.66	1.69	1.78	1.91	1.69	1.72	1.72
<b>D5. Supervision</b>							
215. Write/review enlisted performance evaluations	2.05	2.07	1.97	2.05	2.02	2.08	2.38
217. Assign work priorities	2.22	2.20	2.18	2.25	2.20	2.28	2.32
218. Counsel personnel on performance	2.17	2.19	2.11	2.14	2.14	2.24	2.31
219. Justify augmentation request for personnel logistics resources	1.97	1.91	1.72	1.79	1.90	2.08	2.04
222. Assign work to subordinates	2.23	2.25	2.22	2.21	2.20	2.28	2.38

	All	AE/AO A	CG B	DD/DDG C	FF/FFG D	LSE/LST E	WCO F
<b>D6. Consults/Inspections Requests</b>							
185. Request consultations from other medical facilities	2.23	2.35	2.17	2.18	2.24	2.25	2.39
186. Request noise health survey	2.02	2.00	1.89	1.90	2.08	2.08	2.13
187. Request microwave health survey	1.99	1.89	1.89	1.97	2.01	2.08	2.00
189. Request TYCOM medical inspection (MPIC/NPE, etc.)	2.08	2.12	1.89	2.03	2.13	2.08	2.25
190. Request EPNU technical assist visit	2.22	2.23	2.00	2.20	2.26	2.08	2.31
<b>D7. Correspondence</b>							
199. Draft messages	2.09	2.18	2.17	2.00 <sup>F</sup>	2.10	2.04	2.44
200. Draft letters	2.20	2.12	2.28	2.18	2.19	2.21	2.50
201. Draft instructions/notices	2.03	1.94	2.06	1.93	2.03	2.25	2.06

APPENDIX D

SURFACE SHIP MEAN RATINGS OF IDC TASK PERFORMANCE FREQUENCY

A. Medical/Dental Conditions

	All	AE/AD	CG	DD/DLG	FF/FFG	DD/DE	MO
		(17)	(18)	(62)	(94)	(35)	(18)
		A	B	C	D	E	F
<b>A1. Dental Conditions</b>							
1. Teeth sensitive (tooth crown)	1.33	1.57	1.37	1.36 <sup>FD</sup>	1.22	1.38	1.34
2. Dry socket	1.29	1.55	1.17	1.41 <sup>FD</sup>	1.21	1.32	1.09
3. Pulpitis	1.31	1.17	1.50 <sup>DF</sup>	1.36	1.22	1.46 <sup>F</sup>	1.09
4. Tooth fractures	1.30	1.29	1.50 <sup>F</sup>	1.36	1.24	1.40	1.11
5. Periodontitis	1.33	1.29	1.50	1.34	1.26	1.52	1.11
6. Lost filling	1.91	1.71	2.17 <sup>FD</sup>	2.17 <sup>FD</sup>	1.76 <sup>E</sup>	2.29 <sup>F</sup>	1.39
7. Loose/broken cavity	2.04	2.11	2.49 <sup>FD</sup>	2.17 <sup>FD</sup>	1.85 <sup>E</sup>	2.51 <sup>F</sup>	1.59
8. Abscessed gums	1.37	1.47	1.33	1.49 <sup>F</sup>	1.37	1.48	1.11
<b>A2. General Medical Conditions</b>							
9. Upper respiratory infections	3.19	3.19	3.11	3.39 <sup>F</sup>	3.23	3.21	3.71
12. Gastrointestinal maladies	2.87	2.71	3.17	2.77	2.69	2.89	2.71
13. Venereal disease	2.42	2.65 <sup>F</sup>	2.66 <sup>FD</sup>	2.75 <sup>FD</sup>	2.41 <sup>F</sup>	2.49 <sup>F</sup>	2.17
20. Genitourinary diseases/disorders	2.19	2.17	2.35 <sup>F</sup>	2.13 <sup>F</sup>	2.15 <sup>F</sup>	2.38 <sup>F</sup>	1.59
21. Shock	1.13	1.11	1.33	1.20	1.10	1.16	1.11
25. Electrical shock	1.09	1.09	1.16	1.08	1.03	1.00	1.09
27. Orthopedic injuries	2.64	2.79	3.00 <sup>F</sup>	2.78 <sup>F</sup>	2.63	2.84	2.17
28. Musculoskeletal injury/strain	3.56	3.49	3.78 <sup>F</sup>	3.68 <sup>F</sup>	2.63 <sup>F</sup>	3.56 <sup>F</sup>	2.89
30. Soft tissue injuries	2.52	2.65 <sup>F</sup>	2.44	2.73 <sup>F</sup>	2.41 <sup>F</sup>	2.74 <sup>F</sup>	2.83
35. Headaches	3.95	4.00	3.29	3.16 <sup>E</sup>	3.87	3.60	3.89
36. Influenza	2.80	2.73	3.11	2.72	2.85	2.76	2.39
<b>A3. Acute Medical Conditions</b>							
8. Respiratory conditions such as pneumothorax	1.05	1.00	1.09	1.07	1.09	1.04	1.00
9. Cardiovascular conditions	1.20	1.06 <sup>A</sup>	1.22	1.15	1.25	1.34	1.11
22. Spinal cord injuries	1.00	1.00	1.00	1.00	1.00	1.00	1.00
23. Seizure disorders	1.01	1.00	1.00	1.00	1.00	1.00	1.00
24. Head & neck injuries	1.13	1.11	1.11	1.13	1.15	1.15	1.11
30. Injuries to the genitalia	1.20	1.17	1.22	1.37 <sup>DF</sup>	1.14	1.28	1.09
32. Acute abdominal/thoracic injuries/conditions	1.28	1.29	1.27	1.32	1.29	1.32	1.17
33. Internal hemorrhage	1.02	1.00	1.00	1.00 <sup>E</sup>	1.01 <sup>E</sup>	1.00	1.00
36. Diabetic conditions	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<b>A4. Reactions/Side-Effects</b>							
4. Reaction to medication	1.09	1.17	1.11	1.12	1.09	1.00	1.00
5. Medication side-effects	1.27	1.25 <sup>E</sup>	1.29	1.37 <sup>F</sup>	1.33	1.17	1.00
6. Immunization reactions	1.10	1.00 <sup>E</sup>	1.11	1.17	1.08 <sup>E</sup>	1.30	1.11
18. Bites & stings	1.44	1.38	1.33	1.54	1.50	1.32	1.22
<b>A5. Psychological Disorders/Conditions</b>							
34. Mental/psychiatric disorders	1.73	1.93	2.20	1.81	1.65	1.80	1.61
35. Stress-related emotional problems	2.15	2.09	2.37	2.00	2.19	2.00	2.11
37. Acute drug/chemical intoxication	1.19	1.35	1.27	1.36 <sup>D</sup>	1.10	1.10	1.11
38. Substance abuse and related problems	2.20	2.00	2.39	2.32	2.09	2.23	2.06
<b>A6. Eye &amp; ENT Conditions</b>							
1. Eye injuries	2.71	2.09	2.67	2.70	2.67	3.07 <sup>F</sup>	2.17
2. Eye disease/disorders	2.05	1.71	2.20	2.12	2.13	1.90	1.90
3. Ear, nose, throat disease/disorders	4.00	3.77	3.99	3.72	3.99	3.70	3.65

Frequency scales: 1 = "rarely", 2 = "about quarterly" (once 1 to 2 per month), 3 = "1 or 2 per week", 4 = "nearly every day"

Letters between columns designate a significant difference (p < .05, Duncan method) between the item mean in the column and the noted comparison group.

	1971	1972	1973	1974	1975	1976	1977
A7. Heat Related Conditions	A	B	C	D	E	F	F
101. Heatstroke	1.03	1.03	1.03	1.02	1.01	1.03	1.03
102. Heat exhaustion/heat cramp	1.03	1.03	1.03	1.11	1.05	1.07	1.07
A8. Burn Injuries							
103. Thermal burn	1.04	1.04	1.04	1.04	1.03	1.03	1.07
104. Thermal burn	1.84	1.84	1.84	1.84	1.82	1.80	1.84
105. Cold weather injuries	1.03	1.03	1.03	1.03	1.03	1.03	1.07
A9. Podiatric Conditions							
106. Foot disorders	2.44	2.44	2.70	2.71	2.75	2.81	2.83
107. Common skin diseases e.g. athlete's foot	3.33	3.33	3.33	3.33	3.26	3.26	2.83
A10. Radiation							
108. Radiation exposures	1.03	1.03	1.03	1.03	1.03	1.00	1.03

## B. Clinical Procedures

	All	ALB	CG	ELB	FFB	LSC	SI
	A	B	C	D	E	F	
<b>B1. Injury Treatment</b>							
51. Irrigate ear/eye	3.09	2.87	2.24 <sup>F</sup>	2.31 <sup>DF</sup>	2.00 <sup>F</sup>	3.12 <sup>F</sup>	2.34
52. Irrigate wound	2.54	2.6	2.84 <sup>F</sup>	2.74 <sup>F</sup>	2.54 <sup>F</sup>	2.56	1.24
53. Apply tourniquet	1.03	1.00	1.00	1.07	1.03	1.00	1.00
54. Apply sutures	2.58	2.65 <sup>F</sup>	2.34 <sup>DF</sup>	2.31 <sup>DF</sup>	2.44 <sup>EP</sup>	2.88 <sup>F</sup>	1.23
55. Remove sutures	2.62	2.64 <sup>F</sup>	2.04 <sup>DF</sup>	2.00 <sup>DF</sup>	2.17 <sup>EP</sup>	2.84 <sup>F</sup>	1.83
56. Evaluate for antibiotic coverage	2.83	2.93 <sup>F</sup>	2.04 <sup>F</sup>	2.05 <sup>F</sup>	2.92 <sup>F</sup>	2.84 <sup>F</sup>	1.77
57. Apply/change sterile dressing	3.11	3.22 <sup>F</sup>	2.59 <sup>F</sup>	2.20 <sup>F</sup>	3.02 <sup>F</sup>	3.11 <sup>F</sup>	2.54
58. Apply/change bandages	3.27	3.34 <sup>F</sup>	2.54 <sup>F</sup>	2.24 <sup>F</sup>	3.04 <sup>F</sup>	3.24 <sup>F</sup>	2.54
59. Reinforce dressings	2.49	2.56	2.33	2.5	2.46	2.9	1.22
60. Apply arm sling	1.83	2.04	2.04	2.03	1.84	2.04	1.28
70. Remove superficial foreign bodies	2.52	2.61 <sup>F</sup>	2.28	2.29 <sup>D</sup>	2.31	2.49	2.31
71. Administer local anesthetic	2.32	2.47 <sup>F</sup>	2.56 <sup>F</sup>	2.74 <sup>DF</sup>	2.22 <sup>F</sup>	2.45 <sup>F</sup>	1.72
72. Perform minor surgery (other than removal of superficial foreign bodies)	2.39	1.84 <sup>BC</sup>	1.33 <sup>DF</sup>	2.27 <sup>DF</sup>	1.84	2.00	1.47
<b>B2. Sterile Technique</b>							
65. Drape table, stand, and equipment with sterile material	1.98	2.13 <sup>F</sup>	1.94 <sup>F</sup>	1.94 <sup>F</sup>	1.94 <sup>F</sup>	2.04 <sup>F</sup>	1.22
66. Conduct pre and post-operative cleaning of operating room	1.72	1.94	1.83	1.92 <sup>F</sup>	1.54	2.01 <sup>F</sup>	1.11
70. Don sterile surgical gown and gloves	1.75	1.92	1.72	1.91 <sup>F</sup>	1.74 <sup>F</sup>	1.98 <sup>F</sup>	1.22
71. Assist others in donning sterile surgical gown and gloves	1.21	1.25	1.23	1.21 <sup>E</sup>	1.12	1.52 <sup>F</sup>	1.00
72. Prepare/sterilize/open instrument trays/packs	2.49	2.54	1.78	2.54	2.58	2.48	2.11
<b>B3. Orthopedic Procedures</b>							
61. Apply cast	1.14	1.25 <sup>D</sup>	1.11	1.17	1.07 <sup>E</sup>	1.28	1.11
62. Remove cast	1.16	1.11 <sup>BDF</sup>	1.11	1.24 <sup>D</sup>	1.07 <sup>E</sup>	1.28	1.11
63. Apply traction splint	1.05	1.09	1.00	1.07	1.02 <sup>E</sup>	1.08 <sup>F</sup>	1.16
64. Apply splints	1.54	1.65 <sup>B</sup>	1.67	1.59	1.51	1.92 <sup>F</sup>	1.28
65. Apply orthopedic brace	1.09	1.04 <sup>B</sup>	1.33 <sup>CD</sup>	1.05	1.07	1.13	1.11
67. Apply splint boards	1.01	1.04 <sup>D</sup>	1.00	1.02	1.00	1.00	1.00
<b>B4. Advanced Emergency Care</b>							
80. Provide oxygen therapy	1.08	1.00	1.17	1.07	1.07	1.04	1.04
81. Perform cardiac defibrillation (MONITOR)	1.00	1.00	1.00	1.00	1.00	1.00	1.00
82. Insert a chest tube	1.00	1.00	1.00	1.00	1.00	1.00	1.00
83. Perform blood transfusion	1.00	1.12 <sup>BCDEF</sup>	1.00	1.00	1.00	1.00	1.00
84. Install intravenous fluids	1.23	1.53 <sup>BDEF</sup>	1.22	1.25 <sup>DEF</sup>	1.18	1.17	1.05
85. Perform tooth extraction	1.00	1.00	1.00	1.02	1.00	1.00	1.00
86. Perform endotracheal intubation	1.00	1.00	1.00	1.00	1.00	1.00	1.00
87. Perform cricothyrotomy	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<b>B5. Emergency Care</b>							
68. Emergency care for head/neck injury	1.25	1.23	1.61 <sup>CDEF</sup>	1.27	1.25 <sup>D</sup>	1.24	1.05
73. Cardiopulmonary resuscitation	1.02	1.00	1.00	1.00 <sup>E</sup>	1.00 <sup>D</sup>	1.12	1.00
74. Treat for external hemorrhage, other than tourniquet	2.45	2.22 <sup>F</sup>	2.29	2.59	2.17	2.14	2.00
79. Mouth-to-mouth resuscitation	1.00	1.00	1.00	1.00	1.00	1.00	1.00
80. Perform pulmonary resuscitation using the bag-mask resuscitator	1.00	1.00	1.00	1.02	1.00	1.00	1.00
81. Insert oral airway							
<b>B6. Heat/Cold Therapy</b>							
90. Provide cold therapy	2.18	2.24 <sup>F</sup>	2.56 <sup>F</sup>	2.31 <sup>EF</sup>	2.21 <sup>F</sup>	1.80	1.77
90. Provide heat therapy	2.36	2.52 <sup>F</sup>	2.61 <sup>F</sup>	2.52 <sup>EF</sup>	2.38 <sup>F</sup>	2.00	1.72

C. Patient Care / Patient Management Activities

	7-11	12-15	16-20	21-25	26-30	31-35	36-40
	A	B	C	D	E	F	
<b>C1. Nursing Care</b>							
101. Turn or reposition deep-breathe patients	1.21	1.21	1.21	1.21	1.21	1.21	1.21
102. Provide morning care for bedridden patients	1.05	1.05 DE	1.05 D	1.05	1.05	1.05	1.05
103. Perform circulation checks for patients in hard/cast cases	1.07	1.07	1.07	1.07	1.07	1.07 F	1.07
104. Administer patient exercise & range of motion	1.04	1.04	1.04	1.04	1.04	1.04	1.04
105. Monitor oxygen by all patients	1.09	1.09	1.09	1.09	1.09	1.09	1.09
106. Escort to shower and head	1.04	1.04	1.04	1.04	1.04	1.04	1.04
107. Perform post-operative care	1.12	1.12 DF	1.12	1.12 D	1.12	1.12	1.12
108. Conduct nasal-gastric intubation	1.07	1.07	1.07	1.07	1.07	1.07	1.07
109. Conduct daily debridements for burn victims	1.23	1.23 B	1.23 CDEF	1.23	1.23	1.23	1.23
110. Chart intake & output of fluids	1.05	1.05	1.05 CDEF	1.05	1.05	1.05	1.05
111. Perform catheterization	1.01	1.01	1.01	1.01 D	1.01	1.01	1.01
112. Provide urinary catheter care	1.01	1.01	1.01	1.01 D	1.01	1.01	1.01
113. Monitor intravenous site	1.01	1.01	1.01	1.01 D	1.01	1.01	1.01
114. Provide intravenous site care	1.18	1.18	1.18	1.18	1.18	1.18	1.18
115. Assist patient with postural drainage	1.02	1.02	1.02	1.02	1.02	1.02	1.02
116. Perform tracheostomy care	1.00	1.00	1.00 DEF	1.00	1.00	1.00	1.00
117. Care for patients in traction	1.00	1.00 B	1.00 DEF	1.00	1.00	1.00	1.00
<b>C2. Advanced Nursing Care</b>							
118. Apply starting techniques	1.00	1.00	1.00	1.00	1.00	1.00	1.00
119. Monitor blood transfusions	1.00	1.00	1.00	1.00	1.00	1.00	1.00
120. Apply continuous/intermittent suction	1.00	1.00 B	1.00 CDEF	1.00	1.00	1.00	1.00
<b>C3. Patient Screening</b>							
121. Conduct admission interview	1.07	1.07 E	1.07 E	1.07 E	1.07 E	1.07 F	1.07
122. Obtain info on presenting complaint	1.07	1.07 CD	1.07	1.07	1.07 E	1.07	1.07
123. Obtain a medical history	1.07	1.07	1.07	1.07	1.07	1.07	1.07
124. Review medical record for patient conditions	1.03	1.03	1.03	1.03	1.03	1.03	1.03
125. Take & record temperature, pulse & respiration rate	1.04	1.04	1.04	1.04	1.04	1.04	1.04
126. Take care of blood pressure	1.05	1.05	1.05	1.05	1.05	1.05	1.05
127. Test or height & physical exam	1.01	1.01	1.01	1.01	1.01	1.01	1.01
<b>C4. Medications</b>							
128. Administer med by ingestion	1.01	1.01 DF	1.01 F	1.01 DF	1.01 F	1.01	1.01
129. Administer oral medications	1.01	1.01	1.01 F	1.01 DEF	1.01	1.01	1.01
130. Administer topical/ocutaneous meds	1.02	1.02	1.02 F	1.02 F	1.02	1.02	1.02
131. Administer intravenous medications	1.22	1.22	1.22 DF	1.22	1.22	1.22	1.22
132. Administer oral medications	1.01	1.01	1.01	1.01	1.01	1.01	1.01
133. Administer inhalation medications	1.07	1.07 E	1.07	1.07	1.07	1.07	1.07
134. Administer instillation medications (e.g., eye drops)	1.01	1.01 F	1.01 F	1.01 F	1.01 F	1.01 F	1.01
135. Administer sublingual medications	1.01	1.01	1.01	1.01	1.01	1.01	1.01
<b>C5. Medical Evacuations</b>							
136. Transport patient from scene of accident with special equipment	1.27	1.27	1.27	1.27 F	1.27	1.27	1.27
137. Coordinate medical evacuations (MEDEVAC)	1.50	1.50	1.50 DF	1.50	1.50	1.50	1.50
138. Prepare patients for MEDEVAC	1.37	1.37 D	1.37 DF	1.37 DF	1.37	1.37	1.37
139. Escort patient for MEDEVAC	1.17	1.17	1.17 D	1.17	1.17	1.17	1.17
140. Enter consult with medical officer	1.33	1.33 CDF	1.33 DF	1.33	1.33	1.33	1.33
141. Request consultations from other medical facilities	1.12	1.12	1.12	1.12	1.12	1.12	1.12

	All	AF W A	GG B	ED DGS C	FF FFG D	LSB-100 E	MS F
<b>C6. Patient Inocctrination</b>							
122. Indistinate patients in use of crutches	1.57	1.59	1.77	1.72 <sup>D</sup>	1.48	1.67	1.35
123. Indistinate patients on proper hygiene	2.50	2.57	2.88	2.68	2.32	2.46	2.41
124. Indistinate patients in transmission of disease	2.70	3.21 <sup>DEF</sup>	3.29 <sup>DEF</sup>	2.92	2.54	2.42	2.45
125. Indistinate patients on breathing technique	1.22	1.11	1.47 <sup>F</sup>	1.43	1.19	1.13	1.00
126. Indistinate patients on treatment or self-care	2.76	2.70	3.18	3.08	2.71	2.56	2.41
127. Indistinate patients in use of prescribed medication	1.49	1.71 <sup>E</sup>	1.87 <sup>DE</sup>	1.87	1.40 <sup>E</sup>	1.83	1.53

**C7. Nutrition**

128. Prescribe special diets for patients	1.70	1.43	2.11 <sup>F</sup>	1.87	1.58	1.63	1.31
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**D. Administrative Tasks**

	All	AA A	BB	DD DDG	FF FFG	LLL LLLF	MM
	A	B	C	D	E	F	
<b>D1. Supply</b>							
205. Procure (open purchase) medical supplies	1.85	1.84	1.77	2.03	1.77	1.90	1.87
206. Submit and monitor supply request chart	3.66	3.25	3.78	3.49	3.75 <sup>F</sup>	3.47	3.29
207. Store medical supplies	3.78	3.25 <sup>F</sup>	3.75	3.33	3.75	3.71	3.33
208. Inventory battle dressing stations	2.94	2.13 <sup>F</sup>	2.09	2.03	2.07	2.04	1.97
209. Survey lost/damaged equipment	1.49	1.50	1.59	1.37	1.57	1.33	1.43
210. Dispose of supplies/instruments/equipment after expiration date	2.17	2.37	2.41	2.10	2.07	2.17	2.37
211. Replenish supplies/instruments/equipment after expiration date	2.15	2.47	2.50	2.44	2.44	2.57	2.27
212. Comply with AMAL requirements	3.15	2.90	3.04	3.13	3.19	3.12	3.02
213. Prepare supplemental AMAL	2.04	2.19	1.91	1.90	2.09	2.00	2.14
214. Manage OPRAR for medical department	3.45	3.31	3.34	3.36	3.53	3.34	3.32
<b>D2. Training</b>							
182. Prepare lesson guides	2.17	2.17	2.22	2.35	2.07	2.50 <sup>F</sup>	2.19
183. Prepare audiovisual aids	1.92	2.04 <sup>F</sup>	1.91	1.77	1.93 <sup>F</sup>	2.21 <sup>F</sup>	1.81
184. Prepare training reports	2.37	2.37	2.37	2.63	2.37	2.37	2.19
185. Serve as instructor for training sessions	3.54	3.25	3.29	3.60	3.44	3.44	3.44
186. Prepare tests/examinations	1.91	2.04	1.97	1.95	1.99	1.95	1.75
187. Administer grade tests or examinations	1.55	2.04	1.57	1.87	1.97	1.98	1.73
188. Validate practical factor IAPS completion	1.91	2.27 <sup>F</sup>	1.89	2.07	1.96	2.13	1.87
<b>D3. Medical Records</b>							
181. Verify dental records	2.05	3.21	2.11	3.21	3.24	3.07	3.29
182. Verify health records	3.27	2.17	2.17	2.23 <sup>F</sup>	3.24	2.92	3.27
183. Transcribe doctor's orders	1.45	1.77 <sup>BCDEF</sup>	1.77	1.63	1.77	1.77	1.77
184. Open health records	1.37	2.11 <sup>BDEF</sup>	1.22	1.37	1.37	1.37	1.37
185. Close health records	2.26	2.26	2.26	2.54 <sup>DF</sup>	2.19	2.26	1.77
186. Open dental records	1.26	1.79 <sup>F</sup>	1.77	1.75	1.77	1.76	1.23
187. Close dental records	1.97	1.79 <sup>F</sup>	1.83	1.23	1.95	1.86	1.77
188. Open temporary health or dental record	1.44	1.35	1.39	1.50	1.44	1.54	1.23
<b>D4. File Maintenance</b>							
166. Maintain update medical trailer file	1.97	3.07	1.97	1.93 <sup>EF</sup>	3.14 <sup>EF</sup>	1.97	3.24
167. Identify classified materials	1.12	1.12	1.89 <sup>D</sup>	1.12	1.12	1.12	1.12
168. Monitor ship's weight control program	3.22	3.22 <sup>F</sup>	3.22 <sup>F</sup>	3.22 <sup>F</sup>	3.22 <sup>F</sup>	3.22 <sup>F</sup>	3.22
169. Maintain update sailing list	1.20	1.20	1.17	1.17	1.24	1.28	1.17
170. Maintain update medical department EMS schedule	3.78	1.00	3.47	3.78	3.07	3.53	3.53
171. Draft and follow-up on ship's maintenance actions (SMAPs)	2.03	2.48 <sup>F</sup>	2.17	1.98	2.03	2.15 <sup>F</sup>	2.03
172. Draft and follow-up on internal work requests (IWRs)	2.10	2.10 <sup>F</sup>	2.10 <sup>E</sup>	2.10 <sup>EF</sup>	2.10 <sup>E</sup>	2.10 <sup>F</sup>	2.10
<b>D5. Supervision</b>							
215. Write/review enlisted performance evaluation	1.41	1.41 <sup>F</sup>	1.41 <sup>CDF</sup>	1.41 <sup>E</sup>	1.41 <sup>E</sup>	1.41 <sup>F</sup>	1.41
216. Assign work priorities	1.05	1.05 <sup>F</sup>	1.05 <sup>F</sup>	1.05 <sup>F</sup>	1.05 <sup>F</sup>	1.05 <sup>F</sup>	1.05
217. Counsel personnel on performance	2.73	2.73 <sup>F</sup>	2.73	2.73 <sup>F</sup>	2.73	2.73 <sup>F</sup>	2.73
218. Justify augmentation request for personnel/logistics resources	1.17	1.17 <sup>DF</sup>	1.17 <sup>DF</sup>	1.17 <sup>DE</sup>	1.17 <sup>DF</sup>	1.17 <sup>E</sup>	1.17
219. Assign work to subordinates	3.27	3.27 <sup>F</sup>	3.27 <sup>DF</sup>	3.27 <sup>DF</sup>	3.27 <sup>E</sup>	3.27 <sup>F</sup>	3.27



	All	AE/AO A	CG B	DD/DDG C	FF/FFG D	LSD/LST E	MSO F
<b>D6. Consults/Inspections Requests</b>							
185. Request consultations from other medical facilities	3.37	3.67	3.56	3.36	3.40	3.42	3.00
186. Request noise health survey	1.22	1.40	1.17	1.17 <sup>F</sup>	1.20 <sup>F</sup>	1.22	1.27
187. Request microwave health survey	1.44	1.47	1.39	1.50 <sup>F</sup>	1.49 <sup>F</sup>	1.25	1.13
189. Request TYCOM medical inspection (MRI/MRE, etc.)	1.34	1.53	1.39	1.27	1.35	1.42	1.13
196. Request EPMU technical assist visit	1.40	1.57	1.25	1.41	1.38	1.33	1.40
<b>D7. Correspondence</b>							
199. Draft messages	2.44	2.67	2.61	2.71 <sup>DE</sup>	2.33	2.08	2.53
200. Draft letters	2.68	2.71	2.78	2.98 <sup>D</sup>	2.53	2.46	2.73
201. Draft instructions/notices	1.81	1.71	1.83	2.00	1.76	1.67	1.53

APPENDIX E

SURFACE SHIP QUICK REFERENCE TASK FREQUENCY LIST  
(N = 253)

	R	Q	M	W	D
	A	T	O	E	A
	R	R	N	K	I
	L	L	L	L	L
	Y	Y	Y	Y	Y
<b>A. Medical/Dental Conditions</b>					
<b>A1. Dental Conditions</b>					
11. Pericoronitis (tooth crown)	X				
12. Dry socket	X				
13. Pulpitis	X				
14. Tooth fracture	X				
15. Periodontosis	X				
16. Abscessed gums	X				
17. Lost filling		X			
18. Toothache/cavity		X			
<b>A2. General Medical Conditions</b>					
21. Shock	X				
25. Electrical shock	X				
14. Venereal disease		X			
20. Genitourinary diseases/disorders		X			
13. Gastrointestinal maladies			X		
24. Soft tissue injuries			X		
40. Influenza			X		
7. Upper respiratory infections				X	
17. Orthopedic injuries				X	
26. Upper skeletal injury/strain				X	
43. Headache				X	
<b>A3. Acute Medical Conditions</b>					
5. Respiratory conditions such as pneumothorax	X				
3. Cardiovascular conditions	X				
22. Spinal cord injuries	X				
23. Seizure disorders	X				
16. Head & neck injuries	X				
19. Injuries to the genitalia	X				
15. Acute abdominal/thoracic injuries/conditions	X				
12. Internal hemorrhage	X				
30. Diabetic conditions	X				
<b>A4. Reactions/Side-Effects</b>					
4. Reaction to medication	X				
5. Medication side-effects	X				
6. Immunization reactions	X				
18. Bites & stings	X				
<b>A5. Psychological Disorders/Conditions</b>					
37. Acute drug/chemical intoxication	X				
34. Mental/psychiatric disorders		X			
35. Stress related emotional problems		X			
38. Substance abuse and related problems		X			
<b>A6. Eye &amp; ENT Conditions</b>					
2. Eye disease/disorders		X			
1. Eye injuries			X		
3. Ear, nose, throat disease/disorders				X	
<b>A7. Heat Related Conditions</b>					
10. Heatstroke	X				
11. Heat exhaustion/heat cramps	X				
<b>A8. Burn Injuries</b>					
14. Chemical burns	X				
31. Cold weather injuries	X				
17. Thermal burns		X			

\* Actual task frequency ratings: 1 = "rarely", 2 = "about quarterly", 3 = "1 to 3 per month", 4 = "1 or 2 per week", 5 = "nearly every day"

	<u>R</u> <u>A</u> <u>R</u> <u>E</u> <u>L</u> <u>Y</u>	<u>Q</u> <u>T</u> <u>R</u> <u>L</u> <u>Y</u>	<u>M</u> <u>O</u> <u>N</u> <u>T</u> <u>H</u> <u>L</u> <u>Y</u>	<u>W</u> <u>E</u> <u>E</u> <u>K</u> <u>L</u> <u>Y</u>	<u>D</u> <u>A</u> <u>I</u> <u>L</u> <u>Y</u>
<b>A9. Podiatric Conditions</b>					
14. Foot disorders		X			
15. Common skin disease (e.g., athlete's foot)			X		
<b>A10. Radiation</b>					
21. Radiation exposure	X				
<hr/>					
<b>B. Clinical Procedures</b>					
<b>B1. Injury Treatment</b>					
53. Apply tourniquet	X				
59. Reinforce dressings		X			
63. Apply arm sling		X			
76. Administer local anesthetic		X			
78. Perform minor surgery (excluding superficial foreign body removal)		X			
51. Irrigate ears/eyes			X		
52. Irrigate wound			X		
54. Apply sutures			X		
55. Remove sutures			X		
56. Evaluate for antibiotic coverage			X		
57. Apply/change sterile dressing			X		
58. Apply/change bandages			X		
73. Remove superficial foreign bodies			X		
<b>B2. Sterile Technique</b>					
71. Assist others in donning sterile surgical gown and gloves	X				
68. Drape table, stand, and equipment with sterile material		X			
69. Conduct pre and post operative cleaning of operating room		X			
70. Don sterile surgical gown and gloves		X			
72. Prepare/sterilize/open instrument trays/packs		X			
<b>B3. Orthopedic Procedures</b>					
61. Apply casts	X				
62. Remove casts	X				
64. Apply traction splint	X				
66. Apply orthopedic brace	X				
67. Apply splint boards	X				
65. Apply splints		X			
<b>B4. Advanced Emergency Care</b>					
80. Provide oxygen therapy	X				
81. Perform cardiac defibrillation (LIFE-PAK)	X				
92. Insert a chest tube	X				
83. Perform blood transfusion	X				
84. Install intravenous fluids	X				
85. Perform tooth extraction	X				
88. Perform endotracheal intubation	X				
89. Perform cricothyrotomy	X				
<b>B5. Emergency Care</b>					
60. Emergency care for head/neck injury	X				
74. Cardiopulmonary resuscitation	X				
79. Mouth-to-mouth resuscitation	X				
86. Perform pulmonary resuscitation using the bag-mask resuscitator	X				
87. Insert oral airway	X				
77. Treat for external hemorrhage (not tourniquet)		X			
<b>B6. Heat/Cold Therapy</b>					
49. Provide cold therapy		X			
50. Provide heat therapy		X			

	R	Q	M	W	D
	A		O	E	A
	R	T	N	K	I
	E	R	T	E	L
	L	L	H	L	L
	Y	Y	Y	Y	Y
<b>C. Patient Care / Patient Management Activities</b>					
<b>C1. Nursing Care</b>					
99. Turn, cough, & deep-breathe patients	X				
100. Provide morning care for bedridden patients	X				
101. Perform circulation checks for patients in hard/soft cases	X				
105. Monitor seriously ill patients	X				
106. Escort to showers and head	X				
107. Perform postoperative care	X				
108. Conduct nasal-gastric intubation	X				
109. Conduct daily debridements for burn victims	X				
110. Chart intake & output of fluids	X				
111. Perform catheterization	X				
112. Provide urinary catheter care	X				
113. Monitor intravenous site	X				
114. Provide intravenous site care	X				
115. Assist patient with postural drainage	X				
120. Perform tracheostomy care	X				
121. Care for patients in traction	X				
102. Administer patient exercises/range of motion		X			
<b>C2. Advanced Nursing Care</b>					
117. Apply rotating tourniquets	X				
118. Monitor blood transfusions	X				
119. Apply continuous/intermittent suction	X				
<b>C3. Patient Screening</b>					
96. Perform head to toe physical exam			X		
97. Conduct sick-call for crew					X
98. Obtain info on presenting complaints					X
92. Obtain a medical history					X
93. Review medical record for prior conditions					X
94. Take & record temp., pulse, & resp. rate					X
95. Take & record blood pressure					X
<b>C4. Medications</b>					
116. Administer rectal medications	X				
115. Administer intravenous medications	X				
117. Administer inhalation medications	X				
118. Administer sublingual medications	X				
112. Administer meds by injection			X		
114. Administer topical/cutaneous meds			X		
119. Instillation medications (e.g., eye drops)			X		
103. Administer oral medications					X
<b>C5. Medical Evacuations</b>					
131. Transport patient from scene of accident with special equipment	X				
135. Prepare patients for MEDEVAC	X				
136. Escort patient for MEDEVAC	X				
137. Radio consult with medical officer	X				
134. Coordinate medical evacuations (MEDEVAC)		X			
133. Request consults from other medical facilities			X		
<b>C6. Patient Indoctrination</b>					
125. Indoctrinate patients on breathing techniques	X				
122. Indoctrinate patients in use of crutches		X			
123. Indoctrinate patients on proper hygiene			X		
124. Indoc. patients in transmission of disease			X		
126. Indoc. patients on treatment or self-care			X		
127. Indoc. patients on use of prescribed medication				X	
<b>C7. Nutrition</b>					
98. Prescribe special diets for patients		X			

	R A R E L Y	Q T R L Y	M O N T H L Y	W E E K L Y	D A I L Y
<b>D. Administrative Tasks</b>					
<b>D1. Supply</b>					
209. Survey lost/damaged equipment	X				
205. Procure "open-purchase" medical supplies		X			
208. Inventory battle dressing stations		X			
210. Dispose of supplies/instruments/equipment after expiration date		X			
211. Replenish supplies/instruments/equipment after expiration date		X			
212. Comply with AMAL requirements			X		
213. Prepare supplemental AMAL			X		
206. Submit and monitor supply request charts				X	
207. Store medical supplies				X	
214. Manage OITAR for medical department				X	
<b>D2. Training</b>					
178. Prepare lesson guides		X			
179. Prepare audiovisual aids		X			
180. Prepare training reports		X			
182. Prepare tests/examinations		X			
183. Administer/grade tests or examinations		X			
184. Validate practical factor/PAPS completion		X			
181. Serve as instructor for training sessions				X	
<b>D3. Medical Records</b>					
153. Transcribe doctor's orders	X				
157. Open health records	X				
159. Open dental records	X				
161. Open temporary health or dental record	X				
158. Close health records		X			
160. Close dental records		X			
151. Verify dental records			X		
152. Verify health records			X		
<b>D4. File Maintenance</b>					
163. Destroy classified materials	X				
170. Maintain/update mailing list	X				
172. Draft & follow-up ship maint actions (SMAFs)		X			
173. Draft & follow-up internal work requests (IWRs)		X			
167. Monitor ship's weight control program			X		
150. Maintain/update medical tickler file				X	
171. Maintain/update medical dept. PMS schedule				X	
<b>D5. Supervision</b>					
215. Write review enlisted performance evals	X				
219. Justify augmentation request for personnel, logistic resources	X				
218. Counsel personnel on performance			X		
217. Assign work priorities				X	
222. Assign work to subordinates				X	
<b>D6. Consults/Inspections Requests</b>					
184. Request noise health survey	X				
187. Request microwave health survey	X				
189. Request TYCOM medical insp. (MRI/MRE, etc.)	X				
196. Request EPMU technical assist visit	X				
185. Request consults from other medical facs			X		
<b>D7. Correspondence</b>					
199. Draft messages		X			
201. Draft instructions/notices		X			
200. Draft letters			X		

APPENDIX F

SUBMARINE QUICK REFERENCE TASK FREQUENCY LIST  
(N = 100)

	R	Q	M	W	D
	A	T	O	E	A
	R	R	N	E	I
	E	R	T	K	L
	L	L	L	L	L
	Y	Y	Y	Y	Y
<b>A. Medical/Dental Conditions</b>					
<b>A1. Dental Conditions</b>					
41. Pericoronitis (tooth crown)	X				
42. Dry socket	Y				
43. Pulpitis	X				
44. Tooth fractures	X				
45. Periodontosis	X				
46. Abscessed gums	X				
46. Lost filling		X			
47. Toothache/cavity		X			
<b>A2. General Medical Conditions</b>					
24. Shock	X				
25. Electrical shock	X				
19. Venereal disease		X			
20. Genitourinary diseases/disorders		X			
27. Orthopedic injuries		X			
13. Gastrointestinal maladies			X		
28. Musculoskeletal injury/strain			X		
29. Soft tissue injuries			X		
40. Influenza			X		
7. Upper respiratory infections				X	
12. Headaches				X	
<b>A3. Acute Medical Conditions</b>					
8. Respiratory conditions such as pneumothorax	X				
9. Cardiovascular conditions	X				
22. Spinal cord injuries	X				
23. Seizure disorders	X				
26. Head & neck injuries	X				
30. Injuries to the genitalia	X				
32. Acute abdominal/thoracic injuries/conditions	X				
33. Internal hemorrhage	X				
36. Diabetic conditions	X				
<b>A4. Reactions/Side-Effects</b>					
4. Reaction to medication	X				
5. Medication side-effects	X				
6. Immunization reactions	X				
18. Bites & stings	X				
<b>A5. Psychological Disorders/Conditions</b>					
17. Acute drug/chemical intoxication	X				
34. Mental/psychiatric disorders		X			
35. Stress related emotional problems		X			
38. Substance abuse and related problems		X			
<b>A6. Eye &amp; ENT Conditions</b>					
1. Eye injuries		X			
2. Eye disease/disorders		X			
3. Ear, nose, throat disease/disorders				X	
<b>A7. Heat Related Conditions</b>					
10. Heatstroke	X				
11. Heat exhaustion/heat clamps	X				
<b>A8. Burn Injuries</b>					
16. Chemical burns	X				
31. Cold weather injuries	X				
17. Thermal burns		X			

\* Actual task frequency ratings: 1 = "rarely", 2 = "about quarterly", 3 = "1 to 3 per month",  
4 = "1 or 2 per week", 5 = "nearly every day"

	<u>R</u> <u>A</u> <u>R</u> <u>E</u> <u>L</u> <u>Y</u>	<u>Q</u> <u>T</u> <u>R</u> <u>L</u> <u>Y</u>	<u>M</u> <u>O</u> <u>N</u> <u>T</u> <u>H</u> <u>L</u> <u>Y</u>	<u>W</u> <u>E</u> <u>E</u> <u>K</u> <u>L</u> <u>Y</u>	<u>D</u> <u>A</u> <u>I</u> <u>L</u> <u>Y</u>
<b>A9. Podiatric Conditions</b>					
14. Foot disorders		X			
15. Common skin disease (e.g., athlete's foot)			X		
<b>A10. Radiation</b>					
21. Radiation exposure			X		

**B. Clinical Procedures**

**B1. Injury Treatment**

53. Apply tourniquet	X				
51. Irrigate ears/eyes		X			
52. Irrigate wound		X			
54. Apply sutures		X			
55. Remove sutures		X			
56. Evaluate for antibiotic coverage		X			
59. Reinforce dressings		X			
63. Apply arm sling		X			
73. Remove superficial foreign bodies		X			
76. Administer local anesthetic		X			
79. Perform minor surgery (excluding superficial foreign body removal)		X			
57. Apply/change sterile dressing			X		
58. Apply/change bandages			X		

**B2. Sterile Technique**

71. Assist others in donning sterile surgical gown and gloves	X				
68. Drape table, stand, and equipment with sterile material	X				
69. Conduct pre and post operative cleaning of operating room	X				
70. Don sterile surgical gown and gloves	X				
72. Prepare/sterilize/open instrument trays/packs		X			

**B3. Orthopedic Procedures**

61. Apply casts	X				
62. Remove casts	X				
64. Apply traction splint	X				
65. Apply splints	X				
66. Apply orthopedic brace	X				
67. Apply splint boards	X				

**B4. Advanced Emergency Care**

80. Provide oxygen therapy	X				
81. Perform cardiac defibrillation (LIFE-PAK)	X				
82. Insert a chest tube	X				
83. Perform blood transfusion	X				
84. Install intravenous fluids	X				
85. Perform tooth extraction	X				
88. Perform endotracheal intubation	X				
89. Perform cricothyrotomy	X				

**B5. Emergency Care**

60. Emergency care for head/neck injury	X				
74. Cardiopulmonary resuscitation	X				
79. Mouth-to-mouth resuscitation	X				
86. Perform pulmonary resuscitation using the bag-mask resuscitator	X				
87. Insert oral airway	X				
77. Treat for external hemorrhage (not tourniquets)		X			

**B6. Heat/Cold Therapy**

49. Provide cold therapy		X			
50. Provide heat therapy		X			

	<u>R</u>	<u>Q</u>	<u>M</u>	<u>W</u>	<u>D</u>
	<u>A</u>	<u>T</u>	<u>O</u>	<u>E</u>	<u>A</u>
	<u>R</u>	<u>R</u>	<u>N</u>	<u>K</u>	<u>I</u>
	<u>E</u>	<u>L</u>	<u>T</u>	<u>L</u>	<u>L</u>
	<u>L</u>	<u>L</u>	<u>H</u>	<u>L</u>	<u>L</u>
	<u>Y</u>	<u>Y</u>	<u>Y</u>	<u>Y</u>	<u>Y</u>
<b>C. Patient Care / Patient Management Activities</b>					
<b>C1. Nursing Care</b>					
99. Turn, cough, & deep-breathe patients	X				
100. Provide morning care for bedridden patients	X				
101. Perform circulation checks for patients in hard/soft cases	X				
102. Administer patient exercises/range of motion	X				
105. Monitor seriously ill patients	X				
106. Escort to showers and head	X				
107. Perform postoperative care	X				
108. Conduct nasal-gastric intubation	X				
109. Conduct daily debridements for burn victims	X				
110. Chart intake & output of fluids	X				
111. Perform catheterization	X				
112. Provide urinary catheter care	X				
113. Monitor intravenous site	X				
114. Provide intravenous site care	X				
115. Assist patient with postural drainages	X				
120. Perform tracheostomy care	X				
121. Care for patients in traction	X				
<b>C2. Advanced Nursing Care</b>					
117. Apply rotating tourniquets	X				
118. Monitor blood transfusions	X				
119. Apply continuous/intermittent suction	X				
<b>C3. Patient Screening</b>					
96. Perform head to toe physical exam			X		
97. Conduct sick-call for crew					X
98. Obtain info on presenting complaints					X
99. Obtain a medical history					X
100. Review medical record for prior conditions					X
101. Take & record temp., pulse, & resp. rate					X
102. Take & record blood pressure					X
<b>C4. Medications</b>					
143. Administer rectal medications	X				
145. Administer intravenous medications	X				
147. Administer inhalation medications	X				
149. Administer sublingual medications	X				
152. Administer meds by injection		X			
155. Administer topical/cutaneous meds			X		
148. Instillation medications (e.g., eye drops)			X		
146. Administer oral medications				X	
<b>C5. Medical Evacuations</b>					
131. Transport patient from scene of accident with special equipment	X				
134. Coordinate medical evacuations (MEDEVAC)	X				
135. Prepare patients for MEDEVAC	X				
136. Escort patient for MEDEVAC	X				
137. Radio consult with medical officer	X				
139. Request consults from other medical facilities			X		
<b>C6. Patient Indoctrination</b>					
125. Indoctrinate patients on breathing techniques	X				
122. Indoctrinate patients in use of crutches	X				
123. Indoctrinate patients on proper hygiene		X			
124. Indoc. patients in transmission of disease		X			
126. Indoc. patients on treatment or self-care		X			
127. Indoc. patients on use of prescribed medication				X	
<b>C7. Nutrition</b>					
98. Prescribe special diets for patients		X			



	R A R E L Y	Q T R L Y	M O N T H L Y	W E E K L Y	D A I L Y
<b>D. Administrative Tasks</b>					
<b>D1. Supply</b>					
209. Survey lost/damaged equipment	X				
205. Procure "open-purchase" medical supplies		X			
208. Inventory battle dressing stations		X			
210. Dispose of supplies/instruments/equipment after expiration date		X			
213. Prepare supplemental AMAL		X			
214. Manage OPTAP for medical department		X			
211. Replenish supplies/instruments/equipment after expiration date			X		
212. Comply with AMAL requirements			X		
206. Submit and monitor supply request charts			X		
207. Store medical supplies			X		
<b>D2. Training</b>					
179. Prepare audiovisual aids	X				
183. Administer/grade tests or examinations	X				
178. Prepare lesson guides		X			
180. Prepare training reports		X			
182. Prepare tests/examinations		X			
184. Validate practical factor/PARS completion		X			
181. Serve as instructor for training sessions			X		
<b>D3. Medical Records</b>					
153. Transcribe doctor's orders	X				
157. Open health records	X				
158. Close health records	X				
159. Open dental records	X				
160. Close dental records	X				
161. Open temporary health or dental record	X				
151. Verify dental records			X		
152. Verify health records			X		
<b>D4. File Maintenance</b>					
165. Destroy classified materials	X				
172. Draft & follow-up ship maint actions (SMAPs)	X				
173. Draft & follow-up internal work requests (IWRs)	X				
170. Maintain/update sailing list		X			
150. Maintain/update medical tickler file			X		
167. Monitor ship's weight control program			X		
171. Maintain/update medical dept. RMS schedule				X	
<b>D5. Supervision</b>					
215. Write review enlisted performance evals	X				
219. Justify augmentation request for personnel logistics resources	X				
218. Counsel personnel on performance		X			
222. Assign work to subordinates		X			
217. Assign work priorities			X		
<b>D6. Consults/Inspections Requests</b>					
186. Request noise health survey	X				
187. Request microwave health survey	X				
189. Request TYCOM medical insp. (MRI/MRE, etc.)	X				
196. Request EPMU technical assist visit	X				
185. Request consults from other medical facs			X		
<b>D7. Correspondence</b>					
199. Draft messages		X			
201. Draft instructions/notices		X			
200. Draft letters			X		

APPENDIX G

MEAN PERFORMANCE FREQUENCY RATINGS OF IDC REPORTS, RADIATION HEALTH,  
AND OCCUPATIONAL HEALTH PROGRAM TASKS FOR MAJOR SHIPTYPES

	AE/AO (17)	CG (18)	DD/G (20)	FF/G (94)	LSD/T (25)	MSO (18)	SSBN (25)	SSN (71)
<b>I. Fleet, Base, &amp; MEDCOM Reports:</b>								
1 Prepare medicinal inventory report	3.00	2.83	2.89	2.71	3.00	2.94	2.92	2.79
2 Prepare sick call treatment report	1.25	3.50	2.68	1.66	0.00	0.00	3.08	2.00
3 Prepare VD epidemiologic report	1.44	2.11	2.02	1.52	1.39	0.28	0.48	0.78
4 Prepare lab analysis foods report	0.19	0.35	0.00	0.17	0.22	0.12	0.00	0.09
5 Prepare heat exhaustion report	0.33	0.44	0.37	0.33	0.44	0.41	0.23	0.13
6 Prepare sanitation report	3.31	3.50	3.53	3.47	3.22	3.56	3.74	3.99
7 Prepare bacteriological report	3.77	3.78	3.93	3.95	3.67	4.00	3.50	3.36
8 Prepare morbidity report	3.00	3.06	3.00	3.01	3.06	3.00	2.92	3.00
9 Prepare VD incident report	1.00	0.94	1.39	1.43	1.10	0.29	0.32	0.42
10 Prepare accident or incident report	3.65	3.17	3.13	3.13	3.55	2.00	3.17	2.69
11 Prepare env pollution control report	0.41	0.00	0.05	0.25	0.33	0.12	0.05	0.06
12 Prepare MEDCOM tuberculosis report	0.94	0.94	1.00	0.97	1.00	1.11	1.00	1.00
13 Prepare TYCOM dental status report	2.00	1.94	2.05	1.99	1.83	1.94	1.63	1.97
14 Prepare occup injury status report	0.53	0.69	1.14	1.10	1.25	1.00	1.13	1.00
15 Prepare heat stress status report	1.77	2.53	2.61	2.07	2.15	2.22	0.38	0.20
16 Prepare binacle list	5.00	4.72	4.79	4.63	4.67	3.61	2.50	2.82
17 Prepare MEDCOM rad exposure report	1.06	1.44	1.21	0.80	0.00	0.00	1.67	2.09
18 Prepare HAIF Report	0.80	0.25	1.09	0.85	0.70	1.00	1.35	1.23
19 Prepare antabuse status report	0.88	1.56	1.20	1.13	1.13	1.29	0.17	0.21
20 Prepare medical supply status to CO	1.00	0.56	0.58	0.78	1.17	1.56	1.21	1.03
21 Prepare atmosphere control rpt to CO	0.06	0.00	0.20	0.16	0.00	0.28	2.67	3.36
22 Prepare dental status report	1.71	1.94	1.97	1.97	2.00	2.11	2.35	2.39
23 Prepare privacy act report	0.41	0.19	0.51	0.49	0.73	1.06	0.05	0.21
24 Prepare trace contaminants report	0.12	0.33	0.12	0.18	0.35	0.33	2.88	3.44

	AE/AO	CG	DD/G	FF/G	LSD/T	MSO	SSBN	SSN
<b>II. Radiation Health Program:</b>								
1 Prepare (FRP) status report	0.82	1.38	1.02	0.81	0.00	0.00	1.24	0.75
2 Conduct audit of rad safety program	1.00	1.29	0.93	0.58	0.00	0.00	1.80	1.86
3 Record ionizing radiation on DD 1141	1.75	2.18	1.86	0.99	0.04	0.00	2.92	2.99
4 Prepare sit report (NAVMED 6470/1)	0.71	0.73	1.24	0.61	0.00	0.18	2.64	2.99
5 Prepare personnel overexposure rpt	0.12	0.06	0.09	0.06	0.04	0.00	0.14	0.25
6 Check rad physicals for completeness	0.94	0.31	0.15	0.11	0.00	0.00	3.08	3.23
7 Maintain prohibitive items log	0.13	0.13	0.12	0.06	0.09	0.29	2.89	3.06
8 Prepare rad termination letters	1.38	1.12	0.96	0.69	0.00	0.00	2.58	2.83
9 Prepare rad transmittal letters	0.60	1.12	1.20	0.61	0.00	0.00	2.46	3.01
10 Prepare lost or damaged TLD rpt	0.17	0.25	0.50	0.23	0.00	0.00	2.36	2.33
11 Prepare CO rad exposure alert list	0.25	0.50	0.35	0.15	0.00	0.00	2.09	2.82
12 Prepare CO dosimeter report	0.50	1.00	0.51	0.17	0.00	0.00	2.96	2.03
13 Respond to ext. exposure inquiries	0.13	0.19	0.19	0.16	0.00	0.00	1.65	1.34
14 Prepare ITF/TLD program report	1.00	1.94	1.21	0.64	0.90	0.00	1.92	2.18
15 Prepare MAN-PEM plan & eval worksht	0.12	0.00	0.30	0.11	0.00	0.00	0.14	1.13
16 Maintain atmosphere control log	0.12	0.00	0.25	0.06	0.00	0.00	2.88	2.35
17 Prepare atmospheric contaminant rpt	0.12	0.00	0.08	0.02	0.00	0.00	2.04	2.09
18 Random atmos still surv (port equip)	0.18	0.00	0.14	0.12	0.00	0.00	3.32	3.54
19 Conduct installed equip atmos surv	0.12	0.00	0.04	0.07	0.00	0.00	2.92	3.47
20 Conduct atmosphere control survey	0.06	0.00	0.07	0.07	0.00	0.00	3.63	2.46
21 Conduct hazardous contaminants checks	0.12	0.00	0.11	0.07	0.00	0.00	2.71	2.96
22 Prepare visitor rad brief & data form	0.44	1.67	0.94	0.44	0.00	0.00	2.54	3.01
23 Monitor ELT's read/record of TLDs	0.41	0.56	0.35	0.32	0.00	0.00	3.08	2.21
24 Conduct prelim occup rad physical	0.29	0.19	0.25	0.16	0.00	0.00	2.32	2.23
25 Conduct rad health indoc (crew)	0.94	1.59	1.05	0.71	0.00	0.00	1.97	2.58
26 Conduct rad hlth indoc (weapons dept)	0.47	1.29	1.00	0.57	0.00	0.00	1.54	1.54
27 Conduct rad hlth indoc (eng dept)	0.53	0.31	0.64	0.27	0.00	0.00	1.12	1.80
28 Conduct atmo control indoc for crew	0.12	0.13	0.11	0.07	0.00	0.00	1.72	2.14

Frequency scale: 0 = "never", 1 = "annually or semi-annually", 2 = "1 to 2 per quarter",  
3 = "1 to 2 per month", 4 = "weekly", 5 = "daily"

III. Occupational Health Program

A. Occupational Health -- General	AE/AO	CG	ED-G	FF-G	LSD-T	MSO	SSBN	SSN
1. Take water samples for testing	1.59	1.72	1.59	1.59	1.48	1.41	1.96	1.21
2. Conduct bromine/chlorine test on water	1.88	1.91	1.91	1.95	1.91	1.90	1.19	1.70
3. Conduct bacteriological test pot. water	1.00	1.78	1.91	1.92	1.91	1.94	1.71	1.91
4. Drain traps & emergency water	2.06	2.11	2.03	2.09	2.25	2.22	0.00	0.01
5. Take potable water radiation sample	0.00	0.00	0.00	0.03	0.01	0.00	0.01	0.01
6. Check fire alarm weapon condensate	0.12	0.00	0.01	0.00	0.00	0.00	1.01	1.71
7. Fit personnel for noise protection	1.21	1.54	1.11	1.11	1.52	1.41	0.00	1.01
8. Issue noise protection devices	1.12	1.65	1.59	1.27	1.18	1.89	1.21	1.31
9. Issue respiratory protection devices	0.53	1.71	0.25	1.11	1.50	2.01	0.82	0.72
10. Administer lead intradermal skin test	1.59	1.39	1.11	1.01	1.00	2.50	1.61	1.91
11. Administer inoculations & vaccines	2.87	1.10	1.35	1.05	1.08	1.53	2.36	1.99
12. Read an audiogram	2.56	2.50	2.80	2.47	2.57	2.00	2.60	1.61
13. Inoc personnel hearing conserv. prog.	2.14	2.82	2.64	2.67	2.71	2.69	2.71	2.10
14. Inoc personnel heat stress program	2.24	2.47	2.16	2.53	2.71	2.65	1.64	1.14
15. Perform rodent/pest control procedure	2.77	1.01	1.25	1.12	1.28	1.24	1.18	2.00
16. Inoc personnel in pest control tech	1.44	1.19	1.45	1.38	2.28	2.00	0.51	0.97
17. Administer sight conserv. program	1.94	1.82	1.36	1.66	2.04	1.65	2.51	1.76
18. Administer hearing conserv. program	2.94	1.00	1.30	2.05	2.84	2.89	2.64	2.16

B. Occupational Health -- Inspections	AE/AO	CG	ED-G	FF-G	LSD-T	MSO	SSBN	SSN
19. Conduct heat stress inspection	1.41	1.71	1.56	1.40	1.42	1.39	1.40	0.84
20. Conduct venereal disease interview	1.12	2.27	1.11	1.76	1.78	0.28	0.75	0.93
21. Conduct hearing conserv. & noise insp.	1.12	0.91	1.14	1.18	0.88	1.24	1.09	0.71
22. Inspect food service facilities/perm.	1.71	1.88	1.90	1.20	1.20	1.39	1.40	1.41
23. Inspect food/cutlery (fire h. & staples)	1.12	1.59	1.02	1.01	1.08	1.00	1.68	1.09
24. Inspect food storage spaces	1.29	1.12	1.62	1.73	1.76	1.71	1.08	1.20
25. Inspect laundry facilities	1.35	1.95	1.90	1.89	1.76	1.59	1.88	1.36
26. Conduct habitability inspection	1.75	1.24	1.10	1.10	1.01	1.53	1.80	1.13
27. Conduct physicals on food handlers	1.12	1.00	1.18	1.57	1.17	2.44	2.54	1.00
28. Inspect barber shop	1.17	1.88	1.81	1.83	1.92	0.00	0.50	0.28
29. Inspect ship's store	1.24	1.77	1.53	1.75	1.72	0.28	0.57	0.21
30. Inspect ship's coffee messer	1.11	2.71	1.13	1.21	1.29	1.11	1.84	1.11
31. Inspect chem. storage & paint lockers	2.12	2.18	2.10	2.45	2.52	2.53	0.79	0.49
32. Inspect OHT	1.29	1.41	2.90	1.37	1.28	2.82	1.44	0.51
33. Inspect marine sanitation dev. (MSD)	1.88	1.56	2.57	2.07	2.60	2.77	0.63	0.38

C. Occupational Health -- Monitoring	AE/AO	CG	ED-G	FF-G	LSD-T	MSO	SSBN	SSN
34. Administer asbestos surveillance program	1.82	1.66	1.12	1.87	2.00	1.06	2.30	1.45
35. Monitor ventilation in workspaces	1.53	1.18	1.70	1.10	2.00	2.50	1.70	1.65
36. Monitor toxic substance & gas usage	0.94	1.35	1.12	0.93	1.05	2.18	2.00	2.10
37. Conduct follow-up on gas free insp.	0.63	0.41	0.27	0.73	0.00	0.89	1.87	1.55
38. Monitor hazardous contaminants source	0.12	0.41	0.29	0.42	0.26	0.41	1.41	1.12
39. Monitor protective clothing usage	2.41	2.53	2.12	1.68	2.36	2.65	1.63	1.21
40. Monitor oxygen levels after launch	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00
41. Monitor oxygen level nitro loading	0.00	0.00	0.00	0.00	0.00	0.00	1.14	0.41
42. Monitor oxygen candle usage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18
43. Monitor hydrogen level (bat. charge)	0.06	0.00	0.02	0.02	0.00	0.35	1.44	1.54
44. Monitor electric energized gear maint.	0.63	0.44	0.27	0.12	0.46	0.41	1.29	1.37

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<p>This study was conducted in response to a need for empirical data to facilitate the identification of essential independent duty corpsman (IDC) knowledge and skills and to enable for such purposes due consideration of unusual or infrequent clinical conditions/disorders and non-routine contingencies, such as combat casualty care, as well as routine IDC tasks. The specific objectives of the study were to (a) assess IDC senior medical department representative (SMDR) perceptions of the adequacy of their formal Navy preparation for shipboard duty independent of a physician, (b) identify individual, organizational, and operational discriminators of SMDR ratings of training adequacy, and (c) based on an extensive task inventory, document for reference use the frequency of specific disorder condition encounters and shipboard medical department tasks.</p> <p>Findings indicated that, in general, fleet experienced IDCs perceived their formal Navy preparation for serving as independent SMDR as adequate. Exceptions for both ship and submarine SMDRs were ratings of inadequate training with the following areas: (a) biological</p>			
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VI. ABSTRACT (cont.)

Disorders Conditioned as a Condition, Advanced Emergency Care, Advanced Nursing Care, and Non-medical First Aid tasks. Although statistically significant differences in training adequacy emerged between surface ship and submarine SMDRs and between first team SMDRs and more experienced SMDRs on several categories of tasks, it was concluded that these differences were not large enough to be of practical import. Attention could usefully be placed on reviewing requirements for the task categories identified above as inadequately trained.

In addition to the foregoing findings, it is anticipated that the detailed appendices provided in this report, containing breakdowns of mean training adequacy and task frequency ratings for the major classes of ships on which IDCs serve as SMDRs, can be used as decision aids for determining appropriate IDC responsibilities and consequent training requirements.

Further research on the IDC is needed in the following distinct but related areas: (a) decision-making processes, (b) job performance testing, and (c) program evaluation.

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