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A STUDY OF PRODUCTIVITY OF USAMEDD DENTAL LABORATORY TECHNICIAN--ETC(U)
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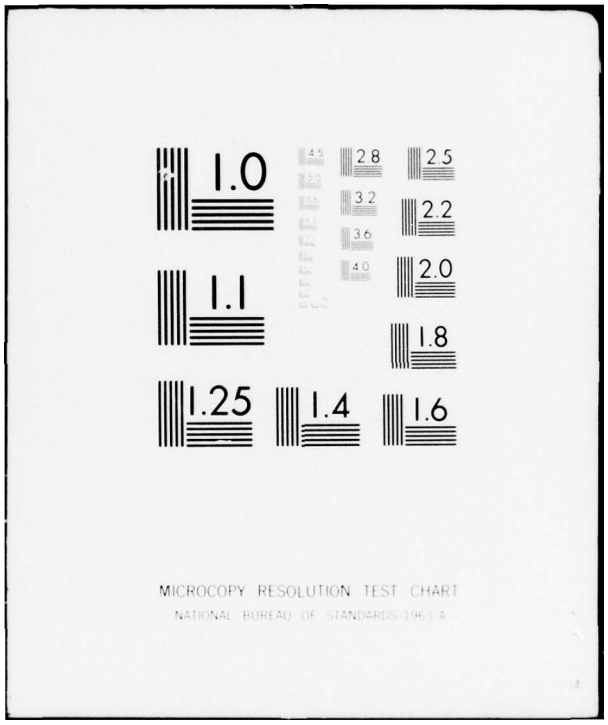
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Report HCSD-77-002

PRODUCTIVITY OF USAMEDD DENTAL LABORATORY TECHNICIANS

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March 1977

Final Report

Prepared for:

UNITED STATES ARMY HEALTH SERVICES COMMAND (HSDS)
Fort Sam Houston, Texas 78234

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

The purposes of this study were: (1) to determine if the dental workload accounting system used in the RDA system is useful at the installation level and (2) to provide data to HSC, DDS for determining if the resultant output is potentially useful as a management tool. Data collection of input, procedures accomplished (output), and daily assigned personnel strength was conducted at one MEDCEN and three MEDDAC dental services. All dental laboratory information collected was reported according to the method used in the RDA system. Data

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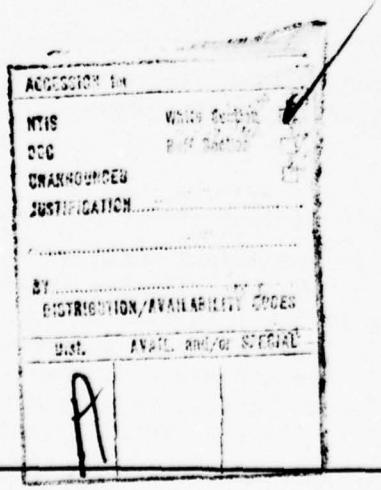
was submitted to the RDA at Fort Sam Houston, Texas for monitoring, editing, and correction of errors. It was concluded that: (a) The data collection mechanism employed in the RDA reporting system was shown to be a feasible method of reporting laboratory procedures at the MEDDAC/MEDCEN level; (b) In view of the recently revised expanded dental laboratory procedure listing (AR 40-182), the implementation of the RDA reporting system at the MEDCEN/MEDDAC level would not provide HSC with additional useful management information over and above that presently available; (c) The present RDA reporting system apparently does not provide MEDCEN/MEDDAC DDSs and/or laboratory officers with sufficient additional information to justify the effort necessary to implement the system at the MEDCEN/MEDDAC level; and (d) A clear-cut change or modification of the current installation laboratory work reporting system, which would provide HSC with an improved dental laboratory resource management tool, has not been identified by this study.



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A STUDY OF PRODUCTIVITY OF USAMEDD DENTAL LABORATORY TECHNICIANS

SUMMARY

Dental staff officers in the Directorate of Dental Services, Health Services Command (HSC), and Directors of Dental Services (DDSs) of Medical Centers (MEDCENs) and Medical Department Activities (MEDDACs) are interested in an improved dental laboratory resource management system for use at the installation level. Such a system should permit staff officers to compare productivity and types of work produced in Regional Dental Activities (RDA) with that accomplished in organic installation dental laboratories. At the present time a reporting system for dental laboratory output that permits managers to determine if laboratory resources are being effectively and efficiently utilized is not in use at the installation level. The purposes of this study were: (1) to determine if the dental workload accounting system used in the RDA system is applicable for use at the installation level and (2) to provide data to HSC, DDS for determining if the resultant output is potentially useful as a management tool. Data collection of input, procedures accomplished (output), and daily assigned personnel strength was conducted at one MEDCEN and three MEDDAC dental services. All dental laboratory information collected was reported according to the method used in the RDA system. Data was submitted to the RDA at Fort Sam Houston, Texas for monitoring, editing, and correction of errors. Data was transferred to punched cards by the Systems Division, Health Care systems Statistical Element, Directorate of Management Information Systems, HSC. Reports were delivered to the Fort Sam Houston RDA Commander for review and then forwarded to HCSD for analysis and reporting purposes. It was concluded that: (1) The data collection mechanism employed in the RDA reporting system was shown to be a feasible method of reporting laboratory procedures at the MEDDAC/MEDCEN level; (2) In view of the recently revised expanded dental laboratory procedure listing (AR 40-182), the implementation of the RDA reporting system at the MEDCEN/MEDDAC level would not provide HSC with additional useful management information over and above that presently available; (3) The present RDA reporting system apparently does not provide MEDCEN/MEDDAC DDSs and/or laboratory officers with sufficient additional information to justify the effort necessary to implement the system at the MEDCEN/MEDDAC level; and (4) A clear-cut change or modification of the current installation laboratory work reporting system, which would provide HSC with an improved dental laboratory resource management tool, has not been identified by this study.

ACKNOWLEDGEMENTS

The authors wish to acknowledge the effort of Major J. Burl Wimsett, MSC, for his effort as project officer during the planning and implementation stages of this project. His thorough planning made the transfer of the study effort to the authors possible without loss of continuity. The authors also wish to thank Colonel James Brudvik, DC, Commander, Regional Dental Activity, Fort Sam Houston, Texas and his administrative assistant, Ms Lee Resnick, for the time and effort in reviewing and editing the input data and reports for accuracy and authenticity. Lastly, the authors are indebted to the Health Care Studies Division personnel who contributed to this study and report. Appreciation is extended to Colonel William G. Peard, MC, and A. David Mangelsdorff, Ph.D., for their review of the manuscript and suggestions to improve its content and to Mrs. Katherine Hatler for her role in planning, implementing and monitoring data input.

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PRODUCTIVITY OF USAMEDD DENTAL LABORATORY TECHNICIANS

1. INTRODUCTION.

a. Purposes.

(1) The purposes of this study were:

(a) To determine if the dental workload accounting system used in the Regional Dental Activity (RDA) system is applicable for use at the installation dental laboratory level.

(b) To provide data to Health Services Command (HSC) Director of Dental Services for determining if the resultant output is potentially useful as a management tool.

(2) Staff officers in the Directorate of Dental Services (DDS), Health Services Command (HSC), and Directors of Dental Services (DDS) of Medical Centers (MEDCENs) or Medical Department Activities (MEDDACs) are interested in an improved dental laboratory resource management system for use at the installation level. Such a system would permit dental staff officers to compare productivity and types of work produced in the RDA with that in installation laboratories. At the present time a reporting system for dental laboratory procedures that can permit managers to determine if laboratory resources are being effectively and efficiently utilized is not in use at the installation level.

b. Background.

(1) Laboratory support of the Army dental prosthetic mission within CONUS is accomplished primarily by four RDAs. In addition to the RDAs, some prosthetic laboratory procedures are performed by dental laboratories organic to MEDCEN/MEDDAC dental treatment facilities (DTFs). The RDA system uses an automated accountability system which provides management data. The reports are prepared monthly for each of the RDAs by the Systems Division, Health Care Systems Statistical Element (HCSSE), Directorate of Management Information Systems (DMIS), HSC. Weighted Work Units (WWUs) for dental laboratory procedures are published in Army Regulation (AR) 40-182 (at Appendix A). These WWUs are used both at the RDA and installation laboratories for reporting their productivity. However, only total laboratory work units are reported to HSC by the MEDCENs and MEDDACs. This is done on a quarterly basis as an "add on" item on DD Form 477. A recent change in AR 40-182 increased the number of procedures (with corresponding weights) to include those that are performed at installation laboratories but not at RDAs. Therefore, the current AR contains an inclusive listing of weighted dental laboratory procedures. Until this recent change in the AR, there were several procedures performed at installation laboratories that did not have a WWU value in the AR. Therefore, under-reporting of procedures was unavoidable. Although all procedures accomplished at installation laboratories can now be

reported, there is no standardized method in use at the MEDCEN/MEDDAC level for recording procedures accomplished. Each local laboratory utilizes a locally devised recording system that "apparently" serves their needs and provides a means of tallying total procedures accomplished for inclosure as the DD Form 477 supplement laboratory report. This resultant supplemental quarterly report does not contain adequate information about resources available to permit an analysis comparable with that obtained from RDAs. In order to facilitate improved management of total dental laboratory resources by HSC, especially in staffing, it is essential that a procedure specific weighted work unit accounting system be field tested for use at the installation level.

2. OBJECTIVES.

The objectives of this study were:

a. To determine if implementation of the data collection mechanism employed in the RDA dental laboratory procedure reporting system is feasible for use at the MEDCEN/MEDDAC level.

b. To determine if the implementation of the RDA reporting system would provide better resource management information to HSC.

c. To determine if the RDA reporting system would provide meaningful management information to DDSs and individual installation laboratory officers.

3. METHODOLOGY.

a. Overview. The study was conducted at one MEDCEN and three MEDDAC dental activities. All dental laboratory procedures performed at the installations were reported according to the method used in the RDA system. Data was submitted to the RDA at Fort Sam Houston, Texas for monitoring and correction of errors. Data was transferred to punched cards, and analyzed by Systems Division, HCSSE, DMIS, HSC. Reports were delivered to the Fort Sam Houston RDA Commander for review and then were forwarded to HCSD.

b. Procedure.

(1) The DA Form 2868, Prosthodontic Prescription and Consultation Request (Appendix A) was initiated for each prosthodontic procedure accomplished by the study site dental activity. This is the standard form used for requesting prosthodontic procedures.

(2) Utilizing block 38 of the DA Form 2868, a dental officer (prosthodontist) selected by the Post Dental Surgeon coded the procedures, material, and units as a part of the normal review procedure. Coding instructions and procedures are included at Appendix B.

(3) Coded DA Forms 2868 were collected daily by the Chief Dental NCO or his representative and posted to the daily keypunch worksheet.

Instructions for posting this worksheet are attached at Appendix C (Card A). These keypunch worksheets were forwarded daily to the Regional Dental Activity, Fort Sam Houston, Texas for review.

(4) To test the efficiency of this system in providing laboratory technician utilization data for management purposes it was necessary to maintain a daily record of dental activity personnel strengths during the one month study period. This was recorded on the personnel strength accounting worksheet. Instructions for preparing this worksheet, with an example, are attached at Appendix D (Card B).

(5) The backlog of work remaining was reported at the close of business of the day preceding the first day of the data collection period and submitted with the first day's report. This data was reported as explained in Appendix E (Card C).

(6) In addition to the beginning and ending backlog counts, the daily laboratory input data was collected at each laboratory by the laboratory NCO. This daily input data was recorded on a separate form (Appendix F) and submitted daily with the other worksheets. This daily input data was evaluated in consultation with a board of certified prosthodontists, to determine if the input was sufficient for full time laboratory technician utilization. This data was used to keep the laboratory technician fully utilized. If there was insufficient work, an evaluation of standard or potential maximum technician productivity was not accomplished on that particular data. Since there was insufficient work to allow such an evaluation during the first data collection period (June-July) a second data collection period was conducted in October using the same study sites.

(7) Computer processing of the data was accomplished utilizing the RDA program at HSC DMIS.

(8) The sample data was obtained from the following MEDCEN and three MEDDACs: Brooke Army Medical Center, Fort Sam Houston, Texas; Fort Ord, California; Fort Polk, Louisiana; and Fort Rucker, Alabama.

(9) Following the data collection phase, the HCSD project officer telephonically contacted installation project officers and key administrative and laboratory NCOICs to obtain their views and impressions of the test system. This procedure was accomplished after the RDA consultant had sent each DDS a copy of the data pertaining to his activity.

c. Data Analysis.

(1) For the purpose of data consolidation and computer listing, the regional dental laboratory technician accounting system was used. This system is currently an active program on the Health Services Command DMIS computer. A computer printout provided the following data for analysis:

(a) A production analysis report containing production data:

1. by weighted work unit.

2. by major dental prostheses.

3. by cases on hand on the last day of the test period by major dental category (i.e., fixed prostheses, removable prostheses; orthodontics, and other/miscellaneous).

4. monthly average of time in laboratory for procedures 01; 05; 20; 25; and 43. (Appendix B)

5. average daily weighted work units.

6. average daily strength and productivity data to include:

a. average daily number of technicians assigned.

b. average daily technician hours present for duty.

c. average daily weighted work units per assigned individual.

d. average weighted work unit per technician hour.

(b) A production report indicating the types of material used for each procedure, the number of procedures, and the average number of days required to complete each type procedure.

(c) A station report showing the number of procedures and weighted work units accomplished at each study site.

(d) A consolidated production analysis report showing the same data that was included in 4b with the four study sites consolidated. This report, provided a total overview of dental laboratory production in one consolidated report but was not found to be of value.

4. FINDINGS.

a. The data collected during June 1976 at the four study sites were analyzed and reviewed by Colonel James Brudvik, DC, the Fort Sam Houston RDA Commander and study consultant. COL Brudvik's evaluation indicated that the laboratory input during this time period was insufficient to provide technicians with an adequate workload to yield realistic productivity data. In coordination with the study monitor, the decision was made to collect additional data during the month of October rather than use the June data for analysis. COL Brudvik mailed the data reports to the DDSs at the study sites and solicited their comments concerning use of the system. Principal areas of concern were centered around the difficulties and

acceptability of implementing the system at the user laboratory level and with perceived usefulness of the report at the installation level by the following personnel: DDS, clinic director, laboratory officer and NCO. In general, responses indicated that although there was no great difficulty in locally implementing the system at the installation, the reports were not perceived as valuable management tools at the installation level. (The local demand, the skill of the prosthodontists and technicians, and the type of facilities determine the types of laboratory procedures locally accomplished.) This project did not address the effect of increasing the data input on DMIS, HSC should expansion of the system occur throughout the HSC.

b. The original four study sites collected data for a second test period during October 1976. October was selected as the test period because input was expected to be high, thus insuring adequate utilization of work technicians. The study consultant's review indicated that input during October was adequate for further analysis of the data. Table one shows the daily technician strength for the four installations. Also shown are the technician's productivity indicators for each installation. Table two shows the number of prosthetic appliances according to the four major categories of dental laboratory procedures that were reported to have been completed at the local laboratories during the data collection period. The number of weighted work units produced, by study site, are shown in Table three. Table four presents the percent distribution of WWUs for each study site. This relative distribution of WWUs describes how local laboratory resources were used for a given period of time. Table five shows the frequency distribution of cases left on hand at the close of business of the last day of the test period.

c. A sample of the complete Consolidated Production Analysis report for the total sample collected (composite study data) is at Appendix G. Appendix H contains the same report (monthly data) from one of the individual sites.

d. A sample of the Procedure Report for one of the study sites is found at Appendix I. This report consists of a listing of all the types of procedures performed during the test period, the frequency that they were performed, the value of the WWU for each procedure, and the average number of days a case remained in the laboratory for completion of each procedure.

5. DISCUSSION.

a. When the key personnel at the study sites were queried concerning the implementation of the system and the perceived benefits of the monthly feedback report, their comments were fairly consistent. Those queried felt that the system could be implemented at the installation; however, it was quite time consuming for the laboratory officer and the laboratory NCOIC.

In general the DDSs did not perceive the resultant feedback report to be of sufficient value to warrant the increased effort required to collect the data. None of the individuals strongly opposed the system and all indicated the system would be acceptable and could be feasibly implemented if the requirement for such a system became mandatory. In general the installation laboratories were considered to be small enough that management of their personnel and other resources was not improved either by the increased specificity of the reporting or the resultant monthly summary obtained from using the RDA system. Although the study consultant discussed the contents of the feedback report with each of the DDSs of the study sites, they did not feel that it met their needs.

b. It is of interest to compare the findings obtained from this study with a similar report from the Fort Sam Houston RDA. Comparisons between the study and RDA reports are not made for the purpose of setting standards but rather to point out differences in the two types of laboratory operations. It is important to consider some of the inherent differences between the station and the RDA systems. There are several basic laboratory procedures that are performed at station laboratories in direct support of chairside procedures that are rarely or never performed in the RDA system. Until the recent change in AR 40-182, several frequently performed procedures in the installation laboratories did not have WWUs assigned for obtaining credit for productivity. Examples of these procedures include pouring casts and fabricating trays. These deficiencies have been corrected and a "complete" list of laboratory procedures and WWUs are published in the current AR 40-182. However, the RDA report format does not include summary tables of the absolute or relative magnitude of performance for procedures that are predominantly performed at local laboratories. This information is available in great detail in the form of a listing of procedures performed (see Procedure Report,Appendix I).

c. Comparison of the Average Daily Weighted Work Units per Assigned Technician and the Average Weighted Work Units per Technician Hour provide a comparable productivity measure. These are direct measurements of effective resource utilization. However, until ranges of productivity for each skill level are available it is impossible to determine how the productivity indicators are influenced by technician skill, management, and/or workload input. Table one shows the differences that were found among the four sites. When data presented in this table are compared with that shown in Table six from an RDA monthly report several interesting points become apparent. The RDA productivity for WWU per day and hour per assigned technician is greater than that found at any of the study sites. Only the WWUs per technician hour at Site D approaches the hourly WWU per technician reported for the RDA. This could be accounted for by: technicians in RDA are more productive because they become more specialized by repeatedly performing a more restrictive range of procedures than can be accomplished at an installation laboratory; and or the consideration that work flow in the RDA is more controlled in demand, type, and degree of difficulty of procedures assigned to specific technicians for maximum utilization of personnel. The RDAs are managed by dental officers (prosthodontists) specifically trained in RDA management

skills while local laboratories are managed usually by commissioned or non-commissioned officers who may or may not have management skill training. This average productivity, which is located in the Consolidated Production Analysis Report (see Appendix G), contains virtually all of the management information that would be of interest at HSC or OTSG level. Therefore the report for higher headquarters would require major program changes by DMIS, HSC in order to obtain a more useable report.

d. The percent distributions of WWUs by major category of laboratory procedure for the study are in Table four and can be compared to those reported by the RDA. These overall percentages reveal that a different type laboratory output exists at the installation level than at the RDA. A closer examination of the production analysis reported by weighted work units indicates that in the Fixed Prosthodontics category the RDA produces primarily procedures 01 through 03 and 05 through 07, while the installation laboratories perform a wider variety of tasks including the procedures cited above. This is shown by the larger percentages of procedures not included in the Partial Dentures and Crowns sub-categories of Fixed Prosthodontics for installation labs than for the RDA. If this system were to be adopted for installation use it would appear helpful if an additional sub-category were added under Fixed Prosthdodontics in order to more clearly display this difference in laboratory activity.

e. In general this reporting system appears to be a working model for a management tool for improving installation laboratory resource utilization. Major changes in the output report would be required in order to present cogent information to managers at different levels of the command hierarchy. Although the current output report serves all the needs of RDA commanders, it needs consolidation to serve the needs of staff officers at higher levels. Conversely, DDSs and/or installation laboratory officers desire a revised detailed report of output that is more descriptive of performance at the installation level. As the need for more quantifiable accountability measures becomes increasingly evident, and managers are required to document how resources are utilized in more detail, the perceived value of an automated more detailed laboratory work reporting system may be increased. However, at the present time the expanded procedures listed in AR 40-182 and recorded by locally devised methods appears to permit reporting of laboratory weighted procedures in enough detail to satisfy current management requirements.

f. Another facet which must be explored is the ability of the computer system to support a sizeable increase in input from new data sources (approximately a 900 percent increase). This question was not addressed in the current study.

6. CONCLUSIONS.

a. The data collection mechanism employed in the RDA reporting system was shown to be a feasible method for reporting laboratory procedures at the MEDDAC/MEDCEN level.

b. In view of the recently revised expanded dental laboratory procedure listing (AR 40-182), the implementation of the RDA reporting system at the MEDCEN/MEDDAC level would not provide HSC with additional useful management information over and above that presently available.

c. The present RDA reporting system apparently does not provide MEDCEN/MEDDAC DDSs and/or laboratory officers with sufficient additional information to justify the effort necessary to implement the system at the MEDCEN/MEDDAC level.

d. A clear-cut change or modification of the current installation laboratory work reporting system, which would provide HSC with an improved dental laboratory resource management tool, has not been identified by this study.

7. RECOMMENDATIONS.

a. Recommend that the RDA dental laboratory procedure reporting system not be implemented on a routine basis at the MEDCEN/MEDDAC level.

b. If a need develops in the future for additional detailed information about dental laboratory productivity at the MEDCEN/MEDDAC level, consideration could be given to using the RDA reporting system for this purpose.

8. REFERENCES.

a. AR 40-182, Regional Dental Activity Report.

b. AR 40-184, Dental Service Report.

Table 1

COMPARISON OF THE AVERAGE DAILY STRENGTH AND PRODUCTIVITY DATA FOR THE STUDY SITES

Table 1

COMPARISON OF THE AVERAGE DAILY STRENGTH AND PRODUCTIVITY DATA FOR THE STUDY SITES

	SITE			
	A	B	C	D
Average Daily Total Assigned Strength	14.00	17.00	10.63	6.00
Average Daily Number of Technicians Assigned	14.00	17.00	10.63	6.00
Average Daily Technician Hours Present for Duty	44.85	65.53	70.53	22.63
Average Daily Weighted Work Units Per Assigned Individual	20.79	18.06	30.57	28.33
Average Daily Weighted Work Units Per Assigned Technician	20.79	18.06	30.57	28.33
Average Weighted Work Units Per Technician Hour	9.73	7.39	7.27	11.83

Table 2

NUMBER OF APPLIANCES FABRICATED DURING
REPORTING PERIOD BY STUDY SITE

Table 2

NUMBER OF APPLIANCES FABRICATED DURING
REPORTING PERIOD BY STUDY SITE

CATEGORY OF DENTAL LABORATORY PROCEDURES	SITE			
	A	B	C	D
Fixed Prosthodontics	69	42	55	69
Removable Prosthodontics	40	22	23	12
Orthodontics	1	5	83	5
Maxillofacial Appliances	0	0	0	0
Total	110	69	161	86

Table 3

NUMBER OF WEIGHTED WORK UNITS PRODUCED
BY STUDY SITE IN ONE MONTH

Table 3

NUMBER OF WEIGHTED WORK UNITS PRODUCED
BY STUDY SITE IN ONE MONTH

CATEGORY OF DENTAL LABORATORY PROCEDURES	SITE			
	A	B	C	D
Fixed Prosthodontics	3,336	5,120	3,899	2,775
Removable Prosthodontics	5,225	3,656	2,928	1,915
Orthodontics	50	250	2,750	250
Other/Miscellaneous	116	176	161	147
Total	8,727	9,202	9,738	5,087

Table 4

PERCENT DISTRIBUTION OF WEIGHTED WORK UNITS BY
MAJOR CATEGORY OF DENTAL LABORATORY PROCEDURE

Table 4

PERCENT DISTRIBUTION OF WEIGHTED WORK UNITS BY MAJOR CATEGORY OF DENTAL LABORATORY PROCEDURE

CATEGORY OF DENTAL LABORATORY PROCEDURE	STUDY SITE			
	A	B	C	D
Fixed Prosthodontics	38.23	55.64	40.04	54.55
Removable Prosthodontics	59.87	39.73	30.07	37.64
Orthodontics	.57	2.72	28.24	4.91
Other/Miscellaneous	1.33	1.92	1.65	2.90
Total	100.00	100.01	100.00	100.00

Table 5

DISTRIBUTION OF PROSTHETIC CASES ON HAND LAST DAY
OF THE TEST PERIOD FOR THE FOUR STUDY SITES

Table 5

DISTRIBUTION OF PROSTHETIC CASES ON HAND LAST DAY OF THE TEST PERIOD FOR THE FOUR STUDY SITES

CATEGORY OF DENTAL PROSTHETIC APPLIANCE	SITE			
	A	B	C	D
Fixed Prosthodontics	125	3,575	755	9
Removable Prosthodontics	232	385	351	2
Orthodontics	0	100	55	0
Other/Miscellaneous	0	0	4	0
Total	357	4,050	1,165	11

Table 6

PRODUCTION ANALYSIS REPORT
REGIONAL DENTAL ACTIVITIES REPORTING PERIOD 01 JAN 77 THRU 31 JAN 77
RDA, FORT SAM HOUSTON

AVERAGE DAILY STRENGTH AND PRODUCTIVITY DATA

Table 6

PRODUCTION ANALYSIS REPORT
REGIONAL DENTAL ACTIVITIES REPORTING PERIOD 01 JAN 77 THRU 31 Jan 77
RDA, FORT SAM HOUSTON

AVERAGE DAILY STRENGTH AND PRODUCTIVITY DATA

Average Daily Total Assigned Strength	51.90
Average Daily Number of Technicians Assigned	42.90
Average Daily Technician Hours Present For Duty	276.86
Average Daily Weighted Work Units Per Assigned Individual	45.01
Average Daily Weighted Work Units Per Assigned Technician	54.45
Average Weighted Work Units Per Technician Hour	12.46

TABLE 7

PERCENT DISTRIBUTION OF WEIGHTED WORK UNITS
BY MAJOR CATEGORY OF DENTAL LABORATORY PROCEDURE

Table 7

PERCENT DISTRIBUTION OF WEIGHTED WORK UNITS
BY MAJOR CATEGORY OF DENTAL LABORATORY PROCEDURE

CATEGORY OF DENTAL LABORATORY PROCEDURES	PERCENT
Fixed Prosthodontics	67.75
Removable Prosthodontics	31.03
Orthodontics	0.69
Other/Miscellaneous	0.53

APPENDIX A

PROSTHODONTIC PRESCRIPTION AND CONSULTATION REQUEST

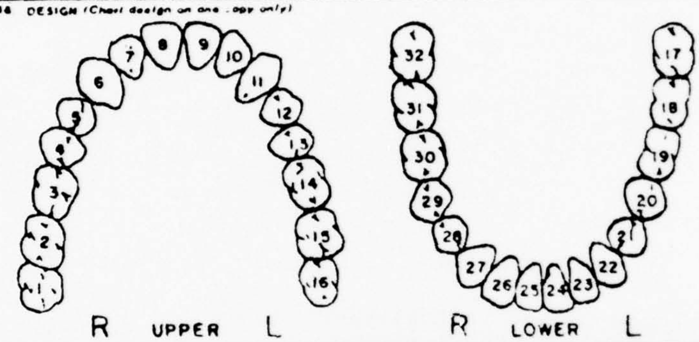
(DA Form 2868)

APPENDIX A

1 RDA NUM
2 TREATMENT FACILITY
3 FACILITY NUMBER
4 PATIENT'S NAME (Last, first, middle initial)
5 GRADE
6 S.S.N.
7 AGE
8 ORGANIZATION
9 LENGTH OF SERVICE
10 DATE INITIATED
11 DATE COMPLETED

PROSTHODONTIC PRESCRIPTION

12 MAXILLARY
13 MANDIBULAR
14 DESIGN (Chart design on one copy only)



TEETH a	MAXILLARY b	MANDIBULAR c
15 SHADE		
16 MOLD ANTERIOR		
17 MOLD POSTERIOR		
18 TYPE ANTERIOR		
19 TYPE POSTERIOR		

REQUEST(S) (Check appropriate box(es))

20 ☐ FRAMEWORK 21 ☐ SET UP 22 ☐ PROCESS 23 ☐ FULLY FABRICATE 24 ☐ CONSULTATION

FOLD HERE

FOR RDA USE ONLY

25 DATE RECEIVED	26 DATE COMPLETED

27 CLINICIAN'S REMARKS

CHECK LIST

OPERATION a	TECHNICIAN b	CHECKED BY c
28 DESIGN		
29 BLOCK OUT		
30 METAL WAX-UP		
31 FINISH (Metal)		
32 SET UP		
33 WAX-UP		
34 FINISH (Plastic)		
35 INLAY(S) OR CROWN(S)		
36 BRIDGES		
37 REPAIR		

TYPED OR PRINTED NAME & GRADE OF DENTAL OFFICER

SIGNATURE OF DENTAL OFFICER

38 FOR RDA USE ONLY

DA FORM 1 OCT 84 2868

REPLACES DA FORM 3747, 1 NOV 55, WHICH IS OBSOLETE

PROSTHODONTIC PRESCRIPTION AND CONSULTATION REQUEST

APPENDIX B

CODING INSTRUCTIONS DA FORM 2868

APPENDIX B

CODING INSTRUCTIONS
DA FORM 2868

DENTAL LABORATORY TECHNICIAN
PRODUCTIVITY STUDY

The DA Form 2868, Prosthodontic Prescription and Consultation Request will serve as the basic data gathering document for this study. Correct completion of this coded material is the most important element in the data gathering process. After coding, the verification should be accomplished by the Installation DDS, or Chief, Prosthodontics. The coded data includes the specific procedure accomplished by the laboratory, the material used, and the number of units of the appliance. This data will be coded in block 38 of the DA Form 2868 as follows:

a. The specific procedure accomplished by the laboratory will be coded using the following two digit codes:

PROCEDURE NUMBER	PROCEDURE	WWU/UNIT VALUES
Ø1	Fully Fabricated Fixed Partial Denture Example: 3 unit porcelain fused to metal FPD Ø14Ø3Ø Example: 3 unit all gold FPD Ø13Ø3Ø	40
Ø2	Casting Only, Fixed Partial Denture Example: 3 unit frame work for a porcelain-to-metal FPD Ø24Ø3Ø	28
Ø3	Veneer Only, Fixed Partial Denture Example: 3 unit frame returns from a metal tryin to be veneered with porcelain Ø32Ø3Ø	18
Ø4	Solder/Repair (Applies only to incoming cases, not routine in-house soldering procedures) Example: A FPD returns from the clinician to have a hole in the occlusal surface soldered and a chip in the porcelain repaired Ø4ØØ2Ø	10

PROCEDURE NUMBER	PROCEDURE	WWU/UNIT VALUES
Ø5	Fully Fabricated Crowns	40
	Example: Porcelain-to-metal crowns for 4 maxillary incisors ØS4Ø4Ø	
Ø6	Casting Only Crowns	28
	Example: Casting for porcelain-to-metal crowns for 4 mandibular anteriors Ø64Ø4Ø	
Ø7	Veneer Only Crowns	18
	Example: 4 castings returned to be veneered with porcelain Ø72Ø4Ø	
Ø8	Glaze	5
	Example: 2 crowns returned to the lab after being contoured in the bisque bake stage by the clinician Ø8ØØ2Ø	
Ø9	Partial Veneer Crowns/Onlays	28
	This procedure covers a variety of partial veneer crowns, 3/4 crowns, 7/8 crowns, onlays, etc.	
1Ø	Casting	10
	This procedure is used only when an invested ring is sent from the station to laboratory for burnout and casting. One unit is counted for each item in the ring, and the total entered in Code Block 15 and 16.	
11	Endo Posts	25
	This procedure is used for endo posts constructed as separate units.	
12	Precision Connector, Fixed Partial Denture	50
	For each precision connector in a FPD, one unit will be entered in Code Blocks 15 and 16	
	Example: An 8 unit maxillary porcelain fused to metal FPD with a stress breaker distal	

PROCEDURE NUMBER	PROCEDURE	WWU/UNIT. VALUES
12 (Con't)	to the cuspid would be entered as two line items Ø14ØØ8Ø 12ØØ1Ø This value will be in addition to the regular value of the FPD	
13	Andrews Bridge To input an Andrews Bridge, two line items will be needed: one for the removable portion (Proc #13), and one for the fixed portion (Proc #Ø1, Ø2, or Ø3) as applicable Example: 3 unit Andrews Bridge with 2 abutments 13ØØ1Ø Ø16Ø3Ø (The Andrews Bar will count as 1 pontic unit)	150
14	Temporary Bridge Former Input into Code Blocks 15 and 16 for this procedure will be 1 for each former made	10
15	Perio Splint, Fixed Splints will be counted as 1 unit for each casting in the splint	40
16	Pour Cast, Fixed One unit will be counted for the cast and one unit for each die pin placed Example: Maxillary 3 unit FPD with 3 die pins placed 16ØØ4Ø	1
17	Impression Tray, Fixed or Removable Any custom tray is included in this procedure	5
18	Articulation, Adjustable One(1) unit will be counted for the entire articulation of casts on an adjustable articulator, Denar, Stewart, etc.	3

PROCEDURE NUMBER	PROCEDURE	WWU/UNIT VALUES
19	Open	
20	Casting Only, Removable Partial Denture Self-explanatory	46
21	Casting and Set-up, Removable Partial Denture Self-explanatory	62
22	Set-up Only, Removable Partial Denture Self-explanatory	15
23	Set-up and Process, Removable Partial Denture Self-explanatory	25
24	Process Only, Removable Partial Denture It is to be understood that this procedure includes the entire finishing and polishing as well as the actual processing.	10
25	Fully Fabricated, Removable Partial Denture *Self-explanatory*	75
26	Transitional, Removable Partial Denture This procedure includes all resin RPD's regardless of whether they have clasps or not	20
27	Repair, Removable Partial Denture One(1) unit will be counted for each partial repair Example: A repair consisting of the addition of a wrought clasp and an additional tooth would be considered two repair units 270020	12
28	Reline & Rebase, Removable Partial Denture Self-explanatory	10
29	Precision Attachment, Removable Partial Denture Self-explanatory	275
30	Swing-Lock, Removable Partial Denture Self-explanatory	225
31	Stressbreaker, Removable Partial Denture Self-explanatory	180

PROCEDURE NUMBER	PROCEDURE	WW UNIT VALUES
32	Bar-Clip, Removable Partial Denture Self-explanatory	120
33	Surgical Splint This procedure includes cast labial arch bars and lingual cast splints. Other more complex surgical aids are to be entered as maxillo-facial appliances Procedure #74	50
34	Altered Cast Tray This procedure will be encoded as one(1) unit for each partial frame with an altered cast tray or trays attached rather than for each edentulous tray area. Example: A mandibular bilateral distal extension with altered cast trays 34ØØ1Ø	5
35	Pour, Altered Cast One(1) unit for the complete cast rather than for each edentulous area	5
36	Pour Cast, Preliminary, Master or Opposing Self-explanatory	1
37	Articulation, Simple This procedure will be encoded as one(1) unit for each case articulated on a simple or laboratory articulator. This procedure is not intended for use at the RDAs.	1
*38-39	Open	
4Ø	Impression Tray, Complete Denture Self-explanatory	5
41	Record Base & Rim, Complete Denture Self-explanatory	5
42	Casting Base, Complete Denture Self-explanatory	25
43	Set-up & Wax-up, Complete Denture Self-explanatory	20

PROCEDURE NUMBER	PROCEDURE	WWU/UNIT VALUES
44	Process & Finish, Complete Denture This procedure will include the final waxing that is necessary before processing.	30
45	Fully Fabricated, Complete Denture Self-explanatory	48
46	Reline/Rebase, Complete Denture Self-explanatory	20
47	Repair, Complete Denture Self-explanatory	8
48	Surgical Template Self-explanatory	7
49	Box & Pour Impression One(1) unit for each impression	5
50	Articulation, Semi-Adjustable One(1) unit will be encoded for each complete articulation on a semi-adjustable articulator. Example: Hanau, Whipmix, etc.	2
*51-59	Open	
60	Orthodontic Tooth Positioner	30
61	Diagnostic Set-up	30
62	Orthodontic Study Models	10
63	Orthodontic Appliance This will encompass any appliance, banded or removable	50
*64-69	Open	
70	Mouthguard, Flexible Self-explanatory	5
71	Mouthguard, Rigid To include such appliances as the SVED bite plane	7

PROCEDURE NUMBER	PROCEDURE	WWU/UNIT VALUES
72	Demonstration Model, Resin Self-explanatory	40
73	Demonstration Model, Stone	2
**74	Maxillo-facial Prostheses	10
	For any max-fac appliance an estimation of the applicable WWU's will be made and entered in the unit columns on the basis of 10 WWU's for each unit Example: A vitallium condylar implant estimated at 300 WWU's 747ØØ	
**75	Special Projects	10
	This procedure also requires the estimation of the total number of work units and their entry on the basis of 10 WWU's for each unit. This procedure covers all miscellaneous research and education projects, as well as those prosthodontic items not covered by any other procedure number	

* Reserved for future use
** The estimations for the WWU's for Procedures 74 and 75 should be based on time, material and expertise in relation to those required for a fully fabricated crown or removable partial denture

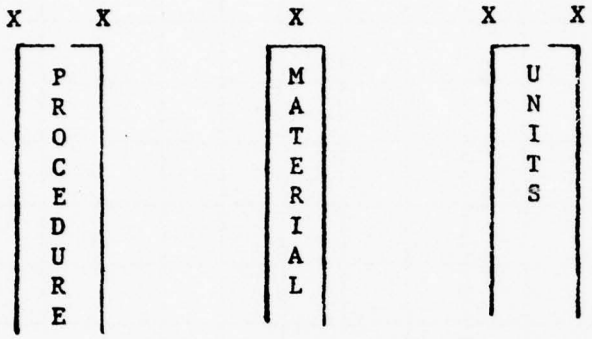
b. Next code the material used. This will be a one digit figure using the code below:

MATERIAL

0	Open/no material code
1	Resin
2	Porcelain
3	Regular gold (I-IV)
4	White Ceramic Gold
5	Yellow Ceramic Gold
6	Combination Metal
7	Non-Precious Metal
8	Open
9	Open

c. Code the number of units of the appliance identified in paragraph *a.* above. This is the most critical area since the weighted work units are compiled from this entry. This code requires a two digit number. The five digit code in block 38 of the DA 2868 will now appear

as follows:



Care will be taken to insure that blocks 10, Date Initiated, and block 11, Date Completed, are completed as this data is required for later posting. For the purpose of this survey all procedures that are completed during the survey period will be coded and recorded even though they may have been started prior to the period.

PRODUCTIVITY OF USAMEDD LABORATORY TECHNICIAN - DAILY WORKSHEET PAGE__OF__

DATE						RDA	STATION CODES				PROCEDURE		MAT	UNITS		ARCH	TIME IN LAB		RESERVED FOR FUTURE USE							CD TYPE
YEAR		MO		DAY																						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	30
																LEAVE BLANK										A

APPENDIX C

CODING INSTRUCTIONS
CARD A

APPENDIX C

CODING INSTRUCTIONS
CARD A

DENTAL LABORATORY TECHNICIAN
PRODUCTIVITY STUDY

1. Coded data from block 38 of the DA Form 2868 will be posted daily to a keypunch worksheet by the clinic NCO.

2. Coding instructions are as follows:

a. DATE (1-6).

(1)	Code Block 1 and 2	Enter last 2 digits of the calendar year.
(2)	Code Block 3 and 4	Enter 2 digits to describe current month.
(3)	Code Block 5 and 6	Enter 2 digits to describe the day on which procedures were completed.

EXAMPLE: 5 April 1976

1	2	3	4	5	6
7	6	Ø	4	Ø	5

b. STATION INPUT (7). Pre-Completed.

c. STATION CODES (8-11). Pre-Completed.

d. PROCEDURE (12-13), MATERIAL (14), UNITS (15-16). Copy from the coded data in block 38, DA 2868, see inclosure 2 for more detailed instructions.

e. ARCH (17). Leave blank.

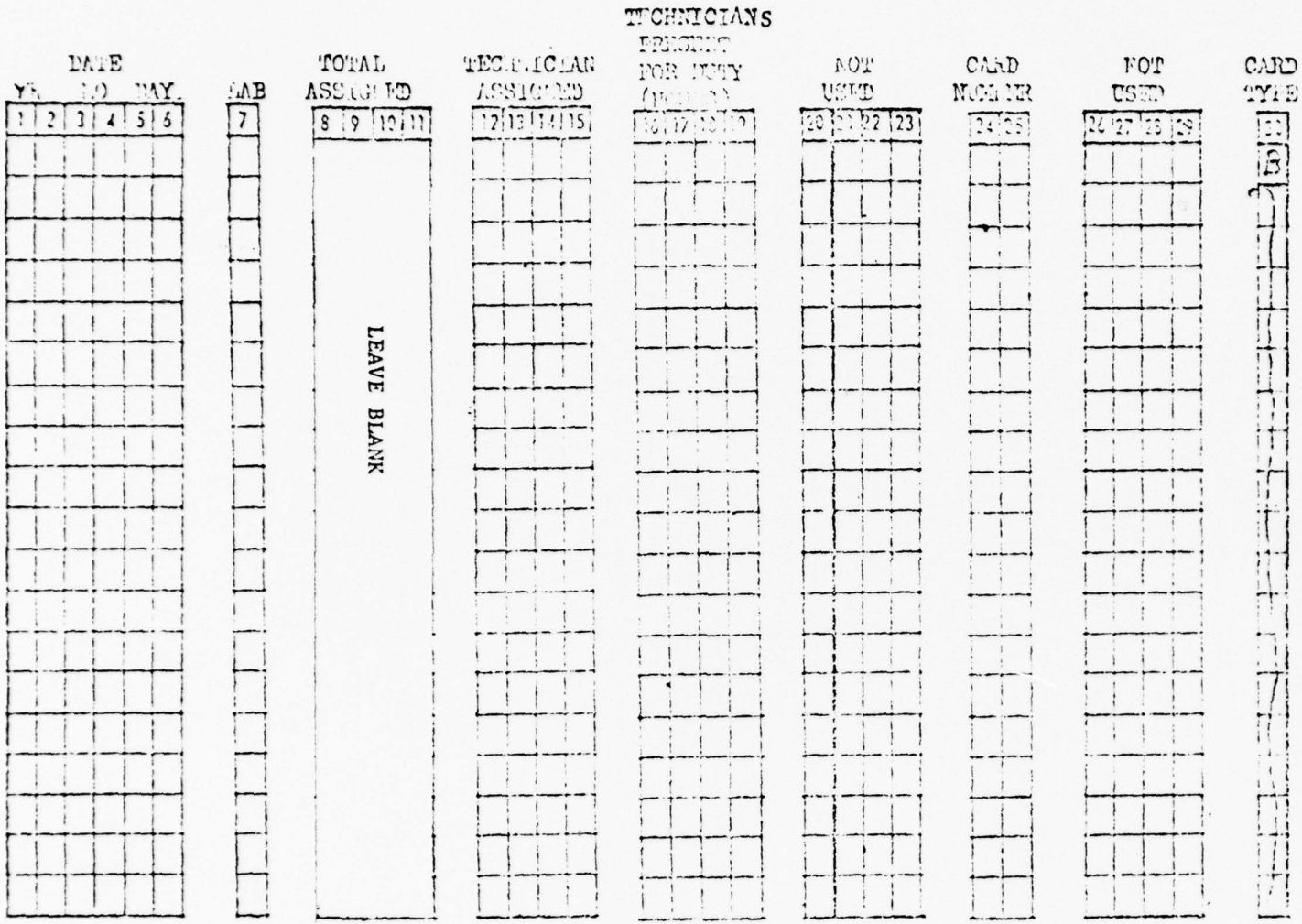
f. TIME IN LAB (18-19). In code blocks 18 and 19 the full days the unit(s) were actually in the laboratory to include weekends and holidays are entered. This can be calculated from blocks 10 and 11, DA Form 2868. The day the case leaves the laboratory will NOT be counted as a day in the laboratory.

EXAMPLE: A case arrives on 5 April and leaves on 13 April.
13 - 5 = 8 days in lab

g. COLUMNS (20-29). May be left blank.

h. CARD TYPE (30). Pre-completed.

3. Completed forms will be returned daily, in the envelopes provided, to the Regional Dental Laboratory, Ft Sam Houston, Texas.


DATE
YR.
MO.
DAY.
1 2 3 4 5 6
LAB
7
TOTAL ASSIGNED
8 9 10 11
LEAVE BLANK
TECHNICIAN ASSIGNED
12 13 14 15
TECHNICIANS REQUIRED FOR DUTY (NUMBER)
16 17 18 19
NOT USED
20 21 22 23
CARD NUMBER
24 25
NOT USED
26 27 28 29
CARD TYPE
30

APPENDIX D

CODING INSTRUCTIONS
CARD B

APPENDIX D

CODING INSTRUCTIONS
CARD B

TECHNICIANS PRESENT FOR DUTY
DENTAL LABORATORY TECHNICIAN PRODUCTIVITY STUDY

1. Coding worksheet B provides personnel assignment and utilization data. The card will be completed on a daily basis by the Dental Clinic NCO.

2. Coding instructions are as follow:

a. DATE (1-6). Follow same procedure as block 1 through 6 on Card A.

b. STATION INPUT (7). Pre-completed.

c. TOTAL ASSIGNED (8-11). Leave blank.

d. TECHNICIANS ASSIGNED (12-15). This will include all military personnel with MOS 42D or 42F, and all civilians with the GS-683 job series assigned on that particular day, even though they may work in administration, supply, or elsewhere.

e. TECHNICIAN HOURS PRESENT FOR DUTY (16-19). The total direct hours available for work by the number of technicians entered in blocks 12-15 for that particular day will be entered. Direct hours are defined as productive labor related to a service performed or a unit of work.

(1) Direct hours DO NOT include:

(a) Annual leave

(b) TDY

(c) Sick leave

(d) Excused absence

(e) Military training

(f) Personnel processing

(g) Formal technical training

(h) Administrative meetings

(i) Medical and Dental appointments

(j) Absences of more than 15 minutes for any reason.

(2) Direct hours DO include:

(a) Breaks

(b) Absences of less than 15 minutes

(3) It is intended that this data accurately reflect those actual hours available to perform dental laboratory procedures.

f. NOT USED (20-23). Leave these columns blank.

g. CARD NUMBER (24-25). Indicates the number of working days in the month by numbering sequentially for each production day.

h. NOT USED (26-29). Leave these columns blank.

i. CARD TYPE (30). Pre-completed, will always be B.

PRODUCTIVITY OF USAMEDD LABORATORY TECHNICIANS

CASES REMAINING

YR	MO	DAY	LAB	FIXED PROSTH	REMOVABLE PROSTH	ORTHODONTICS	OTHER	NOT USED	CARD TYPE
1 2	3 4	5 6	7	8 9 10 11	12 13 14 15	16 17 18 19	20 21 22 23	24 25 26 27 28 29	30
									2

Complete at the close of business the day preceding the first day of the sample period and mail with your first day's submission.

CASES REMAINING

YR	MO	DAY	LAB	FIXED PROSTH	REMOVABLE PROSTH	ORTHODONTICS	OTHER	NOT USED	CARD TYPE
1 2	3 4	5 6	7	8 9 10 11	12 13 14 15	16 17 18 19	20 21 22 23	24 25 26 27 28 29	30
									2

Complete at the close of the last day of the test period and mail with the last day's submission.

APPENDIX E

CODING INSTRUCTIONS
CASES REMAINING (CARD C)

APPENDIX E

CODING INSTRUCTIONS
CASES REMAINING (CARD C)

DENTAL LABORATORY TECHNICIAN PRODUCTIVITY STUDY

Card C provides data on the work remaining in the laboratory as of the last day of the period. For the study period, two cards C, will be required. One, as of the close of business the day before the test period begins, and the second, at the close of business on the last working day of the test period.

a. DATE (1-6). Instructions as shown for CARD A.

b. STATION (7). Pre-completed.

c. FIXED PROSTHODONTICS (8-11). Will be counted in units and will reflect procedures Ø1 through 19.

d. REMOVABLE PROSTHODONTICS (12-15). Will be counted in units (arches) and will reflect those procedures 2Ø through 5Ø.

e. ORTHODONTICS (16-19). Will be counted in units and will reflect procedures 6Ø through 63.

f. Other (2Ø-23). Will be counted in units, appliances, or projects as applicable and will reflect procedures 7Ø through 75.

APPENDIX F

LABORATORY INPUT LOG
DENTAL LABORATORY TECHNICIAN PRODUCTIVITY STUDY

APPENDIX F

LABORATORY INPUT LOG
DENTAL LABORATORY TECHNICIAN PRODUCTIVITY STUDY

DENTAL ACTIVITY _____

(NOTE: Please identify procedures utilizing the procedure titles listed in Appendix B)

DATE	PROCEDURE REQUIRED

APPENDIX G

CONSOLIDATED PRODUCTION ANALYSIS REPORT

PREPARED 11/23/76

CONSOLIDATED PRODUCTION ANALYSIS REPORT
POST DENTAL LABORATORIES REPORTING PERIOD 01 OCT 76 THRU 31 OCT 76
US ARMY HEALTH SERVICES COMMAND

PCN 050LS1

BY WEIGHTED WORK UNITS

	PROCEDURES	* TOTAL *	PERCENT
FIXED PROSTHODONTICS	01 THRU 19	15,130	46.19
PARTIAL DENTURES	01 THRU 03	3,832	11.70
CROWNS	05 THRU 07	7,308	22.31
REMOVABLE PROSTHODONTICS	20 THRU 59	13,724	41.90
PARTIAL DENTURES	20 THRU 39	7,002	21.38
COMPLETE DENTURES	40 THRU 59	6,722	20.52
ORTHODONTICS	60 THRU 69	3,300	10.08
OTHER/MISC	70 THRU 75	600	1.83
OVERALL FOR THIS PERIOD		32,754	

48

BY MAJOR DENTAL PROSTHESES

	PROCEDURES	TOTAL UNITS/APPLIANCES
FIXED PROSTHODONTICS		
PARTIAL DENTURES	01 AND 02	25
CROWNS	05 AND 06	210 UNITS
REMOVABLE PROSTHODONTICS		
PARTIAL DENTURES	20 AND 25	4
COMPLETE DENTURES	43 AND 45	93
ORTHODONTICS	60 THRU 69	94
MAXILLOFACIAL PROSTHESES	74	0

CASES ON HAND LAST DAY OF MONTH

FIXED PROSTHESES/UNITS	4,464	REMOVABLE PROSTHESES	970	ORTHODONTICS	155	OTHER/MISC	4

PREPARED 11/23/76

CONSOLIDATED PRODUCTION ANALYSIS REPORT
POST DENTAL LABORATORIES REPORTING PERIOD 01 OCT 76 THRU 31 OCT 76
US ARMY HEALTH SERVICES COMMAND

PCN 050LS1

MONTHLY AVERAGE OF TIME IN LAB

PROCEDURE	** T I T L E O F P R O C E D U R E **	AVERAGE DAYS
01	FULLY FABRICATED FIXED PARTIAL DENTURE	7
05	FULLY FABRICATED CROWNS	6
20	CASTING ONLY REMOVABLE PARTIAL DENTURE	0
25	FULLY FABRICATED REMOVABLE PARTIAL DENTURE	2
43	SET-UP AND WAX-UP COMPLETE DENTURE	3

AVERAGE DAILY WEIGHTED WORK UNITS

TOTAL WEIGHTED WORK UNITS FOR THIS MONTH	TOTAL DAYS THIS MONTH	AVERAGE DAILY WEIGHTED WORK UNITS
32,754	31	1,057

BY WEIGHTED WORK UNITS BY SERVICE

* TOTAL *	PERCENT	* TOTAL *	PERCENT	* TOTAL *	PERCENT	* TOTAL *	PERCENT
ARMY 32,754	100.00	NAVY 0	0.00	AIR FORCE 0	0.00	US PHS 0	0.00

BY MAJOR DENTAL PROSTHESES BY SERVICE

	PROCEDURES	TOTAL APPLIANCES/ OR UNITS ARMY	TOTAL APPLIANCES/ OR UNITS NAVY	TOTAL APPLIANCES/ OR UNITS AIR FORCE	TOTAL APPLIANCES/ OR UNITS US PHS
FIXED PROSTHODONTICS					
PARTIAL DENTURES	01 AND 02	25	0	0	0
CROWNS	05 AND 06	210 UNITS	0 UNITS	0 UNITS	0 UNITS
REMOVABLE PROSTHODONTICS					
PARTIAL DENTURES	20 AND 25	4 UNITS	0 UNITS	0 UNITS	0 UNITS
COMPLETE DENTURES	43 AND 45	93 UNITS	0 UNITS	0 UNITS	0 UNITS

AVERAGE DAILY STRENGTH AND PRODUCTIVITY DATA

AVERAGE DAILY TOTAL ASSIGNED STRENGTH	48.37
AVERAGE DAILY NUMBER OF TECHNICIANS ASSIGNED	48.37
AVERAGE DAILY TECHNICIAN HOURS PRESENT FOR DUTY	205.89
AVERAGE DAILY WEIGHTED WORK UNITS PER ASSIGNED INDIVIDUAL	21.85
AVERAGE DAILY WEIGHTED WORK UNITS PER ASSIGNED TECHNICIAN	21.85
AVERAGE WEIGHTED WORK UNITS PER TECHNICIAN HOUR	8.37

BY ARCH POSITION

PROCEDURE	** TITLE OF PROCEDURE **	** ARCH POSITION **	UNIT TOTAL
01	FULLY FABRICATED FIXED PARTIAL DENTURE	MAXILLARY ANTERIOR	0
		MAXILLARY POSTERIOR	0
		MAXILLARY COMBINATION	0
		MANDIBULAR ANTERIOR	0
		MANDIBULAR POSTERIOR	0
		MANDIBULAR COMBINATION	0
02	CASTING ONLY FIXED PARTIAL DENTURE	MAXILLARY ANTERIOR	0
		MAXILLARY POSTERIOR	0
		MAXILLARY COMBINATION	0
		MANDIBULAR ANTERIOR	0
		MANDIBULAR POSTERIOR	0
		MANDIBULAR COMBINATION	0
05	FULLY FABRICATED CROWNS	MAXILLARY ANTERIOR	0
		MAXILLARY POSTERIOR	0
		MAXILLARY COMBINATION	0
		MANDIBULAR ANTERIOR	0
		MANDIBULAR POSTERIOR	0
		MANDIBULAR COMBINATION	0
20	CASTING ONLY REMOVABLE PARTIAL DENTURE	MAXILLARY ANTERIOR	0
		MAXILLARY POSTERIOR	0
		MAXILLARY COMBINATION	0
		MANDIBULAR ANTERIOR	0
		MANDIBULAR POSTERIOR	0
		MANDIBULAR COMBINATION	0

25	FULLY FABRICATED REMOVABLE PARTIAL DENTURE	MAXILLARY ANTERIOR	0
		MAXILLARY POSTERIOR	0
		MAXILLARY COMBINATION	0
		MANDIBULAR ANTERIOR	0
		MANDIBULAR POSTERIOR	0
		MANDIBULAR COMBINATION	0

APPENDIX H

PRODUCTION ANALYSIS REPORT

PREPARED 11/23/76 PRODUCTION ANALYSIS REPORT PCN 040LS1

POST DENTAL LABORATORY REPORTING PERIOD 01 SEP 76 THRU 30 SEP 76

DENTAL SERVICES, FT. ORD, CA

BY WEIGHTED WORK UNITS

	PROCEDURES	* TOTAL *	PERCENT
FIXED PROSTHODONTICS	01 THRU 19	5,120	55.64
PARTIAL DENTURES	01 THRU 03	2,636	28.65
CROWNS	05 THRU 07	1,028	11.17
REMOVABLE PROSTHODONTICS	20 THRU 59	3,656	39.73
PARTIAL DENTURES	20 THRU 39	2,200	23.91
COMPLETE DENTURES	40 THRU 59	1,456	15.82
ORTHODONTICS	60 THRU 69	250	2.72
OTHER/MISC	70 THRU 75	176	1.91
OVERALL FOR THIS PERIOD		9,202	

53

BY MAJOR DENTAL PROSTHESES

	PROCEDURES	TOTAL UNITS/APPLIANCES
FIXED PROSTHODONTICS		
PARTIAL DENTURES	01 AND 02	16
CROWNS	05 AND 06	26 UNITS
REMOVABLE PROSTHODONTICS		
PARTIAL DENTURES	20 AND 25	0
COMPLETE DENTURES	43 AND 45	22
ORTHODONTICS	60 THRU 69	5
MAXILLOFACIAL PROSTHESES	74	0

CASES ON HAND LAST DAY OF MONTH

FIXED PROSTHESES/UNITS 3,575 REMOVABLE PROSTHESES 385 ORTHODONTICS 100 OTHER/MISC 0

PREPARED 11/23/76 PRODUCTION ANALYSIS REPORT PCN 040LS1

POST DENTAL LABORATORY REPORTING PERIOD 01 SEP 76 THRU 30 SEP 76

DENTAL SERVICES, FT. ORD, CA

MONTHLY AVERAGE OF TIME IN LAB

PROCEDURE	** TITLE OF PROCEDURE **	AVERAGE DAYS
01	FULLY FABRICATED FIXED PARTIAL DENTURE	8
05	FULLY FABRICATED CROWNS	5
20	CASTING ONLY REMOVABLE PARTIAL DENTURE	0
25	FULLY FABRICATED REMOVABLE PARTIAL DENTURE	0
43	SET-UP AND WAX-UP COMPLETE DENTURE	2

AVERAGE DAILY WEIGHTED WORK UNITS

TOTAL WEIGHTED WORK UNITS FOR THIS MONTH	TOTAL DAYS THIS MONTH	AVERAGE DAILY WEIGHTED WORK UNITS
9,202	30	307

BY WEIGHTED WORK UNITS BY SERVICE

* TOTAL *	PERCENT	* TOTAL *	PERCENT	* TOTAL *	PERCENT	* TOTAL *	PERCENT
ARMY 9,202	100.00	NAVY 0	0.00	AIR FORCE 0	0.00	US PHS 0	0.00

BY MAJOR DENTAL PROSTHESES BY SERVICE

	PROCEDURES	TOTAL APPLIANCES/ OR UNITS ARMY	TOTAL APPLIANCES/ OR UNITS NAVY	TOTAL APPLIANCES/ OR UNITS AIR FORCE	TOTAL APPLIANCES/ OR UNITS US PHS
FIXED PROSTHODONTICS					
PARTIAL DENTURES	01 AND 02	16	0	0	0
CROWNS	05 AND 06	26 UNITS	0 UNITS	0 UNITS	0 UNITS
REMOVABLE PROSTHODONTICS					
PARTIAL DENTURES	20 AND 25	0 UNITS	0 UNITS	0 UNITS	0 UNITS
COMPLETE DENTURES	43 AND 45	22 UNITS	0 UNITS	0 UNITS	0 UNITS

PREPARED 11/23/76 PRODUCTION ANALYSIS REPORT PCN 04DLS1

POST DENTAL LABORATORY REPORTING PERIOD 01 SEP 76 THRU 30 SEP 76

DENTAL SERVICES, FT. ORD, CA

AVERAGE DAILY STRENGTH AND PRODUCTIVITY DATA

AVERAGE DAILY TOTAL ASSIGNED STRENGTH	17.00
AVERAGE DAILY NUMBER OF TECHNICIANS ASSIGNED	17.00
AVERAGE DAILY TECHNICIAN HOURS PRESENT FOR DUTY	65.53
AVERAGE DAILY WEIGHTED WORK UNITS PER ASSIGNED INDIVIDUAL	18.06
AVERAGE DAILY WEIGHTED WORK UNITS PER ASSIGNED TECHNICIAN	18.06
AVERAGE WEIGHTED WORK UNITS PER TECHNICIAN HOUR	7.39

BY ARCH POSITION

PROCEDURE	** TITLE OF PROCEDURE **	** ARCH POSITION **	UNIT TOTAL
01	FULLY FABRICATED FIXED PARTIAL DENTURE	MAXILLARY ANTERIOR	0
		MAXILLARY POSTERIOR	0
		MAXILLARY COMBINATION	0
		MANDIBULAR ANTERIOR	0
		MANDIBULAR POSTERIOR	0
		MANDIBULAR COMBINATION	0
02	CASTING ONLY FIXED PARTIAL DENTURE	MAXILLARY ANTERIOR	0
		MAXILLARY POSTERIOR	0
		MAXILLARY COMBINATION	0
		MANDIBULAR ANTERIOR	0
		MANDIBULAR POSTERIOR	0
		MANDIBULAR COMBINATION	0
05	FULLY FABRICATED CROWNS	MAXILLARY ANTERIOR	0
		MAXILLARY POSTERIOR	0
		MAXILLARY COMBINATION	0
		MANDIBULAR ANTERIOR	0
		MANDIBULAR POSTERIOR	0
		MANDIBULAR COMBINATION	0
20	CASTING ONLY REMOVABLE PARTIAL DENTURE	MAXILLARY ANTERIOR	0
		MAXILLARY POSTERIOR	0
		MAXILLARY COMBINATION	0
		MANDIBULAR ANTERIOR	0
		MANDIBULAR POSTERIOR	0
		MANDIBULAR COMBINATION	0

25	FULLY FABRICATED REMOVABLE PARTIAL DENTURE	MAXILLARY ANTERIOR	0
		MAXILLARY POSTERIOR	0
		MAXILLARY COMBINATION	0
		MANDIBULAR ANTERIOR	0
		MANDIBULAR POSTERIOR	0
		MANDIBULAR COMBINATION	0

APPENDIX I

PROCEDURE REPORT

PREPARED 11/23/76

PROCEDURE REPORT

PCN 060LS1

POST DENTAL LABORATORY REPORTING PERIOD 01 OCT 76 THRU 31 OCT 76

DENTAL SERVICES, FT. ORD, CA

PROCEDURE	TITLE OF PROCEDURE	TYPE OF MATERIAL		UNITS	APPLICATIONS	W.H.U.	DAYS
01	FULLY FABRICATED FIXED PARTIAL DENTURE	PORCELAIN		3	2	240	8
				4	1	160	9
				6	1	240	8
				9	1	360	9
			TOTAL		5	1,000	8
		REGULAR GOLD (I-IV)		4	2	320	9
			TOTAL		2	320	9
		WHITE CERAMIC GOLD		3	1	120	5
			TOTAL		1	120	5
		YELLOW CERAMIC GOLD		2	1	90	6
				4	2	320	6
				6	1	240	8
			TOTAL		4	640	6
			PROCEDURE TOTAL		12	2,080	8
02	CASTING ONLY FIXED PARTIAL DENTURE	YELLOW CERAMIC GOLD		3	2	168	5
				4	1	112	5
			TOTAL		3	280	5
		NON PRECIOUS METAL		6	1	168	3
			TOTAL		1	168	3
			PROCEDURE TOTAL		4	448	4
03	VENEER ONLY FIXED PARTIAL DENTURE		TOTAL	6		108	4
04	SOLDER/REPAIR		TOTAL	13		130	1
05	FULLY FABRICATED CROWNS	PORCELAIN	TOTAL	4		160	5
		REGULAR GOLD (I-IV)	TOTAL	16		640	6
		YELLOW CERAMIC GOLD	TOTAL	5		200	5
			PROCEDURE TOTAL	25		1,000	5
06	CASTINGS ONLY CROWNS	REGULAR GOLD (I-IV)	TOTAL	1		28	5
			PROCEDURE TOTAL	1		28	5

PREPARED 11/23/76 PROCEDURE REPORT PCN 06DLS1

POST DENTAL LABORATORY REPORTING PERIOD 01 OCT 76 THRU 31 OCT 76

DENTAL SERVICES, FT. ORD, CA

PROCEDURE	TITLE OF PROCEDURE	TYPE OF MATERIAL		UNITS	APPLICATIONS	W.W.U.	DAYS
08	GLAZE		TOTAL	5		25	1
09	INLAYS		TOTAL	4		112	5
11	ENDO POSTS		TOTAL	32		900	3
16	POUR CAST, FIXED	MATERIAL UNSPECIFIED	TOTAL	176		176	1
		PROCEDURE	TOTAL	176		176	1
17	IMPRESSION TRAY, FIXED OR REMOVABLE	MATERIAL UNSPECIFIED	TOTAL	21		105	1
		RESIN	TOTAL	21		105	2
		PROCEDURE	TOTAL	42		210	2
18	ARTICULATION, ADJUSTABLE	MATERIAL UNSPECIFIED	TOTAL	1		3	1
		PROCEDURE	TOTAL	1		3	1
22	SET-UP ONLY REMOVABLE PARTIAL DENTURES		TOTAL	8		120	2
23	SET-UP AND PROCESS REMOVABLE PARTIAL DEN		TOTAL	11		275	2
24	PROCESS ONLY REMOVABLE PARTIAL DENTURE		TOTAL	9		90	2
26	TRANSITIONAL PARTIAL DENTURE		TOTAL	37		740	3
27	REPAIR REMOVABLE PARTIAL DENTURE		TOTAL	32		384	1
28	RELINE AND REBASE REMOVABLE PARTIAL DEN		TOTAL	3		30	1
33	SURGICAL SPLINT		TOTAL	4		200	4
34	ALTERED CAST TRAY		TOTAL	1		5	1
35	POUR, ALTERED CAST		TOTAL	1		5	1
36	POUR CAST, REMOVABLE		TOTAL	328		328	1
37	ARTICULATION, SIMPLE		TOTAL	23		23	1
40	IMPRESSION TRAY COMPLETE DENTURE		TOTAL	20		100	2

PREPARED 11/23/76 PROCEDURE REPORT PCN 060LS1

POST DENTAL LABORATORY REPORTING PERIOD 01 OCT 76 THRU 31 OCT 76

DENTAL SERVICES, FT. ORD, CA

PROCEDURE	T I T L E O F P R O C E D U R E	TYPE OF MATERIAL	UNITS	APPLICATIONS	W.H.U.	DAYS
41	RECORD BASE AND RIM COMPLETE DENTURE	TOTAL	19		95	2
43	SET-UP AND WAX-UP COMPLETE DENTURE	TOTAL	19		380	2
44	PROCESS AND FINISH COMPLETE DENTURE	TOTAL	11		330	2
45	FULLY FABRICATED COMPLETE DENTURE	TOTAL	3		144	2
46	RELINE/REBASE COMPLETE DENTURE	TOTAL	8		160	1
47	REPAIR COMPLETE DENTURE	TOTAL	6		48	1
48	SURGICAL TEMPLATE	TOTAL	2		14	2
49	BOX AND POUR IMPRESSION	TOTAL	31		155	1
50	ARTICULATION, SEMI-ADJUSTABLE	TOTAL	15		30	1
63	ORTHODONTIC APPLIANCE	TOTAL	5		250	4
70	MOUTHGUARD FLEXIBLE	TOTAL	4		20	1
71	MOUTHGUARD RIGID	TOTAL	2		14	1
72	DEMONSTRATION MODELS RESIN	TOTAL	2		80	1
73	DEMONSTRATION MODELS STONE	TOTAL	16		32	1
75	SPECIAL PROJECTS		3	1	30	1
		PROCEDURE TOTAL		1	30	1
	MISCELLANEOUS DATA TOTAL 0	GRAND TOTAL	925	17	9,202	

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