



DoD SPACE PLANNING CRITERIA

CHAPTER 320: DENTAL CLINIC

JULY 1, 2017

Originating Component: Defense Health Agency Facilities Division

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Purpose: This issuance: To provide space planning criteria guidance in support of planning, programming and budgeting for DoD Military Health System (MHS) facilities.

SUMMARY of CHANGE

This revision, dated July 1, 2017 includes the following:

- On page 17, section 4.5. FA5: DENTAL LABORATORIES, room 2, Laboratory Basic Service, Dental Prosthodontics (DNPL2), changed the room code to “(DNPL1)”.
- On page 24, Section 6: FUNCTIONAL RELATIONSHIPS added a narrative that reads “The Dental Clinic will rely on a number of other services in a Military Treatment Facility (MTF) for patient care and support functions. The diagram below represents desirable relationships based on efficiency and functional considerations.”
- On page 25, section 7.1. FUNCTIONAL DIAGRAM added a narrative the reads” The diagram below illustrates intradepartmental relationships among key areas / spaces within the Dental Clinic. The diagram is necessarily generic. The planner shall use this as a basis for design only and shall consider project-specific requirements for each Military Treatment Facility.”

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SECTION 1: PURPOSE AND SCOPE

1.1. PURPOSE AND SCOPE This chapter outlines space planning criteria for services and programs provided in the Dental Clinic located within the Military Health System (MHS). More specifically, the Dental Clinic chapter covers the departments of General Dentistry, Dental Surgery, Dental Specialties and Dental Radiography.

Dental Clinics may be located in outpatient clinics, which include freestanding community-based facilities, as well as ambulatory clinics in or directly adjacent to hospital-based services. Dental clinics that support Oral Maxillofacial surgery departments and/or residency programs must be incorporated within hospitals; planners shall incorporate the Oral Maxillofacial workload in the calculation of the number of Operating Rooms (ORs) in 440: Surgical Services. Surgical dentoalveolar procedures performed without general anesthesia are referred to as “oral surgery” and can be accommodated in an outpatient Dental Clinic.

The minimum sized Dental Clinic will include the following four Dental Treatment Rooms:

- A. Two General Dentistry Treatment Rooms
- B. One Comprehensive Dentistry Treatment Room
- C. One Prosthodontic Treatment Room

To accommodate Graduate Dental Education programs, one Dental Treatment Room corresponding to the Resident type shall be programmed for each Resident FTE.

The space planning criteria in this chapter apply to all Military Medical Treatment Facilities (MTFs). Policies and directives, DoD’s Subject Matter Experts (SMEs), established and/or anticipated best practice guidelines / standards, and the Defense Health Agency (DHA) provides the foundation for the workload based space criteria and Net Square Footages (NSF) for each space. The latest version of DoD UFC 4-510-01, Appendix B cites all Room Codes identified in this chapter.

SECTION 2: OPERATING RATIONALE AND BASIS OF CRITERIA

2.1. OPERATING RATIONALE AND BASIS OF CRITERIA.

A. Workload projections and planned services / modalities for a specific MHS facility project shall be sought by the planner in order to develop a project based on these criteria. Healthcare and clinical planners working on military hospitals, medical centers, medical clinics and dental clinics shall utilize and apply the workload based criteria set forth herein for identified services and modalities to determine space requirements for the project.

B. Space planning criteria have been developed on the basis of an understanding of the activities involved in the functional areas required for the dental clinic and its relationship with other services of a medical facility. These criteria are predicated on established and/or anticipated best practice standards, as adapted to provide environments supporting the highest quality healthcare for service members and their dependents.

C. These criteria are subject to modification relative to equipment, medical / dental practice, vendor requirements, and subsequent planning and design. The final selection of the size and type of medical / dental equipment is determined during the design process.

D. The area for each room (NSF) in this chapter has been provided by the MHS Space Template Board.

E. The calculation of the total number of dental chairs for each specialty in a project is based on two parameters:

1. The projected number of annual “Seatings” (see Glossary: Definitions) by specialty, and
2. The dental chair annual seating throughput.

This methodology applies to the following specialties covered in this document:

1. General Dentistry
2. Dental Hygiene
3. Prosthodontics
4. Endodontics
5. Periodontics
6. Orthodontics
7. Oral Surgery
8. Extraoral Panoramic / Cephalometric Radiography

F. The determination of the dental chair annual seating throughput for a specialty is based on the following parameters:

$$\frac{(\text{Operating Days per year})(\text{Hours of Operation per Day})}{\frac{\text{Average Length of Encounter (ALOE) in Minutes}}{60 \text{ Minutes}}} (\text{Utilization Factor})$$

Fixed Values:

1. Operating Days per Year: 240
2. Hours of Operation per Day: 8
3. Utilization Factor: 80%

Variable:

1. Average Length of Seating (ALOS), based on DoD Dental Subject Matter Experts (SME) input for each specialty.

Example: General Dentistry Chair Annual throughput calculation:

Variable:

1. Average Length of Seating (ALOS) for a General Dentistry Chair: 75 Minutes

$$\frac{(240)(8)}{75 \div 60} (0.80) = 1,228 \text{ annual Seatings per Year}$$

The General Dentistry Chair annual throughput (capacity) is 1,228 seatings. The minimum Annual Workload to generate an additional General Dentistry Chair is 20% of this value, 246 seatings. Refer to Table 1 for the annual throughput for each specialty chair.

G. The total number of dental chairs by specialty for a project is obtained by dividing the projected workload for the specialty by the specialty's chair annual throughput determined in this document. This is expressed in the Room Criteria Statement (RCS) for each one of the Dental Treatment Rooms (DTRs) in Section 5.

H. A dental chair is generally allocated to one DTR; however, planner / designer can place more than one dental chair in a multi-chair DTR. The remaining dental spaces are calculated based on these resulting values or based on answers to Mission, Staffing and Miscellaneous Input Data Statements.

The minimum number of dental chairs generated for a project, regardless of the projected workload, is four:

1. Two General Dentistry
2. One Comprehensive Dentistry

3. One Prosthodontics

These three types of DTRs can be utilized by General Dentists and Comprehensive Dentists. Additional chairs for these dentists, as well as for the other specialty Dentists are generated based on the workload parameters in Table 1 below and the projected annual workload for each specialty.

I. Section 4: Input Data Statements and Section 5: Space Planning Criteria have been implemented and tested in SEPS.

J. Workload based dental chair calculation examples:

1. Room Criteria Statement (Room 1):

Minimum two; provide an additional one for every increment of 1,228 projected annual General Dentistry seatings greater than 2,456; the minimum workload to generate an additional General Dentistry Dental Treatment Chair is 246 (refer to Section 3); provide an additional one per each General Dentistry Resident / Student FTE position authorized.

1. Input Data Statement 1, Answer 1:

How many annual General Dentistry seatings are projected? (W)= 4,700

Step 1: Subtract 2,456 (2 x 1,228) from the projected annual seatings to account for the “Minimum two” condition.

$$4,700 - 2,456 = 2,244$$

Two chairs generated

Step 2: Divide the resulting value by the increment.

$$\frac{2,244}{1,228} = 1.83$$

One additional chair generated

Step 3: Multiply the whole value (“1” in the previous step) by the increment.

$$(1)(1,228) = 1,228$$

Step 4: Subtract Step 3 from Step 1.

$$2,244 - 1,228 = 1,016$$

Step 5: Compare the resulting Step 4 value with the “minimum workload to generate an additional chair” value; if higher, provide an additional chair.

$$1,016 > 246$$

One additional chair generated

The total number of General Dentistry chairs generated by 4,700 annual General Dentistry seatings is 4.

2. Input Data Statement 1, Answer 2:

How many annual General Dentistry seatings are projected? (W) = 15,000

Step 1: Subtract 2,456 (2 x 1,228) from the projected annual seatings to account for the “Minimum two” condition.

$$15,000 - 2,456 = 12,544$$

Two chairs generated

Step 2: Divide the resulting value by the increment.

$$\frac{12,544}{1,228} = 10.21$$

Ten additional chairs generated

Step 3: Multiply the whole value (“10” in the previous step) by the increment.

$$(10)(1,228) = 12,280$$

Step 4: Subtract Step 3 from Step 1.

$$12,544 - 12,280 = 264$$

Step 5: Compare the resulting Step 4 value with the “minimum workload to generate an additional chair” value; if higher, provide an additional chair.

$$264 > 246$$

One additional chair generated

Total number of r General Dentistry chairs generated by 15,000 annual General Dentistry seatings is 13.

1. Room Criteria Statement (Room 2):

Provide one if the projected annual Endodontics seatings is between 230 and 1,152; provide an additional one for every increment of 1,152 projected annual Endodontics seatings greater

than 1,152; the minimum workload to generate an additional Endodontics Dental Treatment Room is 230 (refer to Section 3); provide an additional one per each Endodontics Resident / Student FTE position authorized.

a. Input Data Statement 2, Answer 1:

How many annual Endodontics seatings are projected? (W) = 5,850

Step 1: Subtract 1,152 (one increment) from the projected annual seatings.

$$5,850 - 1,152 = 4,698$$

One chair generated

Step 2: Divide the resulting value by the increment.

$$\frac{4,698}{1,152} = 4.08$$

Four additional chairs generated

Step 3: Multiply the whole value (“4” in the previous step) by the increment.

$$(4)(1,152) = 4,608$$

Step 4: Subtract Step 3 from Step 1.

$$4,698 - 4,608 = 90$$

Step 5: Compare the resulting Step 4 value with the “minimum workload to generate an additional chair” value; if higher, provide an additional room.

$$90 < 230$$

No additional chairs generated.

Total number of Endodontics chairs generated by 5,850 annual Endodontics seatings: 5

b. Input Data Statement 2, Answer 2:

How many annual Endodontics seatings are projected? (W) = 12,500

Step 1: Subtract 1,152 from the projected annual seatings.

$$12,500 - 1,152 = 11,348$$

One chair generated

Step 2: Divide the resulting value by the increment.

$$\frac{11,348}{1,152} = 9.85$$

Nine additional chairs generated

Step 3: Multiply the whole value (“9” in the previous step) by the increment.

$$(9)(1,152) = 10,368$$

Step 4: Subtract Step 3 from Step 1.

$$11,348 - 10,368 = 980$$

Step 5: Compare the resulting Step 4 value with the “minimum workload to generate an additional chair” value; if higher, provide an additional chair.

$$980 > 230$$

One additional chair generated

Total number of Endodontics chairs generated by 12,500 annual Endodontics seatings: 11

F. Section 4: Input Data Statements and Section 5: Space Planning Criteria have been implemented and tested in the Space and Equipment Planning System (SEPS). To gain access to SEPS planner should contact a Defense Health Agency (DHA) representative; access to SEPS is provided via a 16-hour hands-on training session.

G. Calculation of each of the directly workload-driven room types is implemented in SEPS based on the following formulae:

TABLE 1: WORKLOAD PARAMETER CALCULATION

320: DENTAL CLINIC				
DENTAL SEATINGS	AVERAGE LENGTH OF DENTAL SEATING (minutes)	UTILIZATION RATE	ANNUAL WORKLOAD PER DENTAL CHAIR (*)	MINIMUM ANNUAL WORKLOAD TO GENERATE ONE CHAIR (20%)
General Dentistry	75	80%	1,228	246
Dental Hygiene	60	80%	1,536	307
Prosthodontics	110	80%	838	168
Endodontics	80	80%	1,152	230
Periodontics	110	80%	838	168
Orthodontics	60	80%	1,536	307
Oral Surgery	120	80%	768	154
Extraoral Panoramic / Cephalometric Radiograph	15	80%	6,144	1,229

(*) Values in this column are based on an 8-hour per day and a 240-day per year value.

SECTION 3: PROGRAM DATA REQUIRED

3.1. INPUT DATA STATEMENTS. Input Data Statements are based on questions about Workload (W), Mission (M), Staffing (S) and Miscellaneous (Misc) information.

1. How many annual General Dentistry seatings are projected? (W)
2. How many annual Dental Hygiene seatings are projected? (W)
3. How many annual Prosthodontics seatings are projected? (W)
4. How many annual Endodontics seatings are projected? (W)
5. How many annual Periodontics seatings are projected? (W)
6. How many annual Orthodontics seatings are projected? (W)
7. How many annual Oral Surgery seatings are projected? (W)
8. How many annual Extraoral Panoramic / Cephalometric Radiograph seatings are projected? (W)
9. How many Comprehensive Dentistry Dental Treatment Chairs, greater than one, are authorized? (Misc)
10. Is a Cone-Beam CT Dental Radiograph authorized? (M)
11. Is a Picture Archiving and Communication System (PACS) Viewing Room authorized? (M)
12. Is a Recovery Room for Oral Surgery authorized? (M)
13. Are Dental Laboratories authorized? (M)
 - a. Are Full Service Dental Prosthodontics Laboratory functions performed in-house? (M)
 - i. How many Dental Prosthodontics Full Service Laboratory Workstations, greater than two, are authorized? (Misc)
 - b. Are Full Service Porcelain / Ceramics Laboratory functions authorized to be performed in-house? (M)
 - i. How many Porcelain / Ceramics Full Service Laboratory Workstations, greater than two, are authorized? (Misc)
14. Is a Playroom for the Dental Clinic authorized? (Misc)
15. Is Patient Education for the Dental Clinic authorized? (Misc)
16. Is a Consult Room for the Dental Clinic authorized? (Misc)
17. Is a Crash Cart for the Dental Clinic authorized? (Misc)
18. Is a dedicated Receiving Workstation for Logistics / Shipping and Receiving authorized? (Misc)
19. Is Sub-Waiting for Staff and Administration authorized? (Misc)
20. How many Dental Records are projected? (Misc)
21. How many Dental Clinic FTE positions are authorized? (S)
 - a. How many Dental Clinic FTE positions are authorized to have a private office? (Misc)
 - b. How many Dental Clinic FTE positions are authorized to have a shared office? (Misc)
 - c. How many Dental Clinic FTE positions are authorized to have a cubicle? (Misc)
 - d. How many Dental Clinic Male FTEs will work on peak shift? (Misc)

- e. How many Dental Clinic Female FTEs will work on peak shift? (Misc)
- 22. Is a GDE / Training program authorized? (M)
 - a. Is a Residency Program Assistant Director authorized? (Misc)
 - b. How many General Dentistry Resident / Student FTE positions are authorized? (S)
 - c. How many Comprehensive Dentistry Resident / Student FTE positions are authorized? (S)
 - d. How many Prosthodontics Resident / Student FTE positions are authorized? (S)
 - e. How many Endodontics Resident / Student FTE positions are authorized? (S)
 - f. How many Periodontics Resident / Student FTE positions are authorized? (S)
 - g. How many Orthodontics Resident / Student FTE positions are authorized? (S)
 - h. How many Oral Surgery (including Oral Maxillofacial) Resident / Student FTE positions are authorized? (S)

SECTION 4: SPACE PLANNING CRITERIA

4.1. FA1: RECEPTION.

1. **Waiting (WRC01)** **120 NSF**
Minimum NSF; provide an additional 60 NSF for every increment of four General Dentistry, Comprehensive Dentistry, Dental Hygiene, Prosthodontics, Endodontics, Periodontics, Orthodontics and Oral Surgery Dental Treatment Rooms (DTRs).
2. **Playroom (PLAY1)** **120 NSF**
Provide one if a Playroom for the Dental Clinic is authorized.

This space is provided to accommodate children's play activities, may be an open or enclosed area, and should be included within or adjacent to Waiting.
3. **Reception (RECP1)** **120 NSF**
Minimum NSF; provide an additional 30 NSF for every increment of twenty-four General Dentistry, Comprehensive Dentistry, Dental Hygiene, Prosthodontics, Endodontics, Periodontics, Orthodontics and Oral Surgery Dental Treatment Rooms (DTRs) greater than twenty-four.

Minimum allocated NSF accommodates two FTEs.
4. **Kiosk, Patient Check-in (CLSC1)** **30 NSF**
Provide one for Dental Clinic.
5. **Patient Education (CLSC3)** **120 NSF**
Provide one if Patient Education for the Dental Clinic is authorized.
6. **Consult Room (OFDC2)** **120 NSF**
Provide one if a Consult Room for the Dental Clinic is authorized.

- 7. Records Distribution / Signing (MRWK1) 60 NSF**
Provide one for Dental Clinic.

This room may be collocated with Reception or Records Storage.

4.2. FA2: GENERAL DENTISTRY.

- 1. Dental Treatment Room (DTR), General Dentistry (DNTG1) 130 NSF**
Minimum two; provide an additional one for every increment of 1,228 projected annual General Dentistry seatings greater than 2,456; the minimum workload to generate an additional General Dentistry Dental Treatment Chair is 246 (refer to Section 2); provide an additional one per each General Dentistry Resident / Student FTE position authorized.

Planner shall allocate the total number of calculated General Dentistry Dental Treatment Chairs in Single-Chair Rooms or in Multi-Chair Rooms (DNTG4) as needed.

- 2. Dental Treatment Room (DTR), Comprehensive Dentistry (DNCT1) 130 NSF**
Minimum one; provide an additional one per each Comprehensive Dentistry Treatment Chair, greater than one authorized; provide an additional one per each Comprehensive Dentistry Resident / Student FTE position authorized.

Planner shall allocate the total number of Comprehensive Dental Treatment Chairs in Single-Chair Rooms.

- 3. Dental Treatment Room (DTR), Dental Hygiene (DNTG2) 130 NSF**
Provide one if the projected annual Dental Hygiene seatings is between 307 and 1,536; provide an additional one for every increment of 1,536 projected annual Dental Hygiene seatings greater than 1,536; the minimum workload to generate an additional Dental Hygiene Dental Treatment Chair is 307. (Refer to Section 2)

- 4. Toilet, Patient (TLTU1) 60 NSF**
Minimum one; provide an additional one for every increment of eight General Dentistry, Comprehensive Dentistry and Dental Hygiene Dental Treatment Rooms (DTRs) greater than eight.

4.3. FA3: SPECIALTY DENTISTRY.

- 1. Dental Treatment Room (DTR), Prosthodontics (DNTP1) 140 NSF**
Minimum one; provide an additional one for every increment of 838 projected annual Prosthodontics seatings greater than 838; the minimum workload to generate an additional Prosthodontics Dental Treatment Room is 168 (refer to Section 2); provide an additional one per each Prosthodontics Resident / Student FTE position authorized.

2. **Dental Treatment Room (DTR), Endodontics (DNTE1) 130 NSF**
Provide one if the projected annual Endodontics seatings is between 230 and 1,152; provide an additional one for every increment of 1,152 projected annual Endodontics seatings greater than 1,152; the minimum workload to generate an additional Endodontics Dental Treatment Room is 230 (refer to Section 2); provide an additional one per each Endodontics Resident / Student FTE position authorized.
3. **Dental Treatment Room (DTR), Periodontics (DNTP2) 130 NSF**
Provide one if the projected annual Periodontics seatings is between 168 and 838; provide an additional one for every increment of 838 projected annual Periodontics seatings greater than 838; the minimum workload to generate an additional Periodontics Dental Treatment Room is 168 (refer to Section 2); provide an additional one per each Periodontics Graduate Dental Resident / Student FTE position authorized.
4. **Dental Treatment Room (DTR), Orthodontics (DNTB1) 130 NSF**
Provide one if the projected annual Orthodontics seatings is between 307 and 1,536; provide an additional one for every increment of 1,536 projected annual Orthodontics seatings greater than 1,536; the minimum workload to generate an additional Orthodontics Dental Treatment Room is 307 (refer to Section 2); provide an additional one per each Orthodontics Graduate Dental Resident / Student FTE position authorized.
5. **Dental Treatment Room (DTR), Oral Surgery (DNST1) 180 NSF**
Provide one if the projected annual Oral Surgery seatings is between 154 and 768; provide an additional one for every increment of 768 projected annual Oral Surgery seatings greater than 768; the minimum workload to generate an additional Oral Surgery DTR is 154 (refer to Section 2); provide an additional one per each Oral Surgery (including Oral Maxillofacial) Resident / Student FTE position authorized.
6. **Dental Treatment Room (DTR), General Dentistry (DNTG1) 130 NSF**
Provide one if the number of Oral Surgery DTRs is between one and four; provide an additional one for every increment of four Oral Surgery DTRs greater than four.

Locate proximate to the Oral Surgery DTRs.
7. **Recovery Room, Oral Surgery (DNTR1) 130 NSF**
Provide one for every increment of two Oral Surgery Dental Treatment Rooms if Recovery for Oral Surgery is authorized.
8. **Workroom, Preparation Area (DNSS1) 120 NSF**
Provide one if at least one Periodontics or one Oral Surgery Dental Treatment Room (DTR) is generated.

9. **Toilet, Patient (TLTU1)** **60 NSF**
Provide one for every increment of eight Prosthodontics, Endodontics, Periodontics, Orthodontics and Oral Surgery Dental Treatment Rooms (DTRs) greater than eight.
10. **Alcove, Crash Cart (RCA01)** **30 NSF**
Provide one if at least one Prosthodontics, Endodontics, Periodontics, Orthodontics and Oral Surgery Dental Treatment Rooms (DTRs) is generated.
11. **Alcove, Blanket / Fluid Warmer (RCA04)** **30 NSF**
Provide one if at least one Periodontics or one Oral Surgery Dental Treatment Room (DTR) is generated.
12. **Alcove, Wheelchair (SRLW1)** **30 NSF**
Provide one if at least one Oral Surgery Dental Treatment Room (DTR) is generated.

4.4. FA4: DENTAL RADIOGRAPHY.

1. **Sub-Waiting, Dental Radiography (WRC03)** **60 NSF**
Minimum NSF; provide an additional 30 NSF if the total number of Extraoral Panoramic / Cephalometric and Cone-Beam CT Dental Radiograph Rooms is greater than four.
2. **Dental Radiograph, Extraoral Panoramic / Cephalometric (DNXS1)** **180 NSF**
Provide one if the projected annual Extraoral Panoramic / Cephalometric Radiograph seatings is between 1,229 and 6,144; provide an additional one for every increment of 6,144 projected annual Extraoral Panoramic / Cephalometric Radiograph seatings greater than 6,144; the minimum workload to generate an additional Extraoral Panoramic / Cephalometric Dental Radiograph is 1,229. (Refer to Section 2)
3. **Dental Radiograph, Cone-Beam CT (DNXC1)** **120 NSF**
Provide one if a Cone-Beam CT Dental Radiograph is authorized.

Allocated NSF accommodates Operator Console barrier wall.
4. **Viewing Room, Picture Archiving and Communication System (PACS) (XVC01)** **120 NSF**
Provide one if a Picture Archiving and Communication System (PACS) Viewing Room is authorized.

4.5. FA5: DENTAL LABORATORIES.

1. **Shipping and Receiving, Dental Laboratories (OFA03)** **60 NSF**
Provide one if Dental Laboratories are authorized.

2. **Laboratory Basic Service, Dental Prosthodontics (DNPL1)** **240 NSF**
Provide one if Full Service Dental Prosthodontics Laboratory functions are not performed in-house.

This space supports pouring impressions, model reduction and a workstation for minor appliance adjustments and repairs.
3. **Laboratory Full Service, Dental Prosthodontics (DNPL3)** **360 NSF**
Provide one if Full Service Dental Prosthodontics Laboratory functions are performed in-house; provide an additional 120 NSF if Dental Surgery is authorized and an additional 60 NSF per each Dental Prosthodontics Laboratory Full Service workstation, greater than two, authorized.
4. **Laboratory Full Service, Porcelain / Ceramics (DNPC2)** **180 NSF**
Provide one if Full Service Porcelain / Ceramics Laboratory functions are authorized to be performed in-house; provide an additional 60 NSF per each Porcelain / Ceramics Laboratory Full Service workstation, greater than two, authorized.
5. **Storage, Dental Models (DNMS1)** **60 NSF**
Minimum NSF if the total number of Prosthodontics DTRs is between one and three; provide an additional 60 NSF if the total number of Prosthodontics DTRs is greater than three.
6. **Storage, Lab Equipment (SRSE1)** **120 NSF**
Provide one if Dental Laboratories are authorized.

4.6. FA6: SUPPORT.

1. **Workstation, Receiving (OFA03)** **60 NSF**
Provide one if a dedicated Receiving Workstation for Logistics / Shipping and Receiving is authorized.
2. **Dental Instrument Decontamination, Small (DNPC1)** **120 NSF**
Provide one if the total number of General Dentistry, Comprehensive Dentistry, Dental Hygiene, Prosthodontics, Endodontics, Periodontics, Orthodontics Dental and Oral Surgery Dental Treatment Rooms (DTRs) is between one and ten.

This room is part of a three-room suite: Decontamination, Sterilization and Storage. There should be a pass-through window between Decontamination and Sterilization.
3. **Dental Instrument Sterilization, Small (DNPC2)** **120 NSF**
Provide one if the total number of General Dentistry, Comprehensive Dentistry, Dental Hygiene, Prosthodontics, Endodontics, Periodontics, Orthodontics Dental and Oral Surgery Dental Treatment Rooms (DTRs) is between one and ten.

This room is part of a three-room suite: Decontamination, Sterilization and Storage. There may be a rack return window between Sterilization and Storage.

4. Dental Instrument Storage, Small (DNSC3) 90 NSF

Provide one if the total number of General Dentistry, Comprehensive Dentistry, Dental Hygiene, Prosthodontics, Endodontics, Periodontics, Orthodontics Dental and Oral Surgery Dental Treatment Rooms (DTRs) is between one and ten.

This room is part of a three-room suite: Decontamination, Sterilization and Storage. The room is used to store dental instrument sets and supplies, and to stage a transfer cart with sterile instruments and supplies to be used in the DTRs.

5. Dental Instrument Decontamination, Medium (DNSC4) 240 NSF

Provide one if the total number of General Dentistry, Comprehensive Dentistry, Dental Hygiene, Prosthodontics, Endodontics, Periodontics, Orthodontics Dental and Oral Surgery Dental Treatment Rooms (DTRs) is between eleven and twenty.

This room is part of a three-room suite: Decontamination, Sterilization and Storage. There should be a pass-through window between Decontamination and Sterilization.

6. Dental Instrument Sterilization, Medium (DNSC5) 320 NSF

Provide one if the total number of General Dentistry, Comprehensive Dentistry, Dental Hygiene, Prosthodontics, Endodontics, Periodontics, Orthodontics Dental and Oral Surgery Dental Treatment Rooms (DTRs) is between eleven and twenty.

This room is part of a three-room suite: Decontamination, Sterilization and Storage. There may be a rack return window between Sterilization and Storage.

7. Dental Instrument Storage, Medium (DNSC6) 120 NSF

Provide one if the total number of General Dentistry, Comprehensive Dentistry, Dental Hygiene, Prosthodontics, Endodontics, Periodontics, Orthodontics Dental and Oral Surgery Dental Treatment Rooms (DTRs) is between eleven and twenty.

This room is part of a three-room suite: Decontamination, Sterilization and Storage. The room is used to store dental instrument sets and supplies, and to stage transfer carts with sterile instruments and supplies to be used in the DTRs.

8. Dental Instrument Decontamination, Large (DNSC7) 360 NSF

Provide one if the total number of General Dentistry, Comprehensive Dentistry, Dental Hygiene, Prosthodontics, Endodontics, Periodontics, Orthodontics Dental and Oral Surgery Dental Treatment Rooms (DTRs) is greater than twenty.

This room is part of a three-room suite: Decontamination, Sterilization and Storage. There should be a pass-through window between Decontamination and Sterilization.

9. **Dental Instrument Sterilization, Large (DNSC8)** **400 NSF**
Provide one if the total number of General Dentistry, Comprehensive Dentistry, Dental Hygiene, Prosthodontics, Endodontics, Periodontics, Orthodontics Dental and Oral Surgery Dental Treatment Rooms (DTRs) is greater than twenty.
- This room is part of a three-room suite: Decontamination, Sterilization and Storage. There may be a rack return window between Sterilization and Storage.
10. **Dental Instrument Storage, Large (DNSC9)** **150 NSF**
Provide one if the total number of General Dentistry, Comprehensive Dentistry, Dental Hygiene, Prosthodontics, Endodontics, Periodontics, Orthodontics Dental and Oral Surgery Dental Treatment Rooms (DTRs) is greater than twenty.
- This room is part of a three-room suite: Decontamination, Sterilization and Storage. The room is used to store dental instrument sets and supplies, and to stage transfer carts with sterile instruments and supplies to be used in the DTRs.
11. **Storage, Dental Supplies (SRS01)** **120 NSF**
Minimum NSF; provide an additional 30 NSF for every increment of eight General Dentistry, Comprehensive Dentistry, Dental Hygiene, Prosthodontics, Endodontics, Periodontics, Orthodontics Dental and Oral Surgery Dental Treatment Rooms (DTRs), Extraoral Panoramic / Cephalometric and Cone-Beam CT Dental Radiograph Rooms greater than eight.
12. **Utility Room, Soiled (USCL1)** **90 NSF**
Minimum one; provide an additional one if the total number of General Dentistry, Comprehensive Dentistry, Dental Hygiene, Prosthodontics, Endodontics, Periodontics, Orthodontics Dental and Oral Surgery Dental Treatment Rooms (DTRs) is greater than fifty.
13. **Linen Room, Clean (LCCL4)** **90 NSF**
Minimum NSF; provide an additional 30 NSF if the total number of General Dentistry, Comprehensive Dentistry, Dental Hygiene, Prosthodontics, Endodontics, Periodontics, Orthodontics Dental and Oral Surgery Dental Treatment Rooms (DTRs), Extraoral Panoramic / Cephalometric and Cone-Beam CT Dental Radiograph Rooms greater than fifty.
14. **Linen Room, Soiled (LCSL2)** **90 NSF**
Minimum NSF; provide an additional 30 NSF if the total number of General Dentistry, Comprehensive Dentistry, Dental Hygiene, Prosthodontics, Endodontics, Periodontics, Orthodontics Dental and Oral Surgery Dental Treatment Rooms (DTRs), Extraoral Panoramic / Cephalometric and Cone-Beam CT Dental Radiograph Rooms greater than fifty.
15. **Alcove, Crash Cart (RCA01)** **30 NSF**
Provide one if a Crash Cart for the Dental Clinic is authorized.

- Provide one crash cart alcove per Dental Clinic; if this is a multi-story Dental Clinic, provide one per floor.
- | | | |
|-----|---|----------------|
| 16. | Storage, Equipment (SRSE1)
Provide one for Dental Clinic. | 120 NSF |
| 17. | Storage, Gas Cylinder (SRGC2)
Provide one for Dental Clinic. | 60 NSF |
| 18. | Storage, Chemical / Corrosives (SRHM1)
Provide one for Dental Clinic. | 60 NSF |
| 19. | Dental Equipment Mechanical Room (MECH1)
Provide one for Dental Clinic. | 120 NSF |

4.7. FA7: STAFF AND ADMINISTRATION.

- | | | |
|--|--|----------------|
| 1. | Office, Department / Clinic Chief (OFA04)
Provide one for Dental Clinic. | 120 NSF |
| 2. | Sub-Waiting (WRC03)
Provide one if a Sub-Waiting is authorized. | 60 NSF |
| 3. | Office, NCOIC / LCPO / LPO (OFA04)
Provide one for Dental Clinic. | 120 NSF |
| 4. | Team Collaboration Room (WRCH1)
Provide one for every increment of twenty-four General Dentistry, Comprehensive Dentistry, Dental Hygiene, Prosthodontics, Endodontics, Periodontics, Orthodontics and Oral Surgery Dental Treatment Rooms (DTRs). | 120 NSF |
| 5. | Office, Private (OFA04)
Provide one per each Dental Clinic FTE position authorized to have a private office. | 120 NSF |
| 6. | Office, Shared (OFA05)
Provide one for every increment of two Dental Clinic FTE positions authorized to have a shared office. | 120 NSF |
| 7. | Cubicle (OFA03)
Provide one per each Dental Clinic FTE position authorized to have a cubicle. | 60 NSF |
| These cubicles may be collocated in a shared space or dispersed as required. | | |
| 8. | Storage, Dental Records (MRS01)
Minimum NSF; provide an additional 15 NSF for every increment of 1,600 projected Dental Records greater than 3,200. | 60 NSF |

Minimum allocated NSF accommodates two four-post open style record storage shelving units with a capacity of 238 lineal filing inches per unit. Collocate with the Distribution / Signing Records in the Reception Area.

9. **Conference Room (CRA01)** **240 NSF**
Minimum NSF; provide an additional 60 NSF if the total number of Dental Clinic FTE positions authorized is greater than ten.

Planner must determine adequacy and availability of existing conference room space and the ability to optimize resources by sharing conference room space with other departments.

10. **Copy / Office Supply (RPR01)** **120 NSF**
Provide one for Dental Clinic.

11. **Lounge, Staff (SL001)** **120 NSF**
Minimum NSF; provide an additional 60 NSF for every increment of five Dental Clinic FTEs working on peak shift greater than ten; maximum 360 NSF.

12. **Toilet, Staff (TLTU1)** **60 NSF**
Minimum one; provide an additional one for every increment of fifteen Dental Clinic FTE positions working on peak shift greater than fifteen.

13. **Locker / Changing Room, Male Staff (LR002)** **120 NSF**
Minimum NSF; provide an additional 10 NSF for every increment of two Dental Clinic Male FTE positions working on peak shift greater than twelve.

14. **Locker / Changing Room, Female Staff (LR002)** **120 NSF**
Minimum NSF; provide an additional 10 NSF for every increment of two Dental Clinic Female FTE positions working on peak shift greater than twelve.

15. **Toilet / Shower, Staff (TLTS1)** **60 NSF**
Provide two; provide an additional one for every increment of fifteen Dental Clinic FTE positions working on peak shift greater than thirty.

Allocate one for female and the other one for male.

- 4.8. FA8: GDE / TRAINING.Office, Residency Program Director (OFA04)** **120 NSF**
Provide one if a GDE / Training program is authorized.

2. **Office, Residency Program Assistant Director (OFA04)** **120 NSF**
Provide one if a GDE / Training program and a Resident Program Assistant Director are authorized.

3. **Resident Collaboration Room (WKTM1)** **240 NSF**
Minimum NSF; provide an additional 60 NSF per each GDE Resident / Student FTE position, any specialty, authorized greater than two if a GDE / Training program is authorized.

Minimum NSF accommodates two residents, and a collaboration / reference area.

4. **Conference / Classroom / (CRA01)** **240 NSF**
Provide one if a GDE / Training program is authorized and if the total number of GDE Resident / Student FTE positions is greater than five.

SECTION 5: PLANNING AND DESIGN CONSIDERATIONS

The following design considerations are intended to provide planners and designers with guidance on world-class and evidence-based design strategies for new healthcare facilities and renovation of existing ones. Please refer to the World Class Checklist (<https://facilities.health.mil/home/>). Also, refer to the “Specific Requirements for Dental Facilities” in the FGI Guidelines for Design and Construction of Hospitals and Outpatient Facilities by the Facility Guidelines Institute (the FGI Guidelines) for additional information.

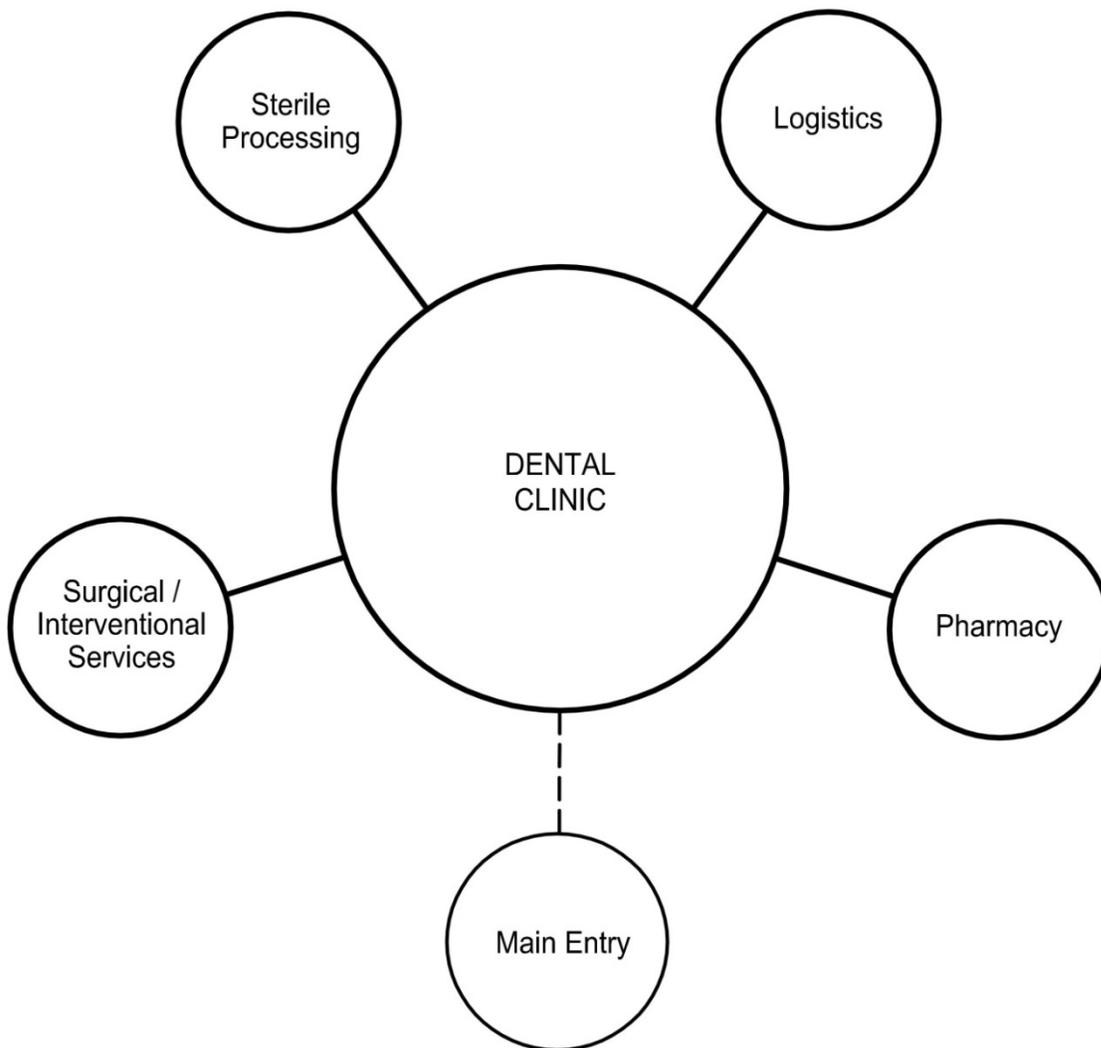
5.1. NET-TO-DEPARTMENT GROSS FACTOR. The net-to-department gross factor (NTDG) for Dental Clinics is 1.40. This number when multiplied by the programmed net square foot (NSF) area determines the departmental gross square feet. This factor accounts for the space occupied by internal department circulation and interior partitions as well as other construction elements not defined by the net square foot area. Refer to UFC 4-510-01, Section 2-3.4.2.2 and DoD Space Planning Criteria Chapter 130: Net to Gross Conversion Factors.

5.2. GENERAL DESIGN CONSIDERATIONS.

- A. Consider efficiency of operations and a layout such that walking distances of the routes staff repeatedly take from consult room to the DTRs, to the work areas (e.g. charting, supplies, medications), back to DTRs are kept to a minimum.
- B. Dental Treatment Rooms may be allocated as private and/or multi-chair configurations. The selection of chair configuration should be determined early in the planning process, as it has a major effect on the equipment provided for each DTR type.
- C. Reduce patient anxiety and typical "dental stressors" by providing daylighting, window views of nature, nature photography and architectural features that provide positive distractions.
- D. Locate the Dental Mechanical Room (MECH1) within the main mechanical room of the facility.

SECTION 6: FUNCTIONAL RELATIONSHIPS (INTERDEPARTMENTAL)

6.1. FUNCTIONAL RELATIONSHIPS. The Dental Clinic will rely on a number of other services in a Military Treatment Facility (MTF) for patient care and support functions. The diagram below represents desirable relationships based on efficiency and functional considerations.

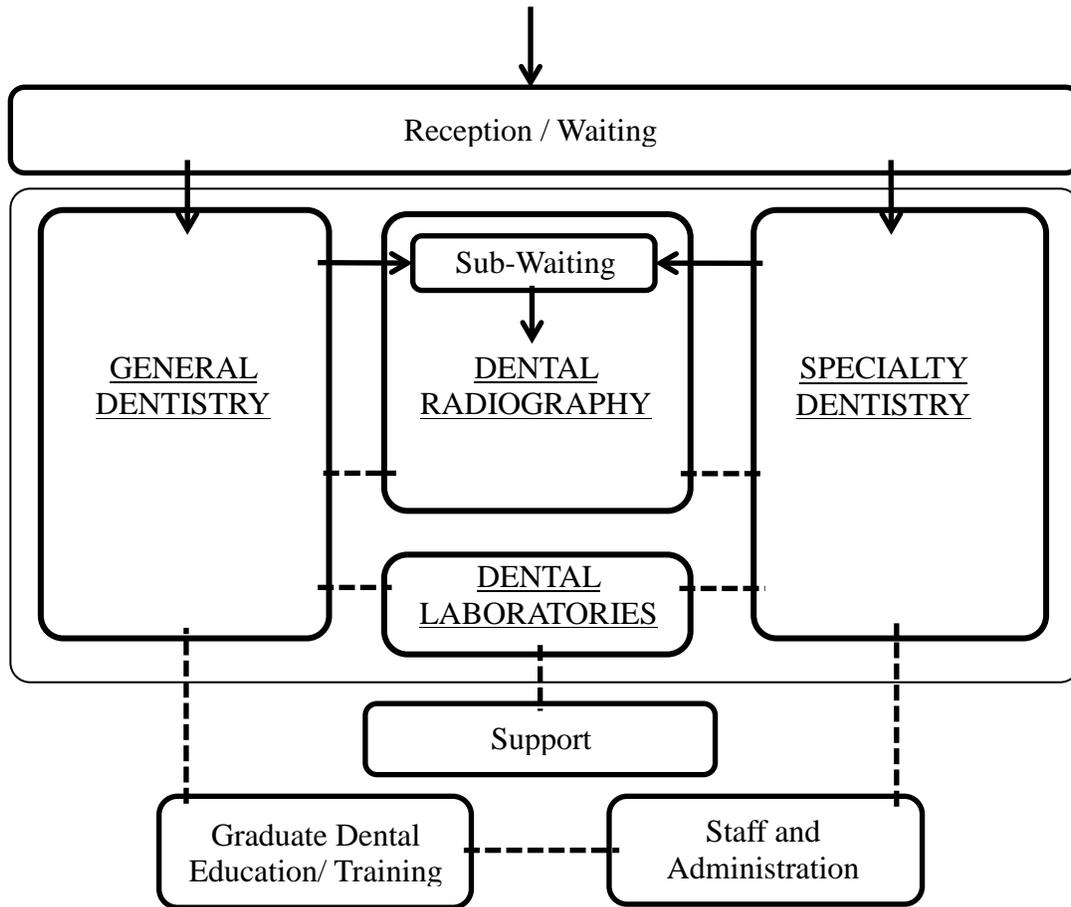


LEGEND

- Most Critical Adjacency
- - - - - Less Critical Adjacency

SECTION 7: FUNCTIONAL DIAGRAM (INTRADEPARTMENTAL)

7.1. FUNCTIONAL DIAGRAM. The diagram below illustrates intradepartmental relationships among key areas / spaces within the Dental Clinic. The diagram is necessarily generic. The planner shall use this as a basis for design only and shall consider project-specific requirements for each Military Treatment Facility.



LEGEND

- > Patient Circulation
- - - - - Staff Circulation

DENTAL

GLOSSARY

G.1. DEFINITIONS.

American Dental Association (ADA): Founded in 1859, the not-for-profit American Dental Association represents a body of dentist members and is the leading source of oral health related information for dentists and their patients. The ADA works to advance the dental profession on the national, state and local level and is committed to the improvement of oral health for the public.

Authorized: This document uses the term “authorized” to indicate that, during a project’s space plan development, a planner shall seek approval from the appropriate official in the chain of command to activate certain spaces or certain groups of spaces. Typical components that may require authorization are certain programs or services that activate Functional Areas (e.g., GME); office spaces (e.g., FTE position); specialized rooms (e.g., Hybrid OR) or other spaces (e.g., On-Call Room). Typically, Mission, Staffing and Miscellaneous Input Data Statements require authorization, while directly and indirectly workload driven rooms / spaces do not.

Average Length of Encounter (ALOE): Also referred to as a “Seating”; in these space criteria, an encounter is defined as a face-to-face professional contact between a patient and a provider vested with responsibility for diagnosing, evaluating, and treating the patient’s condition. The Length of Encounter is the time between set-up and clean-up of the Dental Treatment Room. The Average Length of Encounter or the Average Length of Seating is used to capture variations in Length of Encounter among similar clinical encounters that will take place in the Dental Treatment Room.

Cephalometric Radiograph: A type of extraoral radiograph that shows the entire side of the head. This type of x-ray is useful in examining the teeth in relation to the jaw and profile of the patient. Orthodontists and Maxillofacial surgeons use Cephalometric projections to develop their treatment plans. This image can be film-based or digital.

Clean Utility Room: This room is used for the storage and holding of clean and sterile supplies. Clean linen may be stored in a designated area in the clean utility room if space is not provided in a separate room or in an alcove.

Comprehensive Dentistry: Although this is not a recognized specialty by the American Dental Association, comprehensive dentistry is dental care which takes the entire oral system into account when diagnosing and rendering treatment. Through advanced training, to include a two year residency program and board-certification with the American Board of General Dentistry, comprehensive dentists learn how to identify the deeper causes of problems as well as their relevance and how to treat them in a “comprehensive” way in order to prevent their recurrence.

Cone Beam Computed Tomography (CT): Cone Beam 3D Radiography uses a cone-shaped beam to acquire the entire image in a single scan using only one rotation. The result is a more accurate image without missing information with a considerably lower radiation exposure.

Consult Room: This is a consultation room for family members to meet with physicians, dentists, or other providers privately and is ideally located near the waiting room.

Cubicle: A cubicle is a partially enclosed workspace, separated from neighboring workspaces by partitions. Managers and other staff with no supervisory responsibilities as well as part-time, seasonal, and job-sharing staff may qualify for a cubicle.

Dental Hygiene: A dental specialty providing clinical and therapeutic services under the supervision of a licensed dentist. These services may include prophylaxis (teeth cleaning), sealants, radiography, limited medication administration, and dental education that may be performed by dental hygienists and trained Prophylaxis Technicians.

Dental Hygienist: A healthcare worker who provides clinical and therapeutic dental services under the supervision of a licensed dentist.

Dental Treatment Room (DTR): A properly outfitted room including a dental chair, dental unit, and dental light where clinical dental procedures are performed. A DTR (general dentistry) is equipped to support moderate sedation. A DTR (prosthodontics) is equipped like a DTR (general dentistry), but with additional space to accommodate equipment needed to perform certain prosthodontic laboratory procedures.

Endodontics: According to the American Dental Association (ADA), endodontics is the branch of dentistry which is concerned with the morphology, physiology, and pathology of the human dental pulp and periradicular (surrounding) tissues. Its study and practice encompass the basic and clinical sciences including biology of the normal pulp, the etiology, diagnosis, prevention and treatment of diseases and injuries of the pulp and associated periradicular conditions. The most common therapeutic procedure done in Endodontics is root-canal therapy.

Full-Time Equivalent (FTE): A staffing parameter equal to the amount of time assigned to one full time employee. It may be composed of several part-time employees whose total time commitment equals that of a full-time employee. One FTE equals a 40-hour per week workload. The FTE measure may also be used for specific workload staffing parameters such as a clinical FTE; the amount of time assigned to an employee providing clinical care. For example, a 0.5 clinical FTE for a healthcare worker would indicate that the healthcare worker provides clinical care half of the time per a 40-hour work week.

Functional Area (FA): The grouping of rooms and spaces based on their function within a clinical service. Typical Functional Areas are Reception Area, Patient Area, Support Area, Staff and Administrative Area, and Education Area.

General Dentistry: The comprehensive evaluation, diagnosis, prevention and/or treatment (nonsurgical, surgical, or related procedures) of diseases, disorders and/or conditions of the oral

cavity, maxillofacial area and/or the adjacent and associated structures and their impact on the human body. The general dentist is responsible for the management of the overall oral healthcare needs of the patient and to a limited extent may provide various levels of dental specialty care.

Graduate Dental Education (GDE): A multi-faceted education program composed of theory and practical application that provides an expanded education and the opportunity to develop additional skill in emphasis areas.

Input Data Statement: A set of questions designed to elicit information about the healthcare project in order to create a Program for Design (PFD) (see definition below); based on the space criteria parameters (refer to Section 4) set forth in this document. Input Data Statements are defined as Mission, Workload, Staffing or Miscellaneous.

Laboratory, Dental Porcelain / Ceramics: This space is equipped and used for the construction and molding of dental prosthetics and ceramics, it requires special lighting and environmental controls.

Laboratory, Dental Prosthodontics: This space is equipped to fabricate oral prostheses. Depending on layout, this space can be combined with the other labs in one room. Allocated NSF accommodates space required for Maxillo-Facial Laboratory.

Moderate Sedation: Also referred to as “Conscious Sedation”, is a drug-induced depression of consciousness during which patients respond purposefully to verbal commands, either alone or accompanied by light tactile stimulation. No interventions are required to maintain a patent airway, and spontaneous ventilation is adequate. Cardiovascular function is usually maintained.

Net Square Feet (NSF): The area of a room or space derived by multiplying measurements of the room or space taken from the inside surface of one wall to the inside surface of the opposite wall.

Net-to-Department Gross Factor (NTDG): A parameter used to calculate the Department Gross Square Foot (DGSF) area based on the programmed Net Square Foot (NSF) area. Refer to DoD Chapter 130 for the NTDG factors for all Space Planning Criteria chapters.

Office, Private: A single occupancy office provided for confidential communication.

Office, Shared: An office that accommodates two workstations.

Operating Days per Year: The number of days per calendar year a facility is operational for patient care (refer to Section 2).

Oral Surgery: A dental specialty performed in an outpatient setting; the most common oral surgery procedures are tooth extraction and corrective procedures.

Oral and Maxillofacial Surgery: According to the ADA, oral and maxillofacial surgery is the specialty of dentistry which includes the diagnosis, surgical and adjunctive treatment of diseases, injuries and defects involving both the functional and aesthetic aspects of the hard and soft

tissues of the oral and maxillofacial region. Oral surgery is performed in an outpatient setting; the most common oral surgery procedure is a tooth extraction.

Orthodontics and Dentofacial Orthopedics: According to the ADA, orthodontics and dentofacial orthopedics is the dental specialty that includes the diagnosis, prevention, interception, and correction of malocclusion, as well as neuromuscular and skeletal abnormalities of the developing or mature orofacial structures. Treatment includes the use of braces, retainers, headgear, and other appliances.

Outpatient Clinic: A clinic providing outpatient (not hospitalized overnight) service in both freestanding community-based facilities, as well as ambulatory clinics in or directly adjacent to hospital-based services.

Panoramic Radiograph: A type of extraoral radiograph that shows the teeth in the maxilla and mandible (upper and lower jaws) on a single x-ray using a special x-ray machine. A Panoramic radiograph allows the dentist to detect the position of fully-emerged teeth, identify impacted and partially impacted teeth, and aid in the identification of structures and diagnosis of pathology within the maxilla and mandible.

Pediatric Dentistry: According to the ADA, pediatric dentistry is an age-defined specialty that provides both primary and comprehensive preventive and therapeutic oral health care for infants and children through adolescence, including those with special health care needs.

Periodontics: According to the ADA, periodontics is the specialty of dentistry which encompasses the prevention, diagnosis, and treatment of diseases of the supporting and surrounding tissues of the teeth or their substitutes and the maintenance of the health, function and esthetics of these structures and tissues. Periodontal disease is a major cause of tooth loss in adults.

Picture Archiving and Communication System (PACS) Viewing Room: A digital radiology reading room that consists of workstations for interpretation.

Recovery Room: Depending on the facility and the Concept of Operations, after oral surgery, a patient may be allowed to recover in the oral surgery DTR, or the patient may be walked to a recliner chair to recover in a recovery room.

Program for Design (PFD): A listing of all of the rooms / spaces generated based on answers to the Input Data Statements (see Section 3) and the space planning criteria outlined in this document (Section 4) in SEPS. The list is organized by Functional Area and includes the Room Quantity, Room Code, Room Name, generated Net Square Feet (NSF), Construction Phase and Construction Type.

Project Room Contents (PRC): A listing of the assigned contents (medical equipment, FF&E, etc.) for each room in a PFD generated by SEPS.

Prosthodontics: According to the ADA, prosthodontics is the dental specialty pertaining to the diagnosis, treatment planning, rehabilitation, and maintenance of the oral function, comfort, appearance and health of patients with clinical conditions associated with missing or deficient teeth and/or oral and maxillofacial tissues using biocompatible substitutes. These patients have missing or deficient teeth and/or oral tissues that can be rehabilitated with crowns, veneers, fixed and removable partial dentures, and implant-supported prostheses.

Provider: For the purposes of the Space Planning Criteria, a provider is an individual who examines, diagnoses, treats, prescribes medications, or manages the care of patients within the scope of their practice. Dental providers may be dentists; dental hygienists; expanded function dental assistants, or enlisted service members trained to provide care within a dental clinic.

Seating: Also referred to as an “encounter” or a dental encounter between an eligible beneficiary and a provider or a technician. An encounter may consist of examination, diagnosis, treatment, evaluation, consultation or counseling or a combination of the above. As an example, one seating may include a cleaning by the dental hygienist, a panoramic radiograph and an exam or procedure by the dental provider, which may occur in one or more Dental Treatment Rooms, and equates to the Average Length of Encounter (ALOE). The Procedure Code A9999 from the Corporate Dental Application (CDA) equates to a seating.

SEPS: Acronym for Space and Equipment Planning System, a digital tool developed by the Department of Defense (DoD) and the Department of Veterans Affairs to generate a Program for Design (PFD) and a Project Room Contents (PRC) list for a DoD healthcare project based on specific information entered in response to Input Data Statements.

Soiled Utility Room: This space provides an area for cleanup of medical / dental equipment and instruments, and for disposal of medical waste material. It provides temporary holding for material that will be picked up by Central Sterile or similar service. It should be readily accessible to staff.

Team Collaboration Room: This space provides staff with an environment conducive to collaboration. Room contains computer workstations for documentation and a table with chairs to hold meetings.

Workload: In this space criteria chapter, workload is the anticipated number of seatings or extraoral panoramic / cephalometric radiographs processed through a dental clinic. The projected dental clinic workload for a given location determines the number of DTRs and Radiograph Rooms in the Program for Design (PFD).