

CHAPTER 316: DIALYSIS CENTER

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1 PURPOSE AND SCOPE

This document outlines Space Planning Criteria for Chapter 316: Dialysis Center. It applies to all medical facilities at the Department of Veterans Affairs (VA).

2 DEFINITIONS

Bariatrics: The branch of medicine which deals with the causes, prevention, and treatment of obesity. The Dialysis Center must accommodate, in its equipment and design, a high percentage of bariatric patients, many of whom are disabled or non-ambulatory.

Dialysate: A solution of water and chemicals used in dialysis. Dialysate shall be provided in both single-patient and multiple-patient mixtures as determined by the medical staff.

Dialysis: A type of renal replacement therapy which is used to provide an artificial replacement for lost kidney functions. There are two main forms of dialysis, Hemodialysis and Peritoneal Dialysis, both of which are life support treatments; but dialysis does not treat kidney diseases. Dialysis may be used for very sick patients who have recently lost kidney functions (acute renal failure) or for stable patients who have permanently lost kidney functions (chronic or end-stage renal failure).

Dialysis Center: A highly specialized program which provides facilities for the treatment of patients with irreversible renal insufficiencies. Treatment procedures require professional supervision by staff experienced in renal pathophysiology. The Dialysis Center may serve either or both inpatients and outpatients, depending upon the medical facility type, and may provide self-dialysis training for Peritoneal Dialysis in addition to on-site assisted dialysis, i.e., Hemodialysis. The Dialysis Center administers both single-patient and multi-patient Hemodialysis systems.

Hemodialysis (also Haemodialysis): The form of renal dialysis typically conducted in a Dialysis Center. Hemodialysis relies on convective transport of a dialysate and utilizes counter-current flow, where the dialysate is flowing in the opposite direction to blood flow in an extracorporeal circuit.

Pathophysiology: The study of the disturbance of normal mechanical, physical, and biochemical functions which a disease causes or which cause a disease.

Peritoneal Dialysis (PD): A form of renal dialysis typically done in the patient's home and/or workplace. PD is based on the principle that the peritoneal membrane which surrounds the intestine can act as a natural semi permeable membrane and that, if a dialysate is instilled within the membrane through a catheter, intracorporeal dialysis can occur by diffusion.

Water Treatment: Dialysis water treatment implies various levels of pre-treatment and a final purification module prior to distribution of purified water through a hydraulic circuit.

- A. Deionization (DI) Water: Water which has been treated to remove contaminants. This system removes most mineral deposits, but microbial contaminants may remain.
- B. Feed Water: The untreated, potable water available throughout the facility through its water supply system.



- C. Permeate Water: Fully treated purified water, stored in a tank, which is used in the preparation of dialysate.
- D. Pre-treated Water: Partially treated water, sometimes available as feed water, which has had substantial reduction of mineral and/or microbial particles.
- E. Reverse Osmosis (RO) Water: Usually the final purification module in the treatment system, RO-based treatment modules produce water of optimal chemical and microbial quality.

Space Planning / SEPS

Accessible: A site, building, facility, or portion thereof that complies with provisions outlined in the Architectural Barriers Act of 1968 (ABA).

Architectural Barriers Act (ABA): A set of standards developed to ensure that all buildings financed with federal funds are designed and constructed to be fully accessible to everyone. This law requires all construction, renovation, or leasing of sites, facilities, buildings, and other elements, financed with federal funds, to comply with the Architectural Barriers Act Accessibility Standards (ABAAS). The ABAAS replaces the Uniform Federal Accessibility Standards (UFAS).

Average Length of Encounter (ALoE): Averaged length of time, in minutes, a patient spends in an Exam / Treatment Room interacting with a provider and the clinical support team. It is accounted from room “set-up” to “clean-up” by staff. This metric is used to determine the number of annual patient / provider encounters that take place in an Exam / Treatment Room which, in turn, is used to calculate the number of Exam / Treatment Rooms needed in a facility based on projected annual workload. The ALoE is determined with VHA SME input during a PG-18-9 clinical chapter revision / update.

Average Length of Stay (ALoS): The average number of days a patient Veteran stays in an inpatient care unit. The ALoS is used to calculate the number of patient bedrooms for a specialty by dividing the site’s projected workload by the ALoS.

Building Gross (BG) Factor: A Factor applied to the sum of all the Departmental Gross Square Footage (DGSF) in a project to determine the Building Gross Square Footage. This factor accounts for square footage used by the building envelope, structural systems, horizontal and vertical circulation including main corridors, elevators, stairs and escalators, shafts, and mechanical spaces. The Department of Veterans Affairs has set this factor at 1.35 and included guidance in case of variance when developing a Program for Design (PFD) in SEPS.

Clinic Stop: Per these criteria, a clinic stop is the workload unit of measure for space planning. Clinic Stops are codified by VSSC, when applicable, they are referenced by number in the calculation of workload driven patient care spaces in this document.

Department Net to Gross (DNTG) Factor: A parameter, determined by the VA for each clinical and non-clinical department PG-18-9 space planning criteria chapter, used to convert the programmed Net Square Feet (NSF) area to the Department Gross Square Feet (DGSF) area.



Encounter: An interaction between a patient Veteran and a VA provider or providers in an Exam Room / Treatment Room / Consultation Room / Procedure Room, spaces where a patient Veteran received clinical care.

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 combined time commitment equals that of one full-time employee (i.e., 40 hours per week).

Functional Area (FA): The grouping of rooms and spaces based on their function within a clinical service or department.

Functional Area Criteria Statement (FACS): A verbalized mathematical / logical formulation assigned to a FA incorporating answers to Input Data Statements (IDSs) to determine the condition for providing the rooms / spaces listed in the FA in the baseline space program or Program for Design (PFD) for a project. Certain rooms / spaces may or may not have additional conditions.

Input Data Statement(s): A question or set of questions designed to elicit information about the healthcare project to generate a Program for Design (PFD) based on the parameters set forth in this set of documents. This information is processed through mathematical and logical operations in the VA Space and Equipment Planning System (SEPS).

JSN (Joint Schedule Number): A unique five alpha-numeric code assigned to each content item in the PG-18-5 Standard. JSNs are defined in DoD's Military Standard 1691 and included in SEPS Content Table.

Net Square Feet / Net Square Meters (NSF/NSM): The area of a room or space derived from that within the interior surface of the bounding walls or boundaries.

Patient Unique: (or Unique Patient), A Veteran patient counted as a unique in each division from which they receive care. Patient Uniques are included in the Registry for a VA Medical Center.

Program for Design (PFD): A project specific itemized listing of the spaces, rooms, and square foot area required for the proper operation of a specific service / department, and the corresponding area for each. PFDs are generated by SEPS based on the PG-18-9 Standard.

PG-18-5: A Department of Veterans Affairs' Equipment Guidelist Standard for planning, design, and construction of VA healthcare facilities; a Program Guide (PG) that lists assigned room contents (medical equipment, furniture, and fixtures) to each room in PG-18-9. PG-18-5 follows PG-18-9's chapter organization and nomenclature.

PG-18-9: A Department of Veterans Affairs' Program Guide for the Space Planning Criteria Standard use to develop space planning guidance for the planning, design, and construction of VA healthcare facilities; a Program Guide (PG) that provides space planning guidance for VA Medical Centers (VAMCs) and Community Bases Outpatient Clinics (CBOCs). PG-18-9 is organized by chapters, as of September 2021 there are 56 clinical and non-clinical PG-18-9



chapters; they are implemented and deployed in SEPS so that space planners working on VA healthcare projects can develop baseline space programs.

PG-18-12: A Department of Veterans Affairs' Design Guide Standard for planning, design and construction of VA healthcare facilities, a Program Guide (PG) that provides design guidance for VA Medical Centers (VAMCs) and Community Bases Outpatient Clinics (CBOCs). The narrative section details functional requirements and the Room Template section details the planning and design of key rooms in PG-18-9. Not all PG-18-9 chapters have a corresponding PG-18-12 Design Guide; one Design Guide can cover more than one PG-18-9 chapter.

Provider: An individual who examines, diagnoses, treats, prescribes medication, and manages the care of patients within his or her scope of practice as established by the governing body of a healthcare organization.

Room Area: The square footage required for a clinical or non-clinical function to take place in a room / space. It takes into account the floor area required by equipment (medical and non-medical), furniture, circulation, and appropriate function / code-mandated clearances. Room area is measured in Net Square Feet (NSF).

Room Code (RC): A unique five alpha-numeric code assigned to each room in the PG-18-9 Standard. Room Codes in PG-18-9 are unique to VA and are the basis for SEPS's Space Table for VA projects.

Room Criteria Statement (RCS): A mathematical / logical formulation assigned to each room / space included in PG-18-9 incorporating answers to Input Data Statements (IDSs) to determine the provision of the room / space in the baseline space program or Program for Design (PFD) for a project.

Room Efficiency Factor: A factor that provides flexibility in the utilization of a room to account for patient delays, scheduling conflicts, and equipment maintenance. Common factors are in the 75% to 85% range. A room with 80% room efficiency provides a buffer to assume that this room would be available 20% of the time beyond the planned operational practices for this room. This factor may be adjusted based on the actual and/or anticipated operations and processes of the room/department at a particular facility.

SEPS: Acronym for Space and Equipment Planning System which produces equipment lists and Program for Design for a healthcare project based on specific information entered in response to Input Data Questions.

SEPS Importer: A style-based format developed to allow upload of RCSs and IDSs to SEPS to implement and operationalize space planning criteria in PG-18-9 in the SEPS digital tool. This format establishes the syntax used in the RCSs and allows the use of Shortcuts. Shortcuts allow developers of space planning criteria statements to simplify RCSs making full use of their logical and mathematical functionality. A shortcut can refer to an RCS, a room in any FA or a formula. Shortcuts are [bracketed] when used in FAs and RCSs and are listed along with their equivalences at the end of the Space Planning Criteria section.



Space Planning Concept Matrix (SPCM): A working document developed during the chapter update process. It lists all the rooms organized by Functional Area and establishes ratios between the directly and the indirectly workload driven rooms for the planning range defined in this document. The matrix is organized in ascending workload values in ranges reflecting existing facilities and potential future increase. Section 5 of this document Space Planning Criteria reflects the values in the SPCM.

Stop Code: A measure of workload including clinic stops forecasted by the Office of Policy and Planning (OPP) for all Strategic Planning Categories at Medical Center and Outpatient Clinic levels.

Telehealth: The use of technology, such as computers and mobile devices, to manage healthcare remotely. It includes a variety of health care services, including but not limited to online support groups, online health information and self-management tools, email and online communication with health care providers, remote monitoring of vital signs, video, or online doctor visits. Depending on the concept of operations for this space, it may be equipped as an exam room or as a consult room with video/camera capability.

Utilization Rate: A factor used in the calculation of a directly workload-driven room throughput. It represents, in a percent value, the room is idle based on the planning assumptions. For example, if a directly workload-driven room is available for use 8 hours a day, the Utilization Rate represents the assumed time it will be actually be used, an 85% utilization rate indicates, for planning purposes, the room will be used 6.8 hours a day. An additional directly workload-driven room will be provided in the calculation once the previous room has reached 100% utilization. The utilization Rate is embedded in the Room Throughput value calculated in Section 3 of this document.

VA Room Family (VA RF): An organizational system of rooms / spaces grouped by function, a 'Room Family'. There are two "Orders" in the VA RF: Patient Care and Patient Care Support; Patient Care features four sub-orders: Clinical, Inpatient, Outpatient and Residential Clinical. There are also four sub-orders in the Patient Care Support order: Building Support, Clinical Support, Staff Support and Veteran Support. Each room in a Family has a unique Room Code and NSF assigned based on its Room Contents and function which correspond to the specific use of the room. The same RC can be assigned to different Room Names with the same function in this document and can be assigned an NSF that varies based on the PG-18-5 Room Contents assigned to the room.

VA Technical Information Library (TIL): A resource website maintained by the Facilities Standards Service (FSS) Office of Construction and Facilities Management (CFM) containing a broad range of technical publications related to the planning, design, leasing, and construction of VA facilities. VA-TIL can be accessed at: <https://www.cfm.va.gov/TIL/>

Workload: Workload is the anticipated number of procedures, clinic stops, clinic encounters etc. that is processed through a department/service area. The total workload applied to departmental operational assumptions will determine overall room requirements by modality.



Workstation: Area outfitted with equipment and furnishings, typically allocated 56 NSF each. Managers and other staff with no direct reports as well as part-time, seasonal, and job-sharing staff may qualify for a workstation. Such environments are particularly conducive to team-oriented office groupings. These environments work best when they have access to conference and small group meeting spaces.

3 OPERATING RATIONALE AND BASIS OF CRITERIA

- A. Space planning criteria included in this Standard have been specifically developed for this Department/ Service in a Department of Veterans Affairs healthcare facility based on established VHA policy and guidelines to define the scope of services provided for the existing workload demand as well as that in the foreseeable future. Rooms and Functional Areas are provided based on research of clinical and non-clinical activities performed in this Department.
- B. Development / update of VA's Program Guide (PG) standards is a research based effort executed with participation of VHA Subject Matter Experts (SMEs), VA-Construction and Facilities Management Office (CFM) professional staff and specialty consultants hired for the task. These space planning standards are based on current applicable VHA policies and guidelines, established and/or anticipated best practice standards, and latest medical technology developments. Workload metrics were tailored to satisfy current and anticipated veteran workload demand.
- C. The space planning component of PG-18-9 is based on the Space Planning Concept Matrix (SPCM) which lists all the rooms organized by Functional Area and assigns room quantity (Q) and area (NSF) for a series of ranges corresponding to the smallest to the largest department for this service in the VA healthcare system in incremental size; each range corresponds to a workload parameter which determines the number and area of each directly workload-driven room. The remainder of the rooms in the range i.e., waiting, storage, staff workstations, etc. are determined by ratios to the resulting number of or NSF of the workload-driven rooms.
- D. Sections 4 and 5 of these space planning standards as well as the PG-18-5 standard are implemented in the Space and Equipment Planning System (SEPS) and hosted at the MAX.gov website so planners working on VA Construction projects can develop single or multi-department projects based on these PG-18-9- and the PG-18-5 standards. Output from SEPS is through Space and Contents Reports; the Space Report is the Program for Design (PFD), the Content Report is the Project Room Contents (PRC). Inclusion of a Functional Area as well as Room quantity (Q) and determination of the room area (NSF) in the PFD is based on the projected Workload input which triggers calculations included in the Room Criteria Statements (RCSs). The RCSs are placed immediately after each room name, room code and baseline area (NSF). The PRC list the medical equipment, furniture and fixtures associated to each Room Code in the project. The PFD & PRC are the baseline requirements for the planning phase of a VA project based on a site's projected workload for the target planning year. This chapter's corresponding PG-18-12, Design Guide -if available- is intended for use during the design phase of the project.



- E. Space Planning parameters and metrics in this document are based on the Dialysis Center Space Planning Criteria Matrix (SPCM) developed as the basis for this chapter. The Dialysis Center SPCM lists all the spaces a VA Dialysis Center site would require; the quantity and NSF for each room is calculated based on the Dialysis Center projected workload or number of FTE positions authorized. The SPCM is organized in 22 ranges, each range represents an incremental workload value equivalent an averaged annual Dialysis Station throughput of 530 encounters, covering a range of 94 to 11,660 annual encounters, this way all current VA Dialysis Center sites are covered in the SPCM. The upper ranges are calculated for future facilities in case a higher projected workload.
- F. The SPCM metrics are translated into one (or more) Room Criteria Statement (RCS) for each room in Section 5 of this document. The SPCM Planning Range, the maximum number of directly workload-driven patient care rooms, in this document is 10. If a project shall require provision of workload driven rooms above the maximum range value refer to CFM for guidance. Rooms in this space planning document are organized in 5 Functional Areas (FAs).
- G. Based on its intended function, each room / space is assigned a:
 - 1. Room Name (RN),
 - 2. Room Code (RC),
 - 3. Room Area, the Net Square Feet (NSF) and its corresponding “soft metric” Net Square Meters (NSM),
 - 4. Unique Room Criteria Statement(s) (RCSs) correlated to answers to Input Data Statements (IDSs), and
 - 5. Room Comment as needed.
- H. The Room Codes included in this chapter stem from the VA Room Family. A unique support space, that may have variable area, is assigned a unique Room Code and adopts the square footage, as needed, correlated to the room contents assigned which in turn correspond to the range for those rooms. A unique clinical space or a direct clinical support room, i.e., control room, system components room, etc. typically does not feature variable NSF. Patient Care room names for rooms unique to this chapter end in “, Dlsys Ctr”. Patient Care Support room names end in “, Bldg Sprt”, “Clncl Sprt”, “Stff Sprt”, or “, Vet Sprt”, correlating to Building, Clinical, Staff or Veteran Support room families.
- I. Section 5, Sub-Section F lists the SEPS Importer Shortcuts used for implementation of Sections 4 & 5 in SEPS. These shortcuts are inserted into the Room Criteria Statement (RCS) for each room which upon upload into the Space and Equipment Planning System (SEPS) allowing planners developing VA healthcare projects to determine quantity and square footage of each room by performing mathematical or logical calculations. Shortcuts refer Input Data Statements (IDSs), Rooms or calculation parameters stemming from the SPCM.



- J. SEPS is accessible to government healthcare planners and private sector consultants working on VA HC projects during their Period of Performance (PoP) through the MAX.gov website; government provided Training is a requisite for access.
- K. SEPS incorporates a Net-to-Department Gross factor (NTDG) factor of **1.50** for Dialysis Center and a Building Gross factor of 1.35 in the space calculation to generate the Department Gross Square Feet (DGSF) and the Building Gross Square Feet (BGSF) respectively for the project based on the aggregate resulting Net Square Feet (NSF) for each range. Planners can adjust the BGSF factor in SEPS; the NTDG factor is fixed.
- L. Refer to the chapter corresponding PG-18-5 Equipment Guidelist for the Room Content assignment for each room during the planning phase of a project.
- M. Refer to the chapter corresponding PG-18-12: Design Guide, if available, during the planning and design phases of a project. Not all PG-18-9 clinical chapters have a corresponding PG-18-12 document, please refer to the VA-TIL.
- N. The space planning and design Program Guides: PG-18-9, PG-18-5, and PG-18-12 are available at the [Department of Veterans Affairs Office of Construction and Facilities Management \(CFM\) Technical Information Library \(TIL\)](#) website.

4 INPUT DATA STATEMENTS (IDS)

- A. How many annual Renal Dialysis Center Clinic stops are projected? (W) (Values: 94 to 11,660)

5 SPACE PLANNING CRITERIA

For functional descriptions of key spaces refer to the Design Guide for Dialysis Center.

A. FA 1: RECEPTION AREA

- 1. **Dlsys Ctr Waiting, Bldg Sprt (SB003) 80 NSF (7.5 NSM)**
 - a. Provide one if [number of Dialysis Stations] is between 1 and 3
 - b. Provide one at 110 NSF if [number of Dialysis Stations] is between 4 and 5
 - c. Provide one at 150 NSF if [number of Dialysis Stations] is between 6 and 7
 - d. Provide one at 190 NSF if [number of Dialysis Stations] is between 8 and 9
 - e. Provide one at 240 NSF if [number of Dialysis Stations] is between 10 and 11
 - f. Provide one at 275 NSF if [number of Dialysis Stations] is between 12 and 13
 - g. Provide one at 310 NSF if [number of Dialysis Stations] is between 14 and 15
 - h. Provide one at 350 NSF if [number of Dialysis Stations] is between 16 and 17
 - i. Provide one at 395 NSF if [number of Dialysis Stations] is between 18 and 19
 - j. Provide one at 415 NSF if [number of Dialysis Stations] is between 20 and 22
- 2. **Dlsys Ctr Reception, Clncl Sprt (SC183) 85 NSF (7.9 NSM)**
 - a. Provide one if [number of Dialysis Stations] is between 1 and 10
 - b. Provide one at 260 NSF if [number of Dialysis Stations] is between 11 and 22

Allocated NSF accommodates two Receptionist FTEs, patient privacy area, and circulation.



- 3. Dlsys Ctr Visitor Toilet, Bldg Sprt (SB191) 60 NSF (5.6 NSM)**
 - a. Provide two if [number of Dialysis Stations] is between 1 and 22*

Allocated NSF accommodates one accessible toilet @ 25 NSF, one accessible wall-hung lavatory @ 13 NSF, ABA clearances, and circulation. One for male and one for female.

B. FA 2: PATIENT AREA

- 1. Bed Station, Dlsys Ctr (CDL01)150 NSF (14.0 NSM)**
 - a. Provide one if [Renal Dialysis Center Clinic stops projected] is between 94 and 5,300*
 - b. Provide two if [Renal Dialysis Center Clinic stops projected] is between 5,301 and 11,660*

Private Bed Stations are enclosed rooms, though still visually and audibly observable from the Nurse Station, for patients requiring singular privacy or blood borne infection isolation but not airborne infection isolation. These rooms accommodate patients who might agitate other patients, or be caused anxiety by others, or who are known to have blood borne pathogens.

- 2. Dlsys Ctr Bed Station Patient Toilet, Bldg Sprt (SB201) 60 NSF (5.6 NSM)**
 - a. Provide one per each [Bed Station, Dlsys Ctr (CDL01)]*
- 3. Isolation Negative Pressure Bed Station, Dlsys Ctr (CDL03)150 NSF (14.0 NSM)**
 - a. Provide one if [Renal Dialysis Center Clinic stops projected] is between 94 and 5,300*
 - b. Provide two if [Renal Dialysis Center Clinic stops projected] is between 5,301 and 11,660*

These rooms isolate airborne contagious or infectious patients to protect other patients and should be allocated on a per-project basis.

- 4. Dlsys Ctr Isolation Bed Station Patient Toilet, Bldg Sprt (SB201) 60 NSF (5.6 NSM)**
 - a. Provide one per each [Isolation Negative Pressure Bed Station, Dlsys Ctr (CDL03)]*



- 5. Chair Station Cubicle, Dlsys Ctr (CDL05)..... 80 NSF (7.5 NSM)**
- a. *Provide one if [Renal Dialysis Center Clinic stops projected] is between 94 and 2,120*
 - b. *Provide two if [Renal Dialysis Center Clinic stops projected] is between 2,121 and 2,650*
 - c. *Provide three if [Renal Dialysis Center Clinic stops projected] is between 2,651 and 3,180*
 - d. *Provide four if [Renal Dialysis Center Clinic stops projected] is between 3,181 and 3,710*
 - e. *Provide five if [Renal Dialysis Center Clinic stops projected] is between 3,711 and 4,240*
 - f. *Provide six if [Renal Dialysis Center Clinic stops projected] is between 4,241 and 5,300*
 - g. *Provide five if [Renal Dialysis Center Clinic stops projected] is between 5,301 and 5,830*
 - h. *Provide six if [Renal Dialysis Center Clinic stops projected] is between 5,831 and 6,360*
 - i. *Provide seven if [Renal Dialysis Center Clinic stops projected] is between 6,361 and 6,890*
 - j. *Provide eight if [Renal Dialysis Center Clinic stops projected] is between 6,891 and 7,420*
 - k. *Provide nine if [Renal Dialysis Center Clinic stops projected] is between 7,421 and 7,950*
 - l. *Provide ten if [Renal Dialysis Center Clinic stops projected] is between 7,951 and 8,480*
 - m. *Provide eleven if [Renal Dialysis Center Clinic stops projected] is between 8,481 and 9,010*
 - n. *Provide twelve if [Renal Dialysis Center Clinic stops projected] is between 9,011 and 9,540*
 - o. *Provide thirteen if [Renal Dialysis Center Clinic stops projected] is between 9,541 and 10,070*
 - p. *Provide fourteen if [Renal Dialysis Center Clinic stops projected] is between 10,071 and 11,130*
 - q. *Provide fifteen if [Renal Dialysis Center Clinic stops projected] is between 11,131 and 11,660*

Cubicle Chair Stations are the most common Dialysis Station. They include a mobile reclining chair and are not enclosed rooms.



- 6. Bed Station Cubicle, Dlsys Ctr (CDL07)..... 100 NSF (9.3 NSM)**
 - a. *Provide one if [Renal Dialysis Center Clinic stops projected] is between 94 and 4,770*
 - b. *Provide two if [Renal Dialysis Center Clinic stops projected] is between 4,771 and 10,600*
 - c. *Provide three if [Renal Dialysis Center Clinic stops projected] is between 10,601 and 11,660*

Cubicle Bed Stations are usually open for patients who arrive stretcher- or bed-bound but do not require isolation or singular privacy. These are not enclosed rooms.

- 7. Dlsys Ctr Nurse Station, Clncl Sprt (SC152)120 NSF (11.2 NSM)**
 - a. *Provide one if [number of Dialysis Stations] is between 1 and 10*
 - b. *Provide two if [number of Dialysis Stations] is between 11 and 22*
- 8. Exam Room, Dlsys Ctr (CDL11)120 NSF (11.2 NSM)**
 - a. *Provide one if [number of Dialysis Stations] is between 1 and 9*
 - b. *Provide two if [number of Dialysis Stations] is between 10 and 22*

This room is used for physical exams prior to treatment; to implant cannulas; to remove clots from shunts; and to perform special examinations, treatment, or kidney biopsies.

- 9. Renal Transplant Follow-up Exam Room, Dlsys Ctr (CDL13)120 NSF (11.2 NSM)**
 - a. *Provide one if [number of Dialysis Stations] is between 1 and 15*
 - b. *Provide two if [number of Dialysis Stations] is between 16 and 22*
- 10. Dlsys Ctr Consult Room, Clncl Sprt (SC271)120 NSF (11.2 NSM)**
 - a. *Provide one if [number of Dialysis Stations] is between 1 and 10*
 - b. *Provide two if [number of Dialysis Stations] is between 11 and 22*
- 11. Dlsys Ctr Staff Training Room, Educ Svc (SS111) 100 NSF (9.3 NSM)**
 - a. *Provide one if [number of Dialysis Stations] is between 1 and 10*
 - b. *Provide two if [number of Dialysis Stations] is between 11 and 22*
- 12. Dlsys Ctr Patient Toilet, Bldg Sprt (SB201) 60 NSF (5.6 NSM)**
 - a. *Provide one if [number of Dialysis Stations] is between 1 and 10*
 - b. *Provide two if [number of Dialysis Stations] is between 11 and 22*

Allocated NSF accommodates one accessible toilet @ 25 NSF, one accessible wall-hung lavatory @ 13 NSF, ABA clearances, and circulation. If a Biochemistry Lab is authorized, patient toilets shall be used to pass specimens into the lab.

- 13. Dlsys Ctr Patient Locker Room, Bldg Sprt (SB208)..... 100 NSF (9.3 NSM)**
 - a. *Provide one if [number of Dialysis Stations] is between 1 and 5*
 - b. *Provide one at 120 NSF if [number of Dialysis Stations] is between 6 and 10*
 - c. *Provide one at 140 NSF if [number of Dialysis Stations] is between 11 and 15*
 - d. *Provide one at 160 NSF if [number of Dialysis Stations] is between 16 and 22*



C. FA 3: SUPPORT AREA

- 1. Dlsys Ctr Soiled Utility Room, Lgstcs Svc (SB743) 80 NSF (7.5 NSM)**
 - a. Provide one if [number of Dialysis Stations] is between 1 and 5
 - b. Provide one at 100 NSF if [number of Dialysis Stations] is between 6 and 10
 - c. Provide one at 120 NSF if [number of Dialysis Stations] is between 11 and 15
 - d. Provide one at 140 NSF if [number of Dialysis Stations] is between 16 and 22

- 2. Dlsys Ctr Clean Utility Room, Lgstcs Svc (SB737) 100 NSF (9.3 NSM)**
 - a. Provide one if [number of Dialysis Stations] is between 1 and 5
 - b. Provide one at 120 NSF if [number of Dialysis Stations] is between 6 and 10
 - c. Provide one at 140 NSF if [number of Dialysis Stations] is between 11 and 15
 - d. Provide one at 180 NSF if [number of Dialysis Stations] is between 16 and 22

- 3. Dlsys Ctr Clean Supply Storage Room, Dlsys Ctr (CDL21)..... 80 NSF (7.5 NSM)**
 - a. Provide one if [number of Dialysis Stations] is between 1 and 5
 - b. Provide one at 100 NSF if [number of Dialysis Stations] is between 6 and 10
 - c. Provide one at 120 NSF if [number of Dialysis Stations] is between 11 and 15
 - d. Provide one at 140 NSF if [number of Dialysis Stations] is between 16 and 22

This room accommodates one week’s supply of disposable and non-sterile supplies such as, but not limited to: dialysate acid concentrate, dialysate bicarbonate, vinegar, bleach, dialyzers, blood lines, and plastic aprons

- 4. Sterile Supply Storage Room, Dlsys Ctr (CDL28)..... 80 NSF (7.5 NSM)**
 - a. Provide one if [number of Dialysis Stations] is between 1 and 5
 - b. Provide one at 100 NSF if [number of Dialysis Stations] is between 6 and 10
 - c. Provide one at 120 NSF if [number of Dialysis Stations] is between 11 and 15
 - d. Provide one at 140 NSF if [number of Dialysis Stations] is between 16 and 22

- 5. Dlsys Ctr Clean Linen Room, EMS (SC471) 60 NSF (5.6 NSM)**
 - a. Provide one if [number of Dialysis Stations] is between 1 and 5
 - b. Provide one at 70 NSF if [number of Dialysis Stations] is between 6 and 10
 - c. Provide one at 80 NSF if [number of Dialysis Stations] is between 11 and 15
 - d. Provide one at 90 NSF if [number of Dialysis Stations] is between 16 and 22

- 6. Equipment Storage Room, Dlsys Ctr (CDL31) 100 NSF (9.3 NSM)**
 - a. Provide one if [number of Dialysis Stations] is between 1 and 5
 - b. Provide one at 120 NSF if [number of Dialysis Stations] is between 6 and 10
 - c. Provide one at 140 NSF if [number of Dialysis Stations] is between 11 and 15
 - d. Provide one at 160 NSF if [number of Dialysis Stations] is between 16 and 22

- 7. Dlsys Ctr Nourishment Room, F&N Svc (SV272)..... 80 NSF (7.5 NSM)**
 - a. Provide one if [number of Dialysis Stations] is between 1 and 5
 - b. Provide one at 100 NSF if [number of Dialysis Stations] is between 6 and 10
 - c. Provide one at 120 NSF if [number of Dialysis Stations] is between 11 and 15
 - d. Provide one at 140 NSF if [number of Dialysis Stations] is between 16 and 22



- 8. Dlsys Ctr Medication Room, Phrm Svc (SV583) 80 NSF (7.5 NSM)**
a. Provide one if [number of Dialysis Stations] is between 1 and 5
b. Provide one at 100 NSF if [number of Dialysis Stations] is between 6 and 15
c. Provide one at 120 NSF if [number of Dialysis Stations] is between 16 and 22

- 9. Dlsys Ctr Crash Cart Alcove, Clncl Sprt (SC052) 20 NSF (1.9 NSM)**
a. Provide one if [number of Dialysis Stations] is between 1 and 10
b. Provide two if [number of Dialysis Stations] is between 11 and 22

- 10. Biochemistry Laboratory, Dlsys Ctr (CDL41).....180 NSF (16.8 NSM)**
a. Provide one if [number of Dialysis Stations] is between 1 and 10
b. Provide one at 240 NSF if [number of Dialysis Stations] is between 11 and 22

This area minimally includes urine and blood chemical analyzers and an undercounter refrigerator.

- 11. Venipuncture Laboratory, Dlsys Ctr (CDL46)..... 80 NSF (7.5 NSM)**
a. Provide one if [number of Dialysis Stations] is between 1 and 10
b. Provide one at 120 NSF if [number of Dialysis Stations] is between 11 and 22

This room must be located adjacent to the lab and must be easily accessible to patients. The phlebotomy chair must be suitable for bariatric patients.

- 12. Equipment Processing / Soiled Receiving, Dlsys Ctr (CDL51)150 NSF (14.0 NSM)**
a. Provide one if [number of Dialysis Stations] is between 1 and 10
b. Provide one at 200 NSF if [number of Dialysis Stations] is between 11 and 22

This room is the first component of a threefold process in the one-way flow of re-usable materiel from soiled to clean and accommodates soiled holding, decontamination, and washing functions.

- 13. Equipment Processing /
Clean Preparation, Dlsys Ctr (CDL61)200 NSF (18.6 NSM)**
a. Provide one if [number of Dialysis Stations] is between 1 and 10
b. Provide one at 240 NSF if [number of Dialysis Stations] is between 11 and 22

This room is the second component of a threefold process in the one-way flow of re-usable materiel from soiled to clean and accommodates sorting, sterilizing, assembly, repackaging, and labeling functions.

- 14. Equipment Processing /
Clean Storage Room, Dlsys Ctr (CDL64)200 NSF (18.6 NSM)**
a. Provide one if [number of Dialysis Stations] is between 1 and 10
b. Provide one at 240 NSF if [number of Dialysis Stations] is between 11 and 22

This room is the third component of a threefold process in the one-way flow of re-usable materiel from soiled to clean and accommodates storage, including refrigerated storage and, if authorized, mobile dialysis equipment.



- 15. Medical Repair Room, Dlsys Ctr (CDL71)150 NSF (14.0 NSM)**
 - a. Provide one if [number of Dialysis Stations] is between 1 and 10
 - b. Provide one at 200 NSF if [number of Dialysis Stations] is between 11 and 22
- 16. Dialysate Preparation Room, Dlsys Ctr (CDL73)150 NSF (14.0 NSM)**
 - a. Provide one if [number of Dialysis Stations] is between 1 and 10
 - b. Provide one at 200 NSF if [number of Dialysis Stations] is between 11 and 22
- 17. Water Treatment Room, Dlsys Ctr (CDL81)200 NSF (18.6 NSM)**
 - a. Provide one if [number of Dialysis Stations] is between 1 and 10
 - b. Provide one at 240 NSF if [number of Dialysis Stations] is between 11 and 22

This room accommodates the equipment and supplies, including consumable products, for all dialysis-required forms of water treatment.

- 18. Dlsys Ctr Wheelchair / Stretcher Alcove, Bldg Sprt (SB252) 50 NSF (4.7 NSM)**
 - a. Provide one if [number of Dialysis Stations] is between 1 and 5
 - b. Provide two if [number of Dialysis Stations] is between 6 and 10
 - c. Provide three if [number of Dialysis Stations] is between 11 and 15
 - d. Provide four if [number of Dialysis Stations] is between 16 and 22

This space must accommodate non-folding bariatric type wheelchairs in addition to standard folding wheelchairs and, occasionally, a transport stretcher or a mobile dialysis chair which has been moved temporarily from a cubicle to accommodate a patient's bed or stretcher. Most patients who arrive stretcher- or bed-bound do not transfer to chairs or another stretcher or bed during their dialysis procedure.

- 19. Dlsys Ctr Housekeeping Aides Closet (HAC), Bldg Sprt (SB244) 60 NSF (5.6 NSM)**
 - a. Provide one if [number of Dialysis Stations] is between 1 and 10
 - b. Provide one at 80 NSF if [number of Dialysis Stations] is between 11 and 22

D. FA 4: STAFF AND ADMINISTRATIVE AREA

- 1. Dlsys Ctr Dialysis Service Chief Office, Stff Sprt (SS204) 100 NSF (9.3 NSM)**
 - a. Provide one if [number of Dialysis Stations] is between 1 and 22
- 2. Dlsys Ctr Assistant Chief Office, Stff Sprt (SS204) 100 NSF (9.3 NSM)**
 - a. Provide one if [number of Dialysis Stations] is between 6 and 22
- 3. Dlsys Ctr Visitor Waiting, Bldg Sprt (SB003) 80 NSF (7.5 NSM)**
 - a. Provide one if [number of Dialysis Stations] is between 1 and 22

Allocated space accommodates one standard chair @ 9 NSF, one bariatric chair @ 14 NSF, one accessible space @ 10 NSF, and circulation; total three people.

- 4. Dlsys Ctr Administration Support Workstation, Stff Sprt (SS218) 56 NSF (5.3 NSM)**
 - a. Provide one if [number of Dialysis Stations] is between 1 and 10
 - b. Provide two if [number of Dialysis Stations] is between 11 and 22



5. **Dlsys Ctr Physician Workstation, Stff Sprt (SS218) 56 NSF (5.3 NSM)**
 - a. *Provide one if [number of Dialysis Stations] is between 1 and 5*
 - b. *Provide two if [number of Dialysis Stations] is between 6 and 10*
 - c. *Provide three if [number of Dialysis Stations] is between 11 and 15*
 - d. *Provide four if [number of Dialysis Stations] is between 16 and 22*
6. **Dlsys Ctr**
 - PA / Resident / Intern Workstation, Stff Sprt (SS218) 56 NSF (5.3 NSM)**
 - a. *Provide two if [number of Dialysis Stations] is between 1 and 5*
 - b. *Provide three if [number of Dialysis Stations] is between 6 and 10*
 - c. *Provide four if [number of Dialysis Stations] is between 11 and 15*
 - d. *Provide five if [number of Dialysis Stations] is between 16 and 22*
7. **Dlsys Ctr Chief Nurse Office, Stff Sprt (SS204) 100 NSF (9.3 NSM)**
 - a. *Provide one if [number of Dialysis Stations] is between 1 and 22*
8. **Dlsys Ctr Chemist Workstation, Stff Sprt (SS218) 56 NSF (5.3 NSM)**
 - a. *Provide one if [number of Dialysis Stations] is between 1 and 10*
 - b. *Provide two if [number of Dialysis Stations] is between 11 and 22*
9. **Dlsys Ctr Dietician Workstation, Stff Sprt (SS218) 56 NSF (5.3 NSM)**
 - a. *Provide one if [number of Dialysis Stations] is between 1 and 10*
 - b. *Provide two if [number of Dialysis Stations] is between 11 and 22*
10. **Dlsys Ctr Social Worker Workstation, Stff Sprt (SS218) 56 NSF (5.3 NSM)**
 - a. *Provide one if [number of Dialysis Stations] is between 1 and 10*
 - b. *Provide two if [number of Dialysis Stations] is between 11 and 22*
11. **Dlsys Ctr**
 - Education Coordinator Workstation, Stff Sprt (SS218) 56 NSF (5.3 NSM)**
 - a. *Provide one if [number of Dialysis Stations] is between 1 and 10*
 - b. *Provide two if [number of Dialysis Stations] is between 11 and 22*
12. **Dlsys Ctr Clerical Workstation, Stff Sprt (SS218) 56 NSF (5.3 NSM)**
 - a. *Provide one if [number of Dialysis Stations] is between 1 and 10*
 - b. *Provide two if [number of Dialysis Stations] is between 11 and 22*
13. **Dlsys Ctr Assistant Chemist Workstation, Stff Sprt (SS218) 56 NSF (5.3 NSM)**
 - a. *Provide one if [number of Dialysis Stations] is between 1 and 22*
14. **Dlsys Ctr Assistant Dietitian Workstation, Stff Sprt (SS218) 56 NSF (5.3 NSM)**
 - a. *Provide one if [number of Dialysis Stations] is between 1 and 22*
15. **Dlsys Ctr**
 - Assistant Education Coordinator Workstation, Stff Sprt (SS218) 56 NSF (5.3 NSM)**
 - a. *Provide one if [number of Dialysis Stations] is between 1 and 22*
16. **Dlsys Ctr Lead Technician Workstation, Stff Sprt (SS218) 56 NSF (5.3 NSM)**
 - a. *Provide one if [number of Dialysis Stations] is between 1 and 10*
 - b. *Provide two if [number of Dialysis Stations] is between 11 and 22*



- 17. Dlsys Ctr Student / Trainee Workstation, Stff Sprt (SS216) 36 NSF (3.4 NSM)**
a. Provide two if [number of Dialysis Stations] is between 1 and 5
b. Provide three if [number of Dialysis Stations] is between 6 and 10
c. Provide four if [number of Dialysis Stations] is between 11 and 15
d. Provide five if [number of Dialysis Stations] is between 16 and 22

- 18. Dlsys Ctr Support Technician Workstation, Stff Sprt (SS218) 56 NSF (5.3 NSM)**
a. Provide one if [number of Dialysis Stations] is between 1 and 10
b. Provide two if [number of Dialysis Stations] is between 11 and 22

- 19. Dlsys Ctr Laboratory Technician Workstation, Stff Sprt (SS218) 56 NSF (5.3 NSM)**
a. Provide one if [number of Dialysis Stations] is between 1 and 10
b. Provide two if [number of Dialysis Stations] is between 11 and 22

- 20. Dlsys Ctr Resident / Staff Training Room, Educ Svc (SS111)240 NSF (22.3 NSM)**
a. Provide one if [number of Dialysis Stations] is between 1 and 5
b. Provide one at 300 NSF if [number of Dialysis Stations] is between 6 and 10
c. Provide one at 545 NSF if [number of Dialysis Stations] is between 11 and 22

Allocated NSF accommodates ten conference chairs @ 7.5 NSF each, four 5'-0" x 2'-0" tables at 10 NSF each, one credenza @ 8 NSF, and circulation; total ten people.

- 21. Dlsys Ctr Staff Breakroom, Stff Sprt (SS262)120 NSF (11.2 NSM)**
a. Provide one if [number of Dialysis Stations] is between 1 and 5
b. Provide one at 140 NSF if [number of Dialysis Stations] is between 6 and 10
c. Provide one at 160 NSF if [number of Dialysis Stations] is between 11 and 15
d. Provide one at 180 NSF if [number of Dialysis Stations] is between 16 and 22

- 22. Dlsys Ctr Female Staff Locker Room, Stff Sprt (SS282) 100 NSF (9.3 NSM)**
a. Provide one if [number of Dialysis Stations] is between 1 and 10
b. Provide one at 140 NSF if [number of Dialysis Stations] is between 6 and 22

Provide locker space only for those FTEs without assigned office or workspace. For less than five FTE combine Locker Room facilities with adjacent department or sum in chapter 410.

- 23. Dlsys Ctr Female Staff Toilet, Bldg Sprt (SB191) 60 NSF (5.6 NSM)**
a. Provide one if [number of Dialysis Stations] is between 1 and 10
b. Provide two if [number of Dialysis Stations] is between 6 and 22

Allocated NSF accommodates one accessible toilet @ 25 NSF, one wall-hung lavatory @ 12 NSF, ABA clearances, and circulation.

- 24. Dlsys Ctr Male Staff Locker Room, Stff Sprt (SS282) 100 NSF (9.3 NSM)**
a. Provide one if [number of Dialysis Stations] is between 1 and 10
b. Provide one at 140 NSF if [number of Dialysis Stations] is between 6 and 22

Provide locker space only for those FTEs without assigned office or workspace. For less than five FTE combine Locker Room facilities with adjacent department or sum in chapter 410.



- 25. Dlsys Ctr Male Staff Toilet, Bldg Sprt (SB191) 60 NSF (5.6 NSM)**
a. *Provide one if [number of Dialysis Stations] is between 1 and 10*
b. *Provide two if [number of Dialysis Stations] is between 6 and 22*

Allocated NSF accommodates one accessible toilet @ 25 NSF, one wall-hung lavatory @ 12 NSF, ABA clearances, and circulation.

E. FA 5: EDUCATION AREA

- 1. Dlsys Ctr Residency Director Office, Stff Sprt (SS204) 100 NSF (9.3 NSM)**
a. *Provide one if [number of Dialysis Stations] is between 1 and 22*
- 2. Dlsys Ctr Resident Training Room, Educ Svc (SS111)545 NSF (50.7 NSM)**
a. *Provide one if [number of Dialysis Stations] is between 1 and 10*
b. *Provide one at 590 NSF if [number of Dialysis Stations] is between 11 and 22*

Allocated NSF accommodates six conference chairs @ 7.5 NSF each, two 5'-0" x 2'-0" tables at 10 NSF each, one credenza @ 8 NSF, and circulation; total six people.

F. SEPS IMPORTER SHORTCUTS

The following shortcuts are used in the Room Criteria Statements in the Dialysis Center Functional Areas. These shortcuts are used during upload of this document into the Space and Equipment Planning System (SEPS) software during implementation of the space planning parameters contained herewith to allow for mathematical or logical calculations to be performed. Input Data Statements (IDSs), Rooms or a partial calculation formula can have a shortcut.

- number of Dialysis Stations: [Chair Station Cubicle, Dlsys Ctr (CDL05)] + [Bed Station Cubicle, Dlsys Ctr (CDL07)] + [Bed Station, Dlsys Ctr (CDL01)] + [Isolation Negative Pressure Bed Station, Dlsys Ctr (CDL03)]*
- Renal Dialysis Center Clinic stops projected: [How many annual Renal Dialysis Center Clinic stops are projected?]*

6 PLANNING AND DESIGN CONSIDERATIONS

- Outpatients shall have convenient access to the Dialysis Center from parking areas and public transportation. Inpatients should have a secluded access which accommodates the passage of bariatric size patient transport devices.
- The Nurse Station(s) must have a clear visual line of observation of each patient station and each patient toilet room entrance. Each Nurse Station shall observe no more than ten patient stations; and, when multiple Nurse Stations are required, they shall be arranged to each observe as equal a share of the Dialysis Stations as possible.
- Dialysis patients are highly susceptible to infections. Set the Dialysis Center in an area which will prevent cross-flow by other patients and staff; provide strategically placed and accessible hand washing stations throughout the patient treatment areas; and locate each dialysate return receptacle on the wall, centered at each patient station, and at a height such that it is easily accessible to clean repeatedly each day.



- D. Provide 4'-0" (1.22m) minimum clearance between beds or chairs and a headwall at each Dialysis Station at least 10'-9" (3.28m) wide.
- E. The height of the dialysate receptacle shall be coordinated with the equipment and the preceding parameter to inhibit an excessively long dialysate return hose; and any architectural systems used to conceal the gravity drain must be easily removable such as not to impede decontamination or modifications.
- F. Dialysis patients are highly sensitive to and adversely affected by unsteady ranges of temperature, pressure, and humidity. Environmental systems must provide stable, consistent conditions.
- G. If the Dialysis Center Biochemistry Laboratory is not authorized, the blood and urine analyses must be performed by the Clinical Laboratory of the Medical Facility, and proximity must be considered as shown in the Functional Relationships Matrix below.
- H. If the Dialysis Center Biochemistry Laboratory is authorized, locate patient toilets adjacent to the lab, and provide a pass-through into the lab.
- I. Patient confidentiality must be maintained when providing personal information to interview clerks and/or other staff. The physical design of the space shall not encumber this requirement.
- J. Locate staff areas to be convenient to staff and separate from patient areas, and segregate patient and staff circulations. Since the Dialysis Center operates 24 hours a day / 365 days a year, its Staff Lounge, Staff Lockers, Staff Toilets, and Staff Showers should not be collocated with those of adjacent departments unless they are in close proximity and always accessible to the Dialysis Center staff.
- K. Dialysis equipment may connect directly into patient data information systems to input recordings of the treatment process. The designer must coordinate the interface of the equipment and the information system.
- L. Refer to Department of Veterans Affairs (VA) Office of Construction and Facilities Management Technical Information Library (www.cfm.va.gov/til/) for additional technical criteria.



7 FUNCTIONAL RELATIONSHIPS

Relationship of Dialysis Center to services listed below:

TABLE 1: FUNCTIONAL RELATIONSHIP MATRIX

SERVICES	FUNCTIONAL RELATIONSHIP
RSDNTL: SCI: LTC RCU	2
VET SPRT: PHRM Svc: Outpatient	2
OP: SCI OP	2
IP: SCI: AC PCU	2
IP: MS PCUs	2
VET SPRT: PHRM Svc: Inpatient	2
OP: CBMH: General	3
CLNCL SPRT: OIT: Server	3
BLDG SPRT: Logstcs Svc: Warehouse	3
CLNCL SPRT: OIT: Telecommunications	3
BLDG SPRT: ENG: Engineering Service (all specialties)	3
VET SPRT: Social Work	3
VET SPRT: Chaplain Svc: Worship	3
IP: MH PCUs	3
VET SPRT: Veterans Assistance	3
VET SPRT: Voluntary Svc	3
CLNCL SPRT: R&D: Health Services	3
CLNCL: Clncl Svc Adm: Medical Service	3
CLNCL: Clncl Svc Adm: Hospital Medicine	3
CLNCL: Emergency	3
OP: CBOP: Patient Care	3
IP: PRC: PCU	3
RSDNTL: PRC: RCUs	3

Legend:

1. High
2. Moderate
3. Minimal



8 FUNCTIONAL DIAGRAM

