

1.0 NARRATIVE

1.1 General Considerations

The Department of Veterans Affairs (VA) provides Nursing Home care in three settings:

1. VA Nursing Home Care Units (NHCUs)

These are owned and operated by the Department of Veterans Affairs. These facilities provide all levels of care with a focus on short stay including skilled nursing and rehabilitation. Eligibility requirements must be met.

2. Community Nursing Home Program.

These are community based facilities owned and operated by private enterprises. They provide all levels of care with a focus on long stay residents. Services for veterans may be contracted by the VA Medical Center of jurisdiction. Eligibility requirements for VA contracts must be met. Medicaid/Medicare or private pay are payment options for veterans not under VA contract in community Nursing Homes.

3. State Veterans Home (SVH) Program.

The State Veteran Home Program is a grant program whereby VA contributes a portion of construction and per diem costs. SVH's are owned and operated by the states. Quality oversight is provided by VA. Eligibility is limited to veteran status.

Typical stays in State Veterans Homes and in the Community Nursing Home Program are generally longer than in VA facilities. However, regardless of facility

setting, both short stay and long stay resident care are to be accommodated.

1.1.1 General Trends in Nursing Home Care Design

Historically, design layouts for Nursing Homes were derived from hospital design models with the understanding that care mimicked hospital care but was less intense. There was little to no clarity about the possibility of engaging the resident in life as fully as possible. This applies even to those with significant functional disability or impairment, permanent or temporary.

The profile of today's Nursing Home resident is that many, or most, are physically active in the facility. VA Nursing Home should be viewed from the perspective of a residential environment rather than a hospital. The interior of the Nursing Home facility should include features that serve the needs of the residents and should reflect that extended periods of time are spent indoors. VA Nursing Homes have committed to transforming the culture of Nursing Home care to embrace a more home-like environment. This culture should remain constant and evident throughout the design of the Nursing Home care facility.

In addition to providing for residents' healthcare needs, Veterans' Nursing Homes should include a variety of social activities. These activities should be located both on and off the unit, and should be customized according to mental and physical needs.

1.1.2 VA Trends in Nursing Home Care

The projected aging of the veteran population is an important driving force in the design of VA Nursing Homes.

VA realizes that those most vulnerable of the older veteran population, particularly those over 85, are most likely to require some level of care including short or long term institutional Nursing Home care.

Nursing Home care is only one aspect of a continuum of care. It is important that Veterans are placed in the least restrictive, most cost effective, and most desirable setting possible. Nursing Home care is reserved for those whose functional limitations and resources are such that institutional care is the best alternative.

VA's approach to Nursing Home care has evolved from a hospital focused model to one that is resident-centered and home-like. It has been determined that Nursing Homes should focus care resources around the individual resident instead of taking the resident to the point of care.

There are various types of services that Nursing Homes provide such as dementia care, spinal cord injury care, short stay skilled nursing, short stay rehabilitation, long stay maintenance, hospice and respite care. Understanding that each of these distinct services requires a unique set of competencies has implications for overall facility design.

Although VA owns and operates its own NHCUs, VA recognizes that the needs

of veterans may also be served by encouraging the individual states to develop state Nursing Homes in locations that are convenient to veteran populations.

1.1.3 Codes, Standards and Executive Orders

VA functions as the Authority Having Jurisdiction (AHJ) for all VA facilities and projects and has the responsibility to guard public health and safety through enforcement of its adopted codes. VA is not subject to enforcement of local and state codes.

Local authorities should be notified about planning projects and given the opportunity to review drawings. Although there are exceptions, formal drawing reviews, building permits, inspections and fees do not generally apply to Federal facilities.

Design, construction, renovation and installation of all VA Nursing Home Care Units (NHCUs) must be in accordance with this document and with the latest editions and/or revisions of all applicable codes and standards.

It is recommended that all other Nursing Homes serving US veterans, such as State Veterans Homes, also comply with the codes and standards referenced here. The more stringent code and/or standard are to be applied to VA facilities. Nothing in this Design Guide should be construed as authorization or permission to disregard or violate local and legal requirements.

1.2 Functional Considerations

1.2.1 Operations: Services

The Nursing Home is divided into the following functional areas:

1. *Resident Care Units* are organized into four sub-areas including bedrooms for the resident rooms and adjoining toilet/shower rooms, staff areas required to provide clinical support to operate the resident unit, resident areas for activities and dining, and unit support for utility, office and miscellaneous functions used to assist staff in managing resident units.

2. *Therapeutic Services* offer space adjacent to resident care units for the therapies such as physical therapy, occupational therapy and pharmacy.

3. *Resident Support Services* provide for the resident amenities and social services such as chapel/meditation, barber/beauty shop, and resident storage.

4. *Administrative Services* provide a variety of management and public functions: admissions/registration, lobby, medical records, and management offices.

5. *Logistical Services* provide for the supply needs of the facility and include receiving/loading, bulk stores, laundry and food preparation. The level of services provided depends on the building systems and the availability of contract services or those available from a host organization such as a medical center.

6. *Environmental and Maintenance Services* provide for the upkeep and protection of the facility and include housekeeping, maintenance/ engineering and security. The level of services provided depends on systems and the availability of contract services or those available from a host organization.

1.2.2 Operations: Concepts

The Nursing Home is organized around the following concepts:

1. *Resident Care* should be provided in spaces that are flexible enough to accommodate changing resident care needs. The spaces represented in the guide plates provide flexibility for future changes.

Resident care areas and other areas where staff interact with residents may require additional acoustical treatment to reinforce resident privacy.

2. *Level of Care* may vary in terms of levels of impairment and skilled care needs. Specific rooms and their interior design need to be coordinated with the expected level of care to be delivered. The size of resident units and individual spaces need to reflect level of care.

3. *Market Sensitivity* should be considered in the delivery of Nursing Home care services. In terms of amenities and service, Nursing Home facilities used by veterans need to be designed comparatively with private sector facilities and programs.

Nursing Home facilities need to be user-friendly for both the veteran and his or her family and staff.

4. *New Concepts* in the delivery of Nursing Home care should be considered. These include naming units or sub-units thematically instead of alphanumeric designations, eliminating and/or decentralizing nursing stations, and creating bright and inviting country kitchens for dining and socialization.

1.2.3 Space Planning and Design

1. *Flexibility*

The design of Nursing Home facilities needs to respond to changing workloads, care objectives, and technologies such as wireless technologies for staff.

- Spaces should be universally designed to accommodate a range of related functions.
- Generic plans should be developed to respond to changes in use and assignment.
- Special spaces need to be designed and grouped to accommodate a range of functions and to accommodate change if possible.

2. *Efficiency*

The design of Nursing Home facilities should provide resources to accommodate increasing health care demands.

- Support spaces, such as storage and utility rooms, should be designed to be shared where possible to reduce the overall need for space.
- Functions with requirements, such as facility supply and transport areas, should be grouped or combined to achieve efficiency of operation.

- Duplication of facilities should be minimized where limited resources are available.

3. *User Needs*

Resident dignity and respect for individuality should be accommodated while considering operational realities.

Resident vulnerability to stress from noise, lack of privacy, poor or inadequate lighting and other causes, and the subsequent harmful effect on well being, are known and documented phenomena.

An inherent opportunity exists in the design of Nursing Home facilities to address the above issues and to offer creative solutions to enhance resident comfort and contribute to positive outcomes.

A key architectural objective should be to reduce emphasis on the institutional aspects of care and to surround the resident and family with furniture, furnishings and fixtures that are more homelike, i.e., residential and comfortable.

Proper planning and design appeal to the spirit and sensibilities of both residents and care providers. A spirit of neighborhood or household should be encouraged.

Nursing Home facilities need to be environments of healing that allow the building itself to be part of the therapeutic setting. The technical requirements to operate the building should be unobtrusive and integrated in a manner to support this concept.

Sufficient space should be allocated for equipment and supplies to avoid storing or parking of medical equipment including medication carts and assistive devices in public view, in corridors, or in showers. Resident privacy needs to be provided while encouraging socialization and other group activities.

Security, both from a resident and a facility perspective, needs to be addressed by planning, design and detail considerations.

Access needs to be provided by application of UFAS and ADA design standards to room and fixed equipment layouts.

Most Nursing Home resident units need to be located at grade. For some specialty programs, such as dementia care, location at grade is mandatory.

1.2.4 Functional Relationships

1. Work Flow

The Functional Diagram reflects the function, organization of spaces, flow of residents/staff/materials, and operational issues. (See figure 1 4). These relationships should not be interpreted as preconceived or prescribed layouts.

2. Organizational Concepts

Where possible, facility planning and design should follow a modular concept to promote flexibility, encourage construction efficiencies, and promote staff orientation.

3. Space Allocation

Net square footage requirements discussed and shown in guide plates are intended to be consistent with

revisions to space planning criteria. Refer to Section 2.5 Guideplates, Reflected Ceiling Plans and Data Sheets.

1.3 Technical Considerations

1.3.1 Architectural

1. Partitions

Interior partitions primarily should be gypsum wallboard on metal studs that are either painted or wallpapered. Interior partitions around resident rooms should have sound attenuation features such as batts between studs. Other areas where significant noise may be generated also should have sound attenuation features.

Consideration should be given to acoustically treating spaces to minimize resident privacy issues.

2. Floors

Floors for the Nursing Home facility should not be reflective or glossy. Flooring should be readily cleanable and unaffected by germicidal cleaning solutions. In food consumption and preparation areas, floors should be water resistant.

Floors in resident living areas and other areas at high risk for spread of infections should be of non-porous material other than carpet such as vinyl composition tile. Carpeting can be used in a NHCU, however, the designer must be selective as to what type of carpet is proposed and where it is to be used. (See Section 2.3 Perception and Interiors)

Floors in high-traffic areas such as offices and administrative service areas should be carpeted with a 4" [100 mm] high resilient base.

Floors in toilet/shower rooms and bathing suites should be non-slip, ceramic tile with a non-slip, ceramic tile base. Floors in medical exam rooms, therapeutic services and most other spaces should be vinyl composition tile with a 4" [100 mm] high resilient base.

3. Ceilings

Ceilings primarily should be lay-in acoustic ceiling tile installed in an exposed or semi-concealed suspension system.

4. Protection/Safety

Continuous handrails should be used in resident hallways and other pathways. Wall and ceiling guard protection should be used in all areas subject to damage from cart or other service traffic.

5. Interior Doors and Hardware

Interior doors should be 1 3/4" [44 mm] thick, solid-core, flush-panel wood doors or hollow metal doors in hollow metal frames. Hollow metal doors should be used where high impact is a concern and where fire rated doors are required.

Interior door width for general resident rooms and toilet/shower rooms should be 48" [1220 mm]. Interior door width for special care resident rooms and toilet/shower rooms should be 48" [1220 mm].

Accessible hardware should be used throughout the Nursing Home facility. Automatic door openers should be used for the special care resident rooms.

1.3.2 Structural

Executive Orders 12699 and 12941 require that all new and existing buildings constructed or leased by the Federal Government be seismically safe. The EOs require that nationally recognized building codes be used for the seismic design and construction of new buildings, and for the seismic safety assessment of existing buildings. For structural systems, International Building Code, 2003 Edition, should be followed.

1.3.3 Equipment

1. Casework

Modular casework storage systems should be chosen for flexibility including the incorporation of dimensions for ease of multiple re-use applications. Casework systems should be integrated with space planning to avoid corner installations and filler panels.

2. Management Information Systems

Management Information Systems (MIS) should be planned and designed on an individual facility basis to meet needs. The amount of information that is assembled and distributed through MIS is increasing at a rapid rate and expansion to meet future needs should be considered.

3. Headwall Equipment Management Systems

The Nursing Home facility may be designed to accommodate headwall systems incorporating in-wall medical gases, nurse call, lighting, and power outlets.

1.3.4 Heating, Ventilation and Air Conditioning

1. Operation

HVAC systems should be provided to heat, cool and ventilate individual rooms or areas as required to satisfy design criteria.

2. Capacities

Supply air volume should be established to meet the cooling load requirements of the occupied space. The supply volume should be modified to meet minimum air change requirements or to maintain proper space pressurization relative to room exhaust requirements.

3. Air Quality and Distribution

Typically, clean areas such as clean utility should have positive air pressure and soiled areas such as soiled utility, toilet/shower rooms and storage rooms should have negative air pressure with respect to adjoining areas.

Corridors should not be used to supply or to exhaust/return air from rooms.

Corridor air may be used to ventilate toilets, housekeeping closets and small electrical or telephone closets opening directly on corridors.

HVAC design should minimize the short circuiting of air between supply and exhaust vents in rooms or areas.

4. Exhaust System

Exhaust systems should be designed to provide exhaust air to spaces to control the transfer of odors and provide proper room pressurization. Exhaust air and pressurization should be provided to match requirements for specific rooms or areas as specified in facility design.

5. Seismic (implications)

Where required, earthquake resistant design should be used for HVAC systems in accordance with current codes and standards.

6. Noise Level

HVAC equipment and ductwork should provide resulting sound levels not to exceed 45 maximum NC levels in dining areas, 40 maximum NC levels in toilet/shower rooms, and 35 maximum NC levels in all other occupied spaces.

1.3.5 Plumbing

1. Water and Waste Systems

Plumbing service should be extended to the facility to serve the domestic hot and cold and fire protection systems.

The Nursing Home facility's cold water should be piped to all required plumbing fixtures and equipment. Hot water should be piped to all required plumbing fixtures and equipment. A hot-water recirculation system should be provided.

Plumbing fixture types and flow restrictors should be in accordance with the most current version of the National Standard Plumbing Code (NSPC). Plumbing fixtures should comply with the most current version of ADA.

The facility's plumbing system should be drained by gravity through soil, waste and vent stacks. Medical waste should be drained through corrosion resistant piping into either a local or centralized acid dilution tank.

2. Medical Gas Systems

The Nursing Home facility may be designed to accommodate either in-wall medical gases or portable equipment.

Individual facilities should match resident needs for medical gases with the quantities and locations of medical gases during equipment planning.

3. *Seismic (implications)*

Where required, earthquake resistant design should be used for plumbing and medical gas systems in accordance with current codes and standards.

1.3.6 Electrical

1. *Illumination*

Lighting should comply with the Illuminating Engineering Society (IES) recommended levels. Natural light should be maximized and artificial light should be adequate for residents and staff.

Resident rooms should have as much natural light as possible from the outside; oversized windows to increase natural light and provide a “healing” view should be considered. General lighting, night lighting, and exam lighting are needed. A reading light should be provided for each resident. Reading light controls should be readily accessible to residents.

A minimum of one night light fixture in each resident room should be controlled at the room entrance. All light controls in resident rooms should be inaudible.

2. *Power*

General purpose duplex receptacles are typically provided on each wall of a room or area. Resident rooms and toilet/showers should have duplex, grounded receptacles.

Dedicated duplex or special receptacles are provided for selected pieces of

equipment such as refrigerators, freezers and ice makers.

Staff work stations and other locations where personal computers (PCs) are used, are typically provided with multiple receptacles for the PC, monitor, printers, and other related electrical devices.

Junction boxes are provided for equipment requiring a hardwired electrical connection.

An emergency generator should be provided as an electrical source for power and lighting during an interruption of the normal electric supply. Duplex receptacles that are marked or colored should be provided to connect key pieces of equipment to the critical branch of the emergency power system.

3. *Security*

Security issues include the elopement of residents, particularly for special populations such as residents with dementia and/or Alzheimer’s disease. Urban and suburban sites with elopement issues should study delayed egress locking systems, if permitted by the authority having jurisdiction (AHJ).

4. *Life Safety*

The life safety program should provide a reliable system to protect building occupants, firefighting personnel, building contents, building structure and continuity of building function. The intent should be to provide an enhanced level of fire safety by reducing the probability of injury, loss of life or diminution of building function due to a fire. By limiting the development and spread of a fire emergency to the area of origin, the need for total occupant evacuation should be minimized.

Facility design aspects that relate to fire and life safety include:

- Structural fire resistance;
- Building compartmentalization
- Fire detection, alarm and suppression
- Smoke control and exhaust
- Firefighting access/facilities
- Emergency power

New Nursing Home construction and renovation of areas of existing facilities are required to be fully protected by an automatic fire suppression system. Efforts should be made to balance need for such systems while maintaining a residential environment.

The minimum width of corridors in areas used by residents is 96" [2440 mm]. Corridors and passageways that are not used by residents may be 44" [1120 mm] or wider.

Staff stations and areas used by residents are permitted to be open to the corridors in the latest edition of codes from NFPA and UBC.

5. *Energy Conservation*

Energy conservation is emphasized in all aspects of the building design. Refer to the most recent version of ASHRAE Standard 90.1, as well as DOE regulations.

1.3.7 Communications

1. *Telephone*

Unless restricted by the program of services, a telephone should be available at each resident's bedside. In addition, there should be one private telephone available per resident unit for

residents who do not subscribe to private telephone service.

Telephone outlets are typically provided at each staff work station or in each room.

Wall outlets are 18" [450 mm] AFF and desk outlets are 48" [1200 mm] AFF.

2. *Information Systems*

Information systems needs include computer and electrical outlets available at all work stations including decentralized charting locations. Desk or workstation outlets are 48" [1200 mm] AFF.

3. *Nurse Call*

A staff call system is provided for all resident rooms, toilet/showers, and other spaces used by residents. Specific needs for call system locations should be coordinated with the functional design of resident spaces.

Wireless technologies for staff should be studied, along with hard wired or integrated systems, to meet the needs of individual facilities.

4. *Television*

Cable and electrical outlets for television should be provided at each resident bed area.

5. *Public Address*

Public address systems are required for Nursing Home facilities for code required fire and life safety communications. The use of a public address system for regular paging or staff communications should be avoided in the Nursing Home facility.

1.3.8 Waste Management

1. Medical Waste

Medical waste is generated in medical exam rooms or in resident rooms where it is bagged, collected and transported using specially designated, closed containers to the soiled utility rooms. The waste is held there until it is transported via the loading dock to the medical waste handling facility.

2. General Waste

General waste is generated in all spaces and is held in waste containers for collection. It is then collected by cart and transported via the loading dock to the waste handling facility.

3. Recycling

Means of sorting, collecting, transporting and disposing of recyclable materials should be analyzed by locality and modified to suit local conditions and practices.

Optional use of disposable and recyclable products is an important design consideration in recycling alternatives that impacts physical space for waste disposal volumes.

4. Soiled Linen

Reusable soiled linens are generated in medical exam rooms and resident rooms. They should be collected in carts or hampers in the soiled utility rooms and transported to a soiled linen holding room near the loading dock for pick-up.

5. Utensils

Any washable items incorporated in the plan of care should be transported to the soiled utility room for sanitizing. Some items may be transported to a sterile

processing department or service for cleaning and reprocessing.

Disposable bedpans, urinals and emesis basins are a viable option due to low volumes in the Nursing Home facility.

6. Space Requirements

Space requirements for Waste Management will vary based on selection of waste collection and recycling methods. Space requirements need to be studied for each optional method or system considered.

1.3.9 Transportation

1. Residents

Residents typically arrive at the main entrance via private transportation. Some residents may arrive via ambulance at the ambulance entrance. The main entrance should have a covered drop-off area.

Residents are usually accompanied by family or other caregivers. Clear site and facility organization through the use of directional signage is required to assist in directing the resident and others to their destination.

Vehicles transporting residents for admission via the emergency entrance should be clearly directed to this location. Convenient access from visitor parking should be provided.

Features such as clear access routes, public spaces, landmarks and signage are particularly important in the Nursing Home to facilitate wayfinding.

2. Staff

Staff entry to the Nursing Home facility should be separated from other traffic such as resident/visitor and service. Staff facilities should be located convenient to staff entry.

3. Records

Resident medical and financial records are maintained centrally and may be distributed and accessed electronically.

4. Specimens

Specimens are collected on the resident units and are transported to an off-site, reference laboratory for processing and reporting.

Effective means are necessary for maintaining and transporting specimens to insure quality.

5. Pharmaceuticals

Pharmaceuticals including narcotics are transported by pharmacy staff to individual resident units in locked transport containers. Narcotics are delivered to a locked medication cabinet in the medication room.

6. Material

Supply traffic (material) should be separated from resident/visitor traffic.

Clean supplies are transported via supply carts to the clean utility rooms on the individual resident units where supplies are accessed by staff.

7. Linen

Supply traffic (linen) should be separated from resident/visitor traffic. Clean and soiled linen are transported in linen carts.

8. Sterile Supplies

Sterile items used in the medical exam rooms are transported via dedicated closed carts. Sterile items also may be stored in the clean utility rooms.

9. Food

Efficient, cost-effective and safe food production is based on a continuous system with specific methods for raw product flow, preparation, cooking, assembly and dispensing.

Clean and soiled areas and products must be segregated to prevent cross-contamination. Finished products should be transported only a short distance if they are to remain safe for consumption.

10. Waste

Waste is collected by environmental services staff and transported to soiled utility rooms on the individual resident units and trash collection areas near loading docks where it is disposed according to facility policies.

1.4 FUNCTIONAL DIAGRAM

See diagram below.

