

Section 2

Narrative

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Narrative

General Considerations

Current Direction

The VA HealthCare system provides ambulatory care in two settings:

Community Based Outpatient Clinics

These are simple freestanding clinics located within the community setting to effectively provide convenient primary care.

Community Based Outpatient Clinics refer patients to hospital based Ambulatory Care Facilities for diagnosis and special care.

See the VA Design Guide of Community Based Outpatient Clinics for additional Guide Plates.

Ambulatory Care

The Ambulatory Care Facility is a hospital based patient care center providing special exam, treatment, and diagnostic services for acute and chronically ill patients.

Primary Care services may be provided as determined on a project basis.

Although the majority of Ambulatory Care patients are outpatients many inpatients may be treated in the ambulatory setting to eliminate duplication of services, facilities and staff.

VA Trends

VA budget allocations for hospital based ambulatory care may diminish in favor of primary care centers outside the hospital setting.

VA is evaluating how patients should be served, and how they should participate in their own care.

More accessible and convenient primary care is provided by smaller, community based, free-standing facilities of less than 930 m² (10,000 s.f.)

Hospital Based Ambulatory Care is likely to consist of highly specialized referral clinics, technologies, and staff that cannot afford to be duplicated in off-site Primary Care settings

VA funding is moving from a bed service orientated operation to an ambulatory care emphasis.

VA DESIGN GUIDE

AMBULATORY CARE (Hospital Based)

The VA is actively seeking sharing agreements with University, Army, Navy and Air Force facilities.

Obstetrics tends to be a contracted service due to limited demand within the VA system.

The VA has increased focus on women's medicine in response to increase in the population of women who are veterans.

A large percentage of the population served by the VA system will continue to be retired.

The VA health care system will continue to maintain a significant focus on physical therapy, prosthetics, and rehabilitation services.

Under managed care, the Veteran may chose their health program which can be extended to the spouse and other family members. Under this scenario the profile of the VA patient would change.

General Trends in Ambulatory Care

The continuing shift of selected diagnostic examinations and procedures to an out-patient setting has brought about the evolution of the Ambulatory Care Facility. These "hospitals without beds" may involve such diverse activities as surgery, sophisticated imaging systems, and both invasive and noninvasive diagnostic and therapeutic procedures.

Ambulatory Care Facilities may be connected to an existing hospital structure or they may be remotely located as part of the hospital's outreach program to a targeted population area. In either circumstance, ease of access and circulation for outpatients and their families is a primary planning objective. It is important to remember that patients are often experiencing a heightened sense of anxiety with regard to the status of their health. Their experiences in finding their way around an unfamiliar facility should not contribute to this anxiety. This is particularly important for first-time visitors.

The changes in medical technology and protocol, coupled with continuing readjustment of reimbursement patterns make ambulatory care a very volatile category of health services. For these reasons, **flexibility and expandability** are required attributes of the well-designed Ambulatory Care Facility.

Diagnostic Imaging Services and Surgical Services are the types of programs that will require specialized electrical, ventilation and shielding construction. Changes within these areas will be driven by technological innovation. Also, new programs may come into being as others are discontinued. In these areas a "modular" design which can accommodate evolving needs may be the most appropriate design solution.

Functional Considerations

Operations: Services

Organization Ambulatory Services are organized into three categories; Reception/MAS, Emergency Care, and Examination/Treatment Modules.

Reception/MAS

Activities relating to patient triage and determinations of eligibility are centralized.

Medical records are maintained at a central location utilizing Consolidated Health Records, (CHR), which combine inpatient and outpatient records.

Dental Clinics, Home Care, Substance Abuse, Service and Mental Health Clinics maintain records within the department.

The Reception and Control stations are shared among clinics to optimize staffing and utilization.

Reception and Control Stations should accommodate three clerical functions; reception/check-in, check-out/disposition, and record work-up/appointments.

The equipment provisions and functional plan of Reception and Control areas will be effected by the record retrieval, storage and transport systems recommended for the facility.

Computer Record entry and retrieval systems are being implemented but have not yet replaced conventional records in VA facilities.

Bar code readers are utilized in all patient areas to record patient flow and charges.

Emergency Care

The major function of Emergency at most VA Hospitals is to assess conditions of walk-in and ambulance patients and to provide immediate treatment for stabilization, admission, or referral as required.

The level of emergency services will depend upon analysis of community needs and other services to be provided by the specific facility.

The facilities demonstrated in the Guide Plates provide for elementary emergency treatment including patient examination and stabilization but do not reflect the requirements to accommodate major trauma or surgical procedures.

Examination/Treatment Modules

Examination/Treatment Modules are generic clinical examination and treatment facilities which accommodate scheduled and unscheduled outpatient visits with variable assignment capability based on schedule and workload needs of the using departments which include; Medical Clinics, Surgical Clinics and Specialty Clinics.

Patient Care Concepts

The Ambulatory Care spaces represented in these Guide Plates provide flexibility to accommodate changing patient care concepts for both outpatients and inpatients.

Reception and Patient Care Areas may require additional acoustical treatment to preserve patient privacy. This can take the form of acoustic blankets in walls and ceilings to minimize noise between rooms.

Aspects of patient participation, patient-focused care, and other concepts need to be addressed by specific projects.

Level of Care

The Guide Plates anticipate a higher level of patient care for Hospital based Ambulatory Care.

Hospital based Ambulatory Care facilities may include limited inpatient use within Ambulatory Care Occupancy.

Market Segment

VA ambulatory care facilities need to compete with other sectors both to maintain and to expand their patient base

While the Veteran is of primary concern, there is an increased effort to include the Veteran's family.

Sharing agreements, joint ventures, and referrals will sometimes include members from the general public.

Other Requirements

Special Requirements must be evaluated and applied on a project basis. Such requirements may include, teaching, program mission and coordination of hospital, clinical and support services.

Center for Disease Control (CDC)

Current CDC requirements for design of public areas within the building to accommodate Microbactium Tuberculosis patients must be addressed by architectural and mechanical disciplines. Check current requirements with VA task force on transmission of mycobacterium tuberculosis and TB Criteria in the HVAC Design Manual for Hospital Projects.

Space Planning & Design

Flexibility

The design of health facilities must respond to changing workloads, business objectives and technologies.

Spaces are universally designed to accommodate a range of related functions.

Generic plans are developed to respond to changes in use and assignment.

Special spaces are designed and grouped to accommodate a range of functions and to accommodate change where possible.

Efficiency

The design of Ambulatory Care Facilities must limit resources to accommodate increasing health care demands.

Support spaces are designed to be shared where possible.

Functions with similar system requirements are grouped or combined.

Duplication of facilities is minimized by using ambulatory facilities accommodating inpatients and outpatients in the same setting.

Human Needs

Patient dignity and self-determination are accommodated while considering operational efficiencies.

Patient's vulnerability to stress from noise, lack of privacy, poor lighting and other causes, and the subsequent harmful effects it can have on the healing process is well known and documented phenomenon.

An inherent opportunity exists in the design of Ambulatory Care Facilities to address the above issues and to put forth creative solutions that enhance patient comfort and contribute to positive outcomes.

A prime architectural objective should be to de-emphasize the institutional image of traditional health care facilities and to surround the patient (and family members) with finishes and furnishings that are familiar and non-threatening.

Good planning and design appeal to the spirit and sensibilities of patients and care providers alike.

Ambulatory Care facilities should be healing environments that allow the building itself to become part of the therapy. The technical requirements should be addressed in an integrated manner that supports these concepts.

Patient privacy is accommodated without sacrificing facility utilization.

Security is addressed by planning, design, and detail considerations.

Handicapped access is accommodated by the application of UFAS and ADA design standards to space and fixed equipment layouts.

Functional Relationships

Work Flow

The Functional Diagrams reflect function, organization, flow, and operational issues and should not be interpreted as preconceived floor plans.

Diagrams do not correlate exactly to all the rooms in criteria

VA patient triage, induction, and protocol require the following.

- Triage is located between Emergency and Clinic Facilities
- Walk-in Patients arrive at Triage/MAS interview.

Organizational Concepts

The guide plates and functional diagrams address modular construction including 3050 mm (10') deep exam zones, 3660 mm (12') deep special/ treatment/support zones, and 1830 mm (6') corridor widths.

A Modular Clinic Concept is utilizes functional layering which includes spaces such as Waiting, Reception, Exam, Special and Support Zones.

Overlapping zones of control are provided in both planning and communications to accommodate variable assignment of partial clinic modules, exam, and treatment facilities.

Utilization of modular concepts and functional layering assists in facilitating wayfinding and subsequent patient ease.

Space Allocation

Program Levels

Net square footage requirements are based on workload complexity levels as defined in Section 262 of Handbook 7610 (H - 08 - 9). Three program levels are defined S - M - L. Design Guide layouts are based on level M facilities.

TECHNICAL CONSIDERATIONS

Architectural

Interior Materials and Finishes: Partitions

Interior partitions should primarily be painted gypsum wallboard on metal studs. Partitions around physician offices, exam rooms and treatment rooms should have sound attenuation batts between the studs in accordance with VA Construction Standard 34-1, "Noise Transmission Control".

The partitions surrounding the Patients Funds Clerk office and the Agent Cashier office have special security requirements)

Refer to VA Construction Standard CD-49, "Physical Security Requirements and Options".

Interior Materials and Finishes Floors

Floors in offices, conference rooms and waiting areas should be carpet with a 100 mm (4") high resilient base.

Floors in toilet rooms should be ceramic tile with a ceramic tile base.

Floors in exam rooms, treatment rooms and most other spaces should be vinyl composition tile with a 100 mm (4") high resilient base.

Interior Materials and Finishes Ceilings

Ceilings should primarily be lay-in acoustic ceiling tile. Certain areas, such as procedure rooms and chemotherapy treatment rooms, should have lay-in acoustical ceiling tile with a washable sprayed plastic finish.

Interior Materials and Finishes Protection

Wall and corner guards should be used in corridors and other areas where wall damage from cart traffic is anticipate.

Interior Doors and Hardware

Interior doors should be 44 mm (1 3/4") thick solid core flush panel wood doors or hollow metal doors in hollow metal frames.

Door jambs should have hospital type sanitary stops that stop 205 mm (8") from the floor to facilitate mopping. Hollow metal doors should be used where high impact is a concern and where fire rated doors are required. Kick/mop plates should generally be applied to both sides of the doors. Handicapped accessible hardware should be used throughout.

The door to the Agent Cashier is required to be a steel security door.

Refer to VA Handbook PG-18-14, "Room Finishes, Door and Hardware Schedule" for additional information

Structural

In compliance with Executive Order (EO) 12699, and EO 12941, all new and existing buildings constructed or leased by the Federal Government must be seismically safe. The EO's require that nationally recognized model building codes, listed below, be used for the seismic design and construction of new buildings, and for the seismic safety assessment of existing buildings.

- 1994 Uniform Building Code of the International Congress of Building Officials (ICBO)
- 1996 Building Officials and Code Administrators (BOCA) National Building Code.
- 1994 Amendments to the Southern Building Code Congress (SBCC) Standard Building Code.

Equipment

Casework

For planning and utilization concerns, casework systems should be chosen for their flexibility.

Casework systems should incorporate components dimensioned for ease of multiple re-use installation applications.

Casework systems should be planned avoiding corner installations and filler panel instances.

Information Management Systems

Information Management Systems shall include elements of patient registration, patient charges, Physician's order entry, and patient/staff movement.

These systems elements will require access to the main facility's "*information backbone*" as well as the departmental Local Area Network (LAN). All components should be planned for compatibility.

Headwall Equipment Management Systems

Equipment Management Systems should facilitate a generic setting for all similar treatment spaces to organize diagnostic equipment support equipment, and supplies.

Heating, Ventilation and Air Conditioning

Operation

Air conditioning systems should be provided to heat, cool and ventilate the individual space, as required to satisfy the VA design criteria. Follow TB Criteria in the HVAC Design Manual for Hospital Projects

The air conditioning systems serving the Ambulatory Care Service should be designed to operate at occupied/unoccupied capacity to suit applicable schedule.

Capacities

The number of people and the air conditioning load noted on the room design standard sheet is for the purpose of establishing the design guide basis and its use in planning. The engineers/designers should verify the actual number of people and the air conditioning load to agree with the project requirements. Verify equipment AC loads shown as per actual equipment furnished on a project.

The percent of outside air should be based on the space total supply air quantities.

Air Quality and Distribution

In general, clean areas shall have positive air pressure and soiled areas should have negative air flow with respect to the adjoining areas.

Corridors should not be used to supply or to exhaust/return air from rooms. Corridor air may be used to ventilate bathrooms, toilet rooms, hacs, and small electrical or telephone closets opening directly on corridors. Exfiltration/infiltration from positive/negative pressure rooms adjacent to a corridor should be considered in balancing air flow.

The transfer air should not be more than 2.8m³/min (100 CFM) per undercut door.

Care should be taken to minimize the short circuiting of air between supply and return/exhaust openings in rooms.

Exhaust System

A dedicated exhaust system should be provided for all hoods located in the Ambulatory Care Service. Locate supply air diffusers as far away from the hood sash opening as possible, and sized to eliminate draft conditions and for proper air flow at the hood

Seismic

Where required, install HVAC systems with seismic provisions as outlined in the VA HVAC Design Manual for Hospital Projects.

Noise Level

Select HVAC equipment, ductwork and listed distribution devices to achieve noise levels in listed in the VA HVAC Design Manual for Hospital Projects and Master Construction Specification Section 15200.

Plumbing

Water and Waste Systems

The plumbing systems should be provided to satisfy the departmental plumbing needs.

The department's domestic cold water should be piped to all plumbing fixtures and equipment requiring this utility.

The department's domestic hot water should be piped to all plumbing fixtures and equipment requiring this utility. A hot water return system should be provided to ensure the design temperature at the farthest outlet.

The department's plumbing fixtures and drains should be drained by gravity through soil, waste and vent stacks. In addition, the department's special waste should be drained through corrosion-resistance, flame-retardant piping into either a local or centralized acid dilution tank.

Medical Gas Systems

The department's medical gas outlets are shown to establish the design guide basis and its use in planning. The engineers/designers shall verify the medical gas locations and quantities for individual projects.

Seismic

Where required, the plumbing and medical gas systems should be installed with seismic provisions as outlined in the VA Plumbing Design Manual for Hospital project.

Refer to VA Handbook H-18-3, CD-54 "Natural Disaster Resistive Design Non-Structural" for additional information.

Electrical

Illumination

Illumination is typically provided utilizing 600 mm x 1200 mm (2' x 4') recessed fluorescent luminaries with acrylic prismatic lenses. The fixtures typically use F32T8 lamps in compliance with the National Energy Policy Act of 1992. Lamps have a minimum color rendering index (CRI) of 85 and a color temperature of 4100 degrees Kelvin (K), which is close to the "cool white" color temperature of 4150 degrees K.

Lighting intensities conform to the VA design criteria, the IES Lighting Handbook and IES publication CP-29, "Lighting for Health Care Facilities". IES CP-29 is currently being updated and will be replaced by IES Recommended Practice RP-29 in the future.

The nurse/communication station has 600 mm x 600 mm (2'x2') recessed fluorescent fixtures with parabolic louvers to control glare on the PC screens. Recessed compact fluorescent downlights are provided above the counter work surface for task lighting. As an alternative, dimmed incandescent downlights may be provided above the counter if variable lighting levels are desired at the work surface

The chemotherapy treatment cubicles have wall mounted, individually controlled direct/indirect fluorescent light fixtures that provide softer lighting.

The wheelchair toilet/bath rooms have wet location light fixtures due to the high moisture and humidity of the rooms.

Lighting is typically controlled by wall mounted switches located at the entrance to the room. Larger spaces may utilize multiple switching by separate switches for lighting of individual zones or areas.

Power load densities for lighting are listed by use for the mechanical HVAC load calculation purposes. Load densities should be verified for the actual design, as they may vary depending on the room configuration, fixture types, lamps and ballasts used.

Selected light fixtures are served from the critical branch of the emergency power system to allow for continued operation during a power outage.

Power

General purpose duplex receptacles are typically provided on each wall of a room or a space.

Dedicated duplex or special receptacles are provided for selected pieces of equipment such as refrigerators.

Workstations with personal computer computers (PC's) are typically provided with quadruplex receptacles for the PC, monitor and printer.

Junction boxes are provided for equipment requiring a hardwired connection.

Prefabricated bedside patient units (PBPU's) in the life support unit, observation and treatment room house receptacles other electrical devices. The number of receptacles, the layout, and the wiring requirements should be coordinated with the PBPU standard details.

Duplex receptacles on the critical branch of the emergency power system are provided for selected pieces of equipment such as refrigerators and at certain areas to allow for limited operation during a power outage.

Emergency power requirements are addressed in VA Construction Standards H-18-3, #800-3.

Security

(not used)

Life Safety

Purpose

The life safety program should be developed to provide a reliable system to protect the building occupants, firefighting personnel, building contents, building structure and continuity of building function. Its intent should be to provide a reasonable level of fire safety by reducing the probability of injury, loss of life or building function changes due to a fire. This can be accomplished by limiting the development and spread of a fire emergency to the area of origin and therefore reducing the need for total occupant evacuation.

The design aspects of the facility which relate to the fire and life safety include:

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

New hospital construction and renovated areas of existing facilities are required to be fully protected by an automatic fire suppression system.

The minimum width of corridors and passageways in Ambulatory Care areas is 1120 mm (44"). The minimum width of corridors in areas that will also be used by inpatients is 2440 mm (96").

Nurses' stations and Waiting areas are permitted to be open to the corridors in the latest editions of NFPA 101 "Life Safety Code", the Uniform Building Code and additional standards published by the National Fire Protection Association (NFPA).

Energy Conservation

Refer to VA HVAC Design Manual for Hospital Projects for information.

Communications

Telephone

Telephone outlets are typically provided at each workstation or in each room. Desk outlets are 450 mm (18") AFF and wall phone outlets are 1200 mm (48") AFF.

Automatic Data Processing (ADP)

ADP or computer outlets are typically provided at each workstation with a personal computer (PC) and/or a printer. Desk outlets are 450 mm (18") AFF.

Nurse Call

A nurse call and code one system is provided for the ambulatory care department, consisting of patient call stations, staff stations, duty stations, dome lights and a master station located at the nurse/communication station. The actual system configuration is dependent on the overall layout of the department and should be coordinated with the functional design.

Television

Television outlets are provided at selected areas such as the chemotherapy treatment cubicles.

Physiological Monitoring

Outlets for physiological monitoring are provided at selected locations such as the life support unit, and observation and treatment cubicles.

Public Address

The Ambulatory Care department will not have an independent public address (PA) system. The department will be included as part of the hospital-wide PA system. Speakers are typically located in corridors and public spaces. The actual system configuration will depend on the overall design layout and functional requirements.

Waste Management

Medical Waste

Medical waste is generated in exam and treatment spaces where it is bagged, collected and transported to the soiled utility rooms. There it is held in separate containers pending transport to the medical waste handling facility.

General Waste

General Waste is generated in all spaces and is held in containers for collection and sorting into carts or it is bagged and placed in a waste chute and transported to the waste handling facility.

Recycling

Methods for sorting, collecting, transporting and disposing of recyclable products must be specifically analyzed for each facility and location.

The optional use of disposable and reusable products is an important consideration in recycling and waste disposal alternatives.

Soiled Linen

Soiled reusable linens are generated in exam rooms, treatment spaces and patient and staff gowning areas and are collected in carts or hampers (depending on volume) in the soiled utility rooms or they are bagged and transported to (a) central collection area(s) via soiled linen chutes.

Disposable linens are include with general recyclable waste or medical waste as appropriate.

Utensils

Reusable utensils include bed pans, urinals, emesis basins and other stainless steel items which are used in exam and treatment areas and then transported to the soiled utility room. There they are reprocessed if steam washers are available or collected for transport to the Sterile Processing Department for reprocessing.

Space Requirements

Space requirements will vary with the selection of waste collection and recycling methods and systems, and space requirements need to be analyzed for each optional method or system considered for new and existing facilities.

While space needs are determined by VA Handbook 7610 on a departmental basis, space provisions for waste collection needs to be distributed and dedicated to a variety of uses to accommodate the implementation of the system and method selected.

Transportation

Outpatient

Patients arrive at their appointed clinic via private or public transportation.

Clear site and facility organization and directional signage assist in directing the patient to their destination.

Emergency walk-in patients are clearly directed to a dedicated entrance separated from ambulance traffic.

Convenient access from patient parking and primary care entrance should be provided.

Passenger elevator access to Pulmonary Medicine facilities located off main entrance levels should be provided.

Techniques like clear access routes, public spaces, landmarks and signage to facilitate wayfinding should be used.

Inpatient

Access for stretcher and wheelchair patients from inpatient areas should be provided.

Inpatient and Outpatient traffic should be separated where possible.

Inpatient access from hospital service elevators is required.

Inpatients arrive at a control point common with outpatients.

Inpatients access patient holding, if provided, through a dedicated route separated from outpatient waiting.

Staff

Staff access should be separated from patient waiting and holding areas.

Staff lounge and locker areas should be located away from inpatient and outpatient traffic.

Records

Records are centrally maintained and may be distributed by an automated distribution or electronic retrieval system to be selected on a project basis.

Ambulatory Care volumes are determined by subdepartment and specialty clinic.

Each clinic requires access to the pneumatic tube or automated box transport system to provide distribution of medical records and work orders.

These transport modes are located where shared use is possible in order to provide economical access for all clinics.

Specimens

Specimens are collected within the clinics and/or at a central Lab Collection Area and are transported to the Pathology Labs. The most effective means for maintaining specimen quality and providing efficient access must be incorporated.

Pharmaceuticals

Pharmaceuticals including narcotics are transported by pharmacy personal to the individual clinics in locked carts.

Narcotics are delivered to a narcotics locker, which is usually located in a clean supply or patient prep area, and is remotely alarmed to the nearest nursing station.

Materials

Materials are transported via service elevators which access the clinic's clean and soiled utility room by the back corridor to avoid mixing with patient traffic.

Clean supplies are transported by exchange carts which are stored in the Clean Supply Room.

Supplies are transported by service elevator's and through hospital corridors separated from patient traffic where possible.

Deliveries are scheduled during hours when patient visits are not scheduled.

Linen

Disposable linens are delivered as part of clean supplies.

Sterile Supplies

Sterile Items are transported to equipment processing on dedicated closed carts

Equipment is also transported to the Sterile Processing Department for steam cleaning and sanitizing.

The use of sterile supplies for other procedures is accommodated by prepackaged or disposable items that are delivered with clean supplies.

Food

Dietary deliveries to Ambulatory Care are limited to nourishments provided at holding areas where patients who have undergone minor procedures are held for observation and/or recovery.

Waste

Waste is collected by housekeeping staff and transported to the Soiled Utility Rooms and trash collection areas where it is disposed of as indicated by the Waste Management narrative.