

FOREWORD

These Physical Guidelines have been prepared principally to give HUD Field Office personnel and sponsor's architects general information about space and equipment needs in group practice facilities. In certain clearly defined instances, standards which must be followed are also included.

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1-1. BUILDING ACCESSIBILITY FOR THE HANDICAPPED. The building should conform to "United States of America Standards Institute"

publication A117.1-1961 "Making Buildings Usable by, and Accessible to, the Physically Handicapped."

- 1-2. ADMINISTRATION AREAS. Adequate space should be provided for patient reception, waiting, and admitting procedures. The business manager's office, business records office, patient billing area, and telephone and toilet facilities should be located close to the waiting space. The extent of the administrative service in a central location will depend on the organization of the facility. Since the patients' initial impressions of the clinic is formed in the reception area, a cheerful and attractive use of space and furnishings is desirable. Good reading light and comfortable seating are needed. In large facilities, the administrative area may also provide for a doctors' lounge, conference room, library, isolation of patients suspected of being infectious and where applicable, a waiting area for small children.
- a. Centralized Medical Records. Space shall be provided for centralized medical records. This area is usually located within the administrative area or adjoining it. Medical records for all patients of the clinic are kept here.
 - b. Medical Record Librarian. In larger facilities, work space for a medical record librarian should also be provided. It may also be necessary to provide space and equipment for microfilming medical records.
- 1-3. PATIENT EXAMINATION AND TREATMENT AREAS. Most group practice facilities, which provide for practitioners such as the internist, the surgeon, the obstetrician-gynecologist, the pediatrician, and the orthopedist require certain similar areas: consultation rooms, examination rooms, treatment rooms, and recovery rooms. Various combinations of these rooms are often desirable, such as consultation-examination room, or a treatment-recovery room.
- a. Consultation Room. A typical consultation room should be large enough for a full-size physician's desk and comfortable chairs for two or three people. Space for bookcases and one or more file cabinets should also be provided.

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- (1-3) b. Examination Room. Adjacent to the consultation room and usually accessible directly from it should be an examination room. An examination room may be required on each side of one consultation room. The examination room should be large enough for a full-size adjustable examining table, an

instrument supply cabinet, a small instrument table, a small desk or wall-hung writing surface for the physician, and one or two straight chairs. A good examining light should also be provided. A small curtained-off space in a corner of the room for patients to undress is desirable, and a patient toilet should be easily accessible.

- c. Recovery Room. A recovery room is needed in most clinics. It may also be used for tests and treatments such as injections and EKG's. Space should be provided for a bed, equipment, an instrument and supply cabinet, and a chair.
- d. Surgery Clinic. In a clinic where minor surgery is contemplated, a small surgery room with a small dressing room adjoining should be provided. This room requires an operating table instead of an examining table, portable examining light, and instorement table. If surgical procedures requiring the use of explosive gases are contemplated, compliance with NFPA No. 6, Code for the Use of Flammable Anesthetics, is required.
- e. Dental Examination. Dental examination and diagnosis may require one or more operatories. While fully equipped operatory, such as one described in the next section, entitled "Dental Operatories" is not always considered necessary, it is sometimes desirable in order to provide greater flexibility in use. Taking X-rays is part of the examination and diagnosis procedure and requires that appropriate radiology equipment be located adjacent to or as close as possible to the operating room. For a small dental facility, X-rays may be taken in the dental operatory, but particular care must be given to locating the equipment to provide proper shielding from gamma and X-rays. In larger facilities, a separate radiology section as described under "Dental X-ray Service" should be used.
- f. Dental Operatories. A dental operatory varies in size from cubicles of 7' x 10' to rooms of 10' x 14'. A room 8' x 6' in width permits "U" shaped cabinetry around the chair.

Modern dentistry is performed with the patient in a supine position and the dentist and chairside assistant in a seated position. Many dentists who operate from a seated position prefer the mobile dental unit to the older fixed floor-mounted unit. Another type of dental unit is designed to be mounted

in the cabinetry behind the head of the patient. While not having the flexibility of the mobile unit, the cabinet-mounted unit can be located in a position that is more accessible to both the dentist and his assistant than the fixed-floor mounted unit. The method of operation and the selection of equipment will strongly influence the design of the operator. With the exception of oral surgery, the operatories of all the other dental specialities, such as pedodontics, periodontics, orthodontics, etc., are basically the same.

- g. Oral Surgery Operatory. The oral surgery operatory can be the same size as other operatories. Operatories designed specifically for oral surgery often do not have dental units as described in "Operatories." A portable dental engine is used instead. Scrub-up sinks and provisions for sterilization and sterile supplies can be within the area, but are usually in an alcove adjacent to the oral surgery operatories. One or more small recovery rooms with accessible toilet facilities should be provided in the oral surgery area.

1-4. SUPPORTING SERVICE AREAS

a. Laboratory and X-ray Services.

- (1) Some type of laboratory work will generally be done in all but the very smallest group practice facilities. In the very large facilities all, or almost all, of the laboratory work will be done on the premises.
- (2) In many facilities, space for routine fracture and chest X-ray work must be provided. The X-ray facilities may include both diagnostic X-ray and X-ray therapy. Separate waiting areas nearby, particularly for X-ray therapy, would be desirable. Besides the X-ray room, the diagnostic X-ray and fluoroscopy space should include a consultation-viewing room for the radiologist, and a darkroom. Films should be filed in an adjoining room or arranged so that the patient need not leave the immediate area of the X-ray room. One X-ray room

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- (1-4) could be used for chest work, gastrointestinal work, and routine radiography, depending on the caseload. GI work is time-consuming; therefore, GI patients need waiting space near the X-ray office. Therapeutic X-ray providing facilities for superficial types of treatment should include convenient dressing space, a

toilet room, and at least one recovery room. Care must be taken in placing the X-ray equipment in the room. In the case of diagnostic X-ray, the chest cassette should be on an outside wall and, if possible, the tube must be installed so that it does not point in the direction of persons working in adjacent rooms. Appropriate shielding must be provided according to the National Bureau of Standards' Handbooks No. 73 and 76 to reduce the effects of gamma and X-rays.

- b. Physical Therapy Service. Some clinics will include physical therapy as a part of their total services. Such a service generally includes some hydrotherapy-arm baths, leg baths, and perhaps Hubbard tanks; and alcoves for massage, electro-therapy, and diatherapy. A large room with various types of exercise equipment may also be included in the clinic.
- c. Dental X-ray Service. X-ray cubicles or rooms should be a minimum of 8 X 10 feet and should have radiation protection equivalent to 1/16" lead to height of 7'0". Controls are usually outside the areas beneath a lead glass observation window. A lavatory should be provided within the room. A darkroom should be located as close as possible to the X-ray cubicle or room. A combination transfer box and drier, installed in the partition separating the darkroom from another room or alcove in which the dental films could be mounted and examined in white light, would facilitate operations.
- d. Dental Laboratory. While many dental group practice clinics will have the major portion of their prosthetic laboratory work done by private dental laboratories, all clinics will wish to have some laboratory facilities available. The full range of work can be divided into five main categories: (1) crown and bridge, (2) full dentures, (3) partial dentures, (4) ceramics, and (5) orthodontics. Each category requires specialized equipment which in turn determines the work area and overall size of the laboratory.

e. Pharmacy Service.

- (1) Some group practice clinics may find it advantageous to arrange for the inclusion of a pharmacy. The need for one and its size depends upon the number and types of medical disciplines it will serve.

- (2) Even a minimum pharmacy will need storage space for a large reserve stock of many items. Smaller quantities will be kept in drug cabinets which should adjoin a compounding and dispensing counter. Several hundred chemicals and pharmaceuticals in various forms and strengths must be stored in sectional cabinets, ready for immediate use. A refrigerator with drawers will be needed for keeping biologicals and thermolabile preparations. Locked storage of narcotic preparations must be provided.

1-5. AREAS FOR OTHER SPECIALISTS. Specialized examination and treatment rooms may be required for special services. These are usually provided on the basis of one room to each consultation room.

- a. Otolaryngology Service (Ear, Nose, and Throat). The examination and treatment room for the otolaryngologist should be approximately the same size as a typical examination room. In this room, instead of an examining table, an adjustable examining and treatment chair with a cuspidor connected to the water supply and drain should be provided.
- * b. Ophthalmology Service. The ophthalmologist will need a consultation room and an examination room. The size and number of the eye examination rooms depend on the patient load. As a minimum, one examination room would be required to house the refracting equipment and small desk. Additional equipment the ophthalmologist uses for his examination could be in this same room. In larger clinics it is frequently desirable to have a separate room for eye refraction, perimeter, and corrective treatment equipment. Patient load may justify a separate room for measuring eye tension although this procedure can be performed in the eye therapy room. A small examination room with a treatment and examining chair or table is all that is required for this test. *

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- * c. Optometry Service. Except for surgery, the space needs of the optometrist would be similar to those of the ophthalmologist. If optician services are included, work space and equipment may be provided here for filling prescriptions for corrective lenses and for frames. A waiting room and space for fitting frames may be needed.
- d. Psychiatry Service. This service may be found in large

group practice facilities. In some facilities, separate exits may be desirable. The consultation room is the focal point of the service. A larger room may be required for conference or group therapy. A more extensive program may include psychologists, social workers, or both, each of whom would also need a typical consultation room.

- e. Podiatric Services. Podiatric examination and treatment requires one or more appropriately equipped rooms. Such rooms should be approximately 8' X 10' in size. Appropriate radiological equipment should be located as close as possible to the examination rooms. A hydraulic podiatry examination and treatment unit will serve the best interests of the podiatry department. The selection of the basic equipment unit will, of course, influence the overall design and furnishing of the room. A surgery clinic for minor podiatric surgery may be included, and must comply with Paragraph 1-3(d) of this appendix. In cases where podiatric services are a part of a medical or osteopathic group practice, the Podiatry Department should be located with easy access to the surgery clinic. *

1-6. SPECIAL SUBJECTS. A group facility shall comply with all applicable laws, codes, ordinances and regulations which are essential to assure a healthful, safe and sanitary facility.

- a. Sound Transmission. Airborne sound transmission shall be minimized in consultation, examination, and waiting areas. The limitation for airborne sound transmission class (STC) for partitions and floors is 50 as determined by tests in accordance with methods set forth in ASTM (American Society for Testing Materials E90-61T).

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(1-6) b. Storage. Adequate storage area for supplies shall be provided. Provision should also be made for handling and storage of soiled laundry and trash either through chutes or appropriate collection arrangements.

c. Work Areas (Nurses)

(1) Clean work area(s) shall be provided for the sterilization of trays and instruments. Clean storage areas shall be provided for sterile goods, including disposables.

(2) Soiled work area(s) shall be separated from clean work

areas. Space shall be provided for gross cleaning of instruments prior to sterilization.

d. Heating, Ventilating, and Air Conditioning.

- (1) Air conditioning is recommended for geographic areas where climatic conditions require it.
- (2) Temperatures: (a) A minimum temperature of 75 degree F is recommended for winter design conditions. (b) A maximum temperature of 80 degree F is recommended for summer design conditions. Systems should be designed to permit the raising of temperatures at the discretion of the physician in such areas as surgery, examination, treatment and X-ray rooms where patient disrobing may be necessary.
- (3) Ventilation System Details. All air supply and air exhaust systems shall be mechanically operated. All fans serving exhaust systems should be located at the discharge end of the system. The ventilation rates shown on TABLE NO. A are recommended as minimum acceptable rates and should not be construed as limiting higher ventilation rates if they are required or appear to be desirable to meet design conditions.
- (4) Outdoor ventilation intakes, other than individual room units, should be located as far away as practicable but not less than 25 feet from the exhaust from any ventilating system or combustion equipment.

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- (1-6) (5) All air systems should be designed to provide differential air pressures between areas in a descending order from clean areas to less clean areas. All air supplied to sensitive areas such as surgery or examination and treatment rooms should be delivered at or near the ceiling of the room served, and all air exhausted from the area served should be removed near floor level.
 - (6) The ventilation systems serving the surgery and examination and treatment rooms where recirculation of air is not permitted should be provided with filters rated 90 percent efficiency. Central systems serving administration and other general areas should be provided with filters rated at 80 percent efficiency. Filter efficiencies should be based upon the National Bureau

of Standards Dust Spot Method on atmospheric dust.

- (7) Ducts which penetrate construction intended for X-ray or other ray protection should not impair the effectiveness of the ray protection. Areas in which anesthesia or oxygen is used and/or stored shall comply with NFPA 56 "Code for the Use of Flammable Anesthetics."

e. Plumbing.

- (1) Specific types of plumbing fixtures will be required for the various clinical areas. These include handwashing facilities and disposal sinks such as the clinical sink and scrub sink. Wrist-action valves or knee or foot-operated valves will facilitate the use of fixtures. Among the clinical areas requiring handwashing or special fixtures are examination and treatment, recovery, isolation, and operating.
- (2) All plumbing systems should be installed in accordance with the requirements of USASI (United States of America Standards Institute) A40.8 "The National Plumbing Code."

- f. Electrical. Materials and installation shall comply with the National Electrical Code. Independent feeders for X-ray installations should be provided to reduce the problems of voltage fluctuations. All equipment in installations should

conform to Article 660 of the National Electrical Code and NEMA recommendations XR4-10. Fixed and mobile X-ray units should be connected by means of independent feeders from the main switchboard. Emergency power for lighting shall be provided and emergency generating equipment shall be provided for services deemed to be critical.

- g. Other Aspects of Mechanical and Electrical Equipment. Items or elements of mechanical or electrical equipment in addition to those already mentioned shall comply, as appropriate, with Minimum Property Standards for Multifamily Housing.

h. Fire Protection.

- (1) Group practice facilities shall comply with the following objectives:

To obtain a building which will provide a high degree

of safety of life and property preservation; to assure planning and the use of materials which will retard the spread of fire; and to provide means of egress which will permit persons to leave the building with safety, and not be harmed by fire, smoke, or heat.

(2) In order to meet the above objective, the provisions of HUD's Minimum Property Standards for Multifamily Housing, and those concerning Office Occupancy of NFPA No. 101, "Life Safety Code", shall be used as guidance for the appropriate specific subject.

i. Materials, Products, Construction and Finishes. Building materials, products, items, or elements of construction and interior and exterior finishes shall comply, as appropriate, with the HUD "Minimum Property Standards for Multifamily Housing.

1-7. EQUIPMENT. The classification of equipment items acceptable for mortgage insurance purposes is made in this handbook. Consultation with the HUD Field Office should be held by project sponsors on questions concerning the inclusion of equipment. Reference may be made to the American Hospital Association Chart of Accounts for Hospitals, which lists many equipment items and their estimated useful life.

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TABLE NO. A

PRESSURE RELATIONSHIPS AND VENTILATION OF CERTAIN GROUP PRACTICE AREAS

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* GRAPHICS MATERIAL IN ORIGINAL DOCUMENT OMITTED *
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