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Protocol No.	000
Subject	General Considerations for The Design of A Procedure Room
Effective Date	08-04-2021

Introduction

The task of designing a procedure room is not as complicated as someone might think at first instance, any well-prepared healthcare professional should have the ability a knowledge required to perform this task. This introductory manual's objective is to give some insight into what's needed to design the procedure room, and to give some general guidelines to maintain certain level of security to keep optimal standards. Giving the experienced collected so far over more than 9,000 procedures performed, these are what we consider the minimum requirements to perform such procedures, in a healthy, secure, comfortable environment.

Abstract

It's very important to know the human and technological needs of the users in order to properly perform the physical planning of spaces which will provide the setting for a secure cosmetic facility.

Objective

Design security guidelines to be considered in the design of a procedure room.

Physical space

The physical design can be adapted into any existing area, however, as minimum requirements to allow the proper function we recommend that the area for the operating room, or procedure room, which would be a more suitable name, should be at least 10 feet long by 10 feet width and at least 8 feet in height. Or any other similar variations give or take.

An individual procedure room should have at least an area of 98 square feet, with a minimum of 15% total free area to allow the free transit of the patients and personnel inside de room. There should be a minimum of 20 inches between the head of the reclined chair and any other structure and 25 inches of free space along the lateral sides of the chair. Between any equipment present in the room there should be a safe distance of 35 inches to allow the free flow of air and minimize contamination.

The opening and exits, as well as the hallways should be wide and open and should be labeled, so in case of any emergency the patients and the personal know where they should go. We do not recommend the presence of any window in the procedure rooms, let alone windows that could be opened, since these can be a hazard in terms of air contamination.

Loria Pharmaceutical, LLC

PROTOCOL

Besides the procedure room itself, the cosmetic practice in general could have other areas to give the best experience for the patients and their companions, as well as some areas that are specific for the cosmetic practice to run smoothly, such as:

- A waiting room for patients and their companions with a minimum of 13 square feet area per person.
- Cleaning supplies deposit room with at least 21 square feet area.
- Public restroom facilities with a minimum of 18 square feet area per person.
- A sterilization central with two contiguous environments:
 - Wash and disinfection area, with a minimum area of 51.6 square feet.
 - Preparation, sterilization, and storage area for the sterilized materials. Minimum area of 51.6 square foot.
- We could consider other areas as support areas for the general cosmetic practice, such as:
 - Restrooms specifically for the personal with a minimum area of 18 square feet per person.
 - Storage room for equipment, materials, etc., with a minimum area in accordance with the amount and nature of such equipment and materials.
 - Administrative area with a minimum of 59 square feet per person.

Finishing Materials

The finishing materials for the walls or the ceilings, floors or walls of the procedure rooms should be water and disinfectant resistant, the materials used should provide smooth finishes and edges, as well as flat surfaces with the least number of crevices. Ceramic materials should possess a water absorption resistance, wherever there are junctions, such junctions should provide the same water resistance quality.

Epoxy paint or polyurethane coating intended for susceptible areas of exposure to water, can be used for floors, walls and ceilings, provided they are also resistant to washing and disinfectants, when they are used on the floor, they should also be resistant to abrasion and impacts.

The use of removable dividers is not advisable, prefabricated walls can be used as long as they have a smooth finish, that is without joints, and must be resistant to washing and disinfectants.

The union between the baseboard and the floor, should there be one, should be in a form that allows thorough cleaning. Baseboard must be hygienic type, not showing right angles, which facilitates the cleaning process. The union between the baseboard and the wall must be done so that both are aligned, thus avoiding the traditional highlight of the baseboard, which facilitates the accumulation of dust.

Loria Pharmaceutical, LLC

PROTOCOL

Ceilings should be continuous, it is not advisable to use removable false ceilings or roofs, unless that you can secure such panels, in order not to interfere with the cleanliness of the environment, these should also be resistant to cleaning and disinfection processes.

Although we do not recommend the presence of windows in the procedure rooms, should there be one, for protection against the sun and reduce the accumulation of dust, the use of protective films is most advisable, blinds and curtains are not recommended in any way.

Electrical Installations

Electrical installations of any equipment associated with the operation room and/or control of the air filtration systems, should be designed, implemented, tested, and maintained on a periodical base in accordance with current regulations, to guarantee the proper function of the room and equipment.

Lighting

The lighting in any health center where any activity of this kind is carried out, and generally in any workplace must allow workers to have adequate visibility conditions. Lighting parameters are based on the activity performed and the space where it develops:

- *Average level of illumination*
 - Illuminance or illuminance level is the amount of luminous flux (lumens) emitted by a light source, that arrives vertically or horizontally to a surface, divided by the surface, and its unit of measure lux. The lighting system must be designed so that lighting levels are obtained in the same place where the task is done, for example, levels should be measured at the height of the worktable, and likewise the task must be illuminated in the more uniform way possible.
- *Unified glare index*
 - Glare can occur when there are light sources whose luminance is excessive in relation to the existing general luminance inside the premises (direct glare produced by sunlight or artificial light), or when the light sources are reflected on surfaces polished (indirect glare or reflections).
- *Color rendering index*
 - The color of a space or artificially lit place will depend on the selected specifically lamp and depends on two lamp parameters: color rendering index and color appearance given by its color temperature. The color rendering index characterizes the ability of the light source to reproduce standard colors compared with reproduction provided by a reference pattern light. The higher this value will be better color reproduction. Moreover, the color temperature characterized the tone of the emitted light.

Regarding the color temperature, it is recommended to use warm tones for the access area and waiting rooms, cool tones for the technical areas and neutral tones for the rest of the spaces. The procedure rooms must be provided with artificial lighting systems that enable good visibility without glaring or shadows, in all areas where patients are cared for.

Loria Pharmaceutical, LLC

PROTOCOL

Illuminance in general must have values between 200 and 500 LUX, and the type of illuminance should be general, while in the area of the procedure itself illuminance should be between 500 and 1000 LUX and the type of illuminance should be general and localized.

Procedure Lights

Recommended lighting for general procedure rooms:

You should choose between evenly illuminated 8-inch diameter pattern size and 3 to 10-inch adjustable pattern. Whether it is in single or dual ceiling mounts as well as five-caster mobile base mount models. The recommended setting is the dual ceiling mount base model, this one should be at least 7 feet above the floor level to facilitate the free transit underneath.

Several factors that will determine the most appropriate type of lamp: lamp efficacy, chromatic qualities, luminous flux, half-life, necessary equipment, and environmental aspects. The use of fluorescent lamps and reflectors of luminaires equipped for better light distribution, with a level of about 35,000 lux focal point is recommended.

Electrical lighting circuits should be dedicated with their respective protective devices and must be distinct and sized according to their ability to conduct electric current. There must be several outlets installed, distributed throughout the environment enough to power the various equipment, not being recommended the use of a single point or outlet to feed various equipment through extension cords. If you need high loads outputs, you must provide a duly balanced three-phase electrical installation.

Electrical installations must be recessed or protected by an impact-resistant, washing-resistant, and disinfectants-resistant material to avoid the deposit of dirt in its entirety.

Thermal Comfort

Thermal comfort is "a state in which the individual does not feel cold nor heat, nor humidity, or dehydration". In the health center areas of general activities of patients, such as waiting rooms, areas of circulation, offices, etc., do not require special thermal conditions, rather than the general terms of comfort.

Those spaces where aseptic conditions, circulation and air temperature are required to prevent the reproduction of microorganisms, where there is a risk of contamination by infectious agents, or when the needs of some equipment, such as operating rooms, laboratories, radiology, require an air conditioning.

Air Conditioning Systems

Procedure rooms must have forced ventilation to prevent the reproduction of microorganisms thus maintaining aseptic condition. The installation of this equipment must be accompanied by an additional ventilation system to ensure the quality of air circulating in the room.

A HEPA filter should be installed in every procedure room, a HEPA filter is a type of high efficiency particulate air filter. This type of air filter should remove at least 99.97% of airborne particles 0.3 micrometers in diameter. Particles of this

Loria Pharmaceutical, LLC

PROTOCOL

size are the most difficult to filter and thus the most penetrating particle size. Particles that are larger are filtered with even higher efficiency. HEPA filters are the most effective air filtration filters to remove contaminants from the air.

- a. Air conditioning systems for must provide a minimum air exhaust to the outside of 6 (m³/h) m², and a minimum emptying total air of 18 (m³/h) m². The ambient temperature must be maintained at between 64.4 and 69 °F, relative humidity of air between 40 and 60 %, also the equipment must have air filters.
- b. Air ducts when they are used must be connected by means of seals designed for this purpose. All air return must be made through pipelines.

Adjacent Areas Water Systems

Next to the procedure room should be an area with a sink, provided with liquid soap, disposable paper towels for drying hands and deposit trash bin with pedal-operated lid. The sink should be of stainless steel or non-porous material, and separate the top of the wall, plus sensors for dispensing water without using hands. The instrument laundry area must have a sink of stainless steel or non-porous material exclusively for this activity.

Final thoughts

The design and construction of a procedure room is a dynamic engineering process that does not have to be overly complicated to fulfill all the required parameters to provide the best environment possible for the male enhancement procedure.

There is no need to start designing and developing a procedure room from zero, and almost all already functional spaces could be converted to fill these needs.

A procedure room should be above all functional, keeping the best interest for the patient's sake in mind, to prevent any possible contamination.