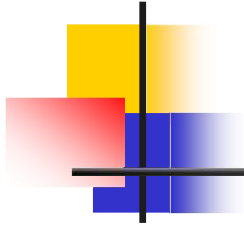


**University of Salahaddin
College of Engineering
Department of Architecture**



Surgical Department

Surgical Department

Renewal of the surgery department of the Academic Medical Center (AMC), Amsterdam, the Netherlands. Valtos Architecten, 2008-2015. Daylight is provided from above via a skylight.

Circle Bath, Bath, UK, Foster + Partners, 2009. Operating room with daylight



Surgical Department

In the surgical department, treatment is given to the patients whose conditions have been diagnosed but cannot be cured solely with medical treatment.

-:It should be designed as follows:

• The intensive care department

• The recovery room

• The central sterilization area because there is extensive interaction between these departments and so easy access must be assured

Surgical unit must be isolated from the rest of the hospital operations. This is achieved by a demarcation system using lobbies

Surgical departments are best located centrally in the core area of the hospital where they are easy to reach

The reception area for emergency cases must be as close as possible to the surgical area since such patients often need to be moved into surgery immediately

Surgical Department

Organization of the surgery department

-:Every surgical department requires the following rooms

Operating theatre	2m 48-40
Entry room	2m 20-15
Exit room	2m 20-15
Washroom	2m 15-12
Equipment room	2m 15-10

In new projects, it is permissible for two operating theatres to share the same exit room.

Essential to surgical departments are a staff lobby, patient lobby, clean work corridor, anesthetic workroom, waste lobby, supply lobby, standing area for two operating trolleys and, nearby, the recovery room

The patient demarcation lobbies are also used for bed to- bed transfer, preparation of operating tables and ward beds, and theatre stores. An appropriate size is around and fittings should include wash-basins and an electric conveyor for bed-to-bed 2 m 36 .transfer

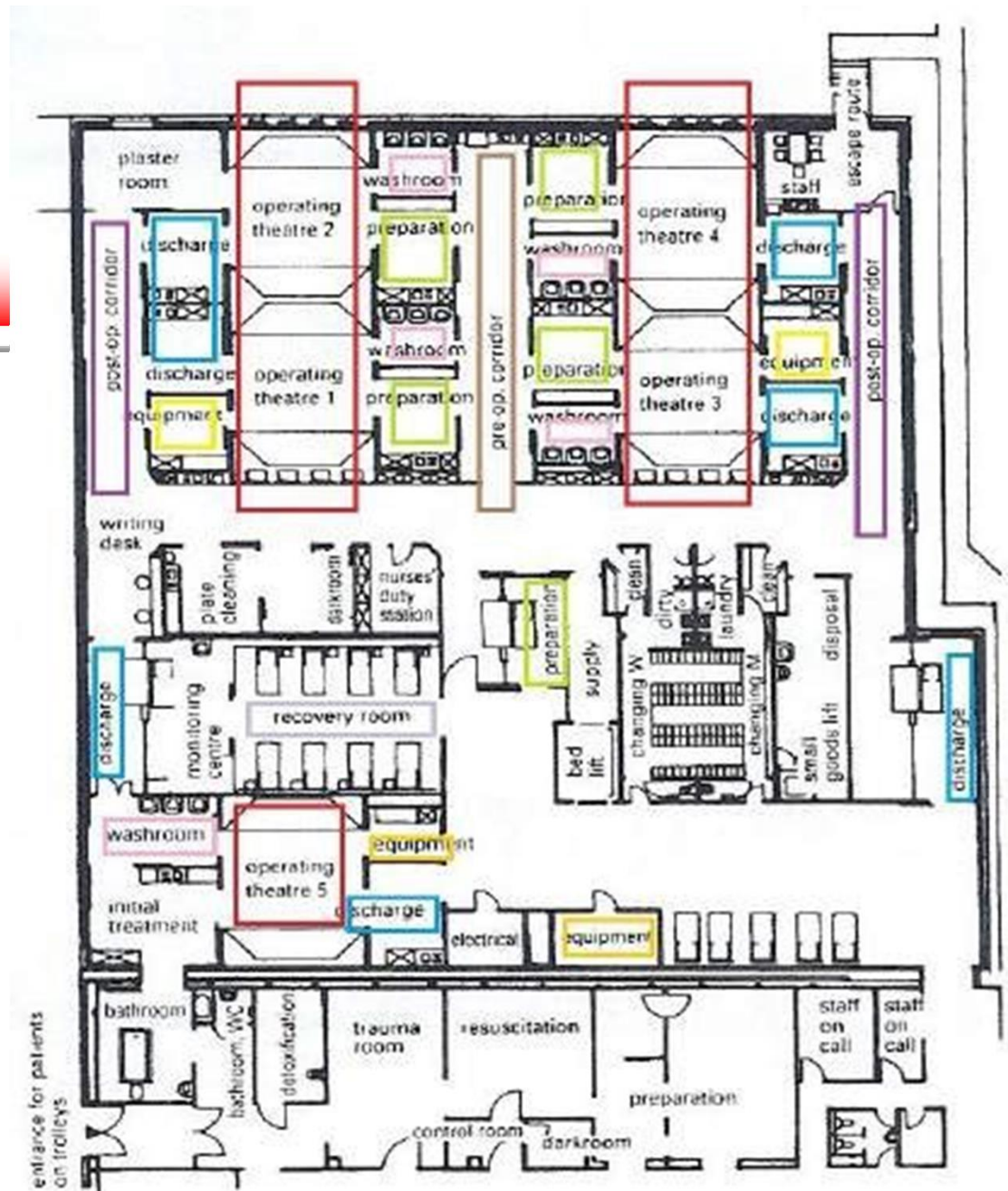


Ziekenhuis Lievensberg, Bergen op Zoom, the Netherlands, De Jong Gortemaker Algra, 2009. Operating room

Surgical Department

Floor plan of the central operating area at the Northern Hospital Centre, Dortmund, with five operating theatres and additional rooms

Pre-operative and post-operative patients are separated and the staff circulate via the area accommodating non-anesthetic patients area



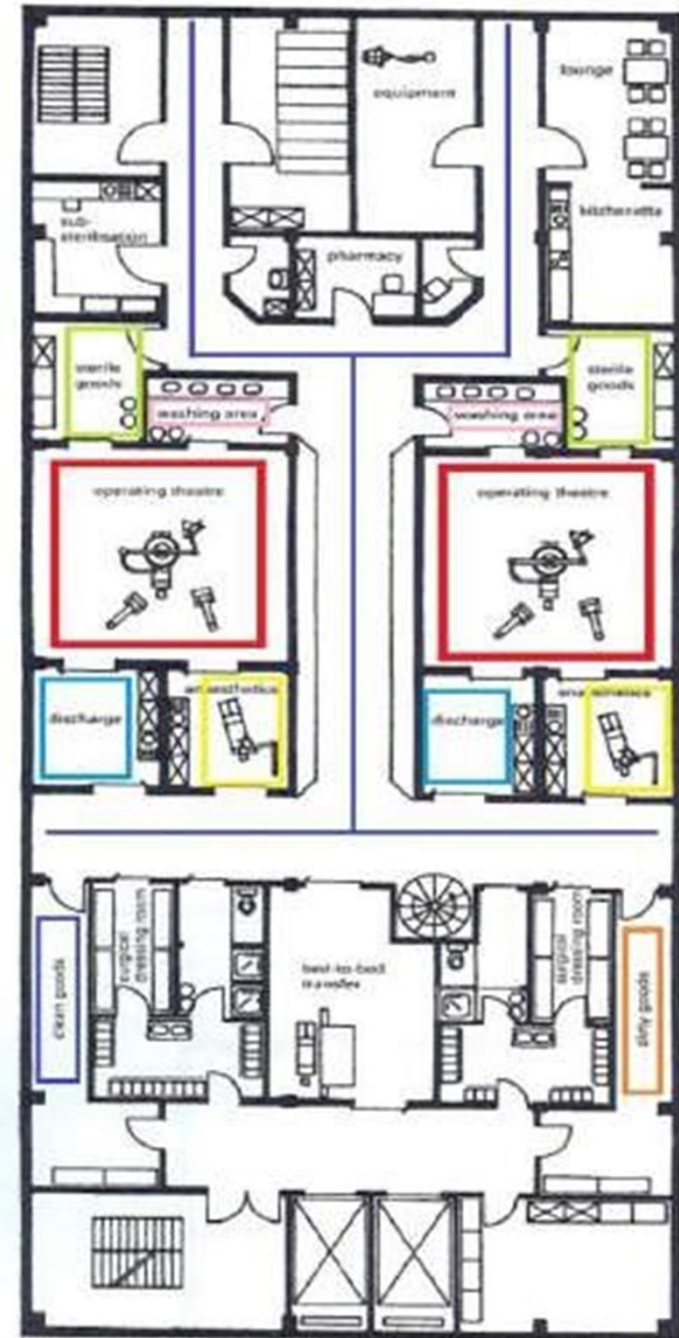
Surgical Department

Main Surgical Rooms

The operating theatre should be designed to be as square as possible to allow working whatever direction the .operating table is turned in m, with a clear height 6.50 x 6.50 A suitable size would be m 0.70m and an extra height allowance of roughly 3.00 of . for air conditioning and other services It is important to isolate the highly sterile areas to which .sterile instruments are supplied

Division of the operating theatres into septic and aseptic zones is a matter of medical controversy, but is a .sensible precaution

Floors and walls must be smooth throughout and easily washed; decorative or structural projections should be .avoided



Ground floor plan of a surgical annex with underground link to the main building: recovery room one floor below



Surgical Department

Anesthetics room

m in size and have electric 3.80 x 3.80 The anesthetics room should be approximately m). These doors must have 1.40sliding doors into the operating theatre (clear width .windows to give a visual link with the operating theatre

Anesthetic discharge room

This is set out identically to the anesthetics room. The door to the working corridor .m1.25 should be designed as a swing door with a clear width of

Washroom

Division into clean and non-clean washrooms is ideal, a single large room is adequate. .m1.80The minimum width of the room should be

For each operating theatre there should be three non-splash wash-basins with foot controls. Doors into the operating theatre must have an inspection window and, if they .are electrical, be opened by foot controls



Surgical Department

Sterile goods room

The size of this room is more flexible and it must be accessed directly from the operating theatre. One room of roughly 2 m¹⁰ is required per operating theatre.

Equipment room

Although direct access to the operating theatre is preferable, it is not always feasible the equipment room must be located as close as possible to the theatre in order to reduce waiting times. A room size of approximately 2 m²⁰ should be allowed.

Sub sterilization room

This room may or may not be connected directly to the operating theatre's sterile area. It contains a non-clean area for non-sterile material and a clean area for prepared sterile items. Linking a sub sterilization room to several operating theatres causes hygiene problems and so should be avoided. Note that surgical instruments are prepared in the central sterilizing unit, which lies outside the surgical area.

Plaster room

For hygiene reasons this is not located in the surgical zone but in the outpatient area. In emergencies the patient must be channeled through lobbies in order to get to the operating theatre.



Surgical Department

Recovery room requirements

The recovery room must accommodate the post-operative patients from more than one operating theatre. The number of beds required is calculated as 1.5 times the number of operating theatres. Designs should allow in daylight to help the patients to orientate themselves.

Dictation room

No larger than 5 m² in size, such rooms are where the doctors prepare reports following an operation.

Pharmacy

A 20 m² pharmacy can supply a combination of anesthetics and surgical medication and other materials.

Cleaning room

A size of 5 m² is sufficient for cleaning rooms. They should be close to the operating theatre since cleaning and disinfection are carried out after each operation.

Central Sterilization

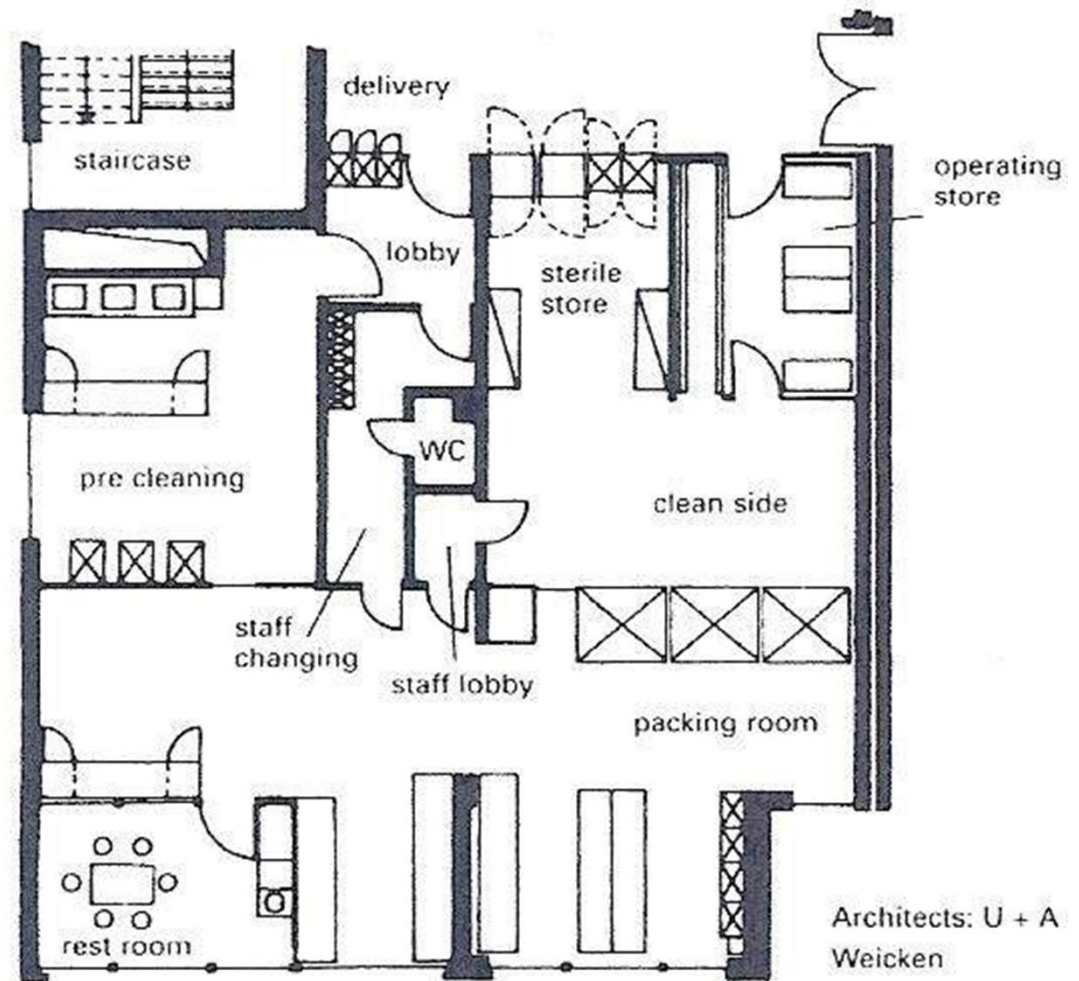
Central sterilization

This is where all hospital instruments are prepared. The majority of instruments are used by the surgical department (40%), surgical intensive and internal medicine (15%) intensive care (15%)

For this reason central sterilization should be installed close to these specialist areas.

It is recommended that the sterilization area be situated in areas with relatively low volumes of traffic (both people and materials)

The number of sterilizers is dependent on the size of the hospital and surgical department, and can occupy an area of approximately 40-120 m²



Architects: U + A Weicken

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Central sterilisation unit, St Elisabeth, Halle/S