
2 How oral health facilities work

The way in which health services operate is a key factor in directing the development of appropriate and effective health service facilities. This applies equally to oral health facilities. This section outlines some of the important operational issues for oral health facilities. It is recommended that these are reviewed prior to the commencement of planning and design processes.

Infection Control

Due to the nature of activities undertaken by oral health services, infection control is a key issue. As for all health facilities, the implementation and management of an appropriate Infection Control Program to prevent infection (and disease) transmission is an important requirement.

Queensland Health's Infection Control Guidelines (November 2001) provides guidance as to appropriate strategies for preventing infection (and disease) transmission. An appropriate Infection Control Program which reflects these Guidelines is to be developed and implemented.

The following standard measures can be applied in the clinical areas of the facility, such as:

- ▶ Hand washing
- ▶ Use of personal protective equipment
- ▶ Maintenance of a clean and safe environment

In addition to standard infection control measures, the maintenance of clean and dirty areas is a requirement in oral health facilities. This is to be supported by workflows and appropriate facility design.

Particular issues which need to be taken into consideration when implementing the clean/dirty distinction include:

- ▶ zones of aerosol infection in surgeries
- ▶ dust creation in laboratory areas
- ▶ sterilisation of used equipment
- ▶ disposal of contaminated waste

Workflows will need to support a clean/dirty flow and barriers will need to be in place to prevent crossovers.

Requirements

- ▶ Hand washing facilities are to be provided and appropriate hand washing procedures complied with in order to reduce the number of micro-organisms on the hands.
- ▶ Appropriate personal protective equipment (such as gloves, protective eyewear, gowns and facemasks) are to be used to reduce the risk of exposure to blood and body fluids.
- ▶ Regular cleaning of the facility is to be undertaken in order to minimise the number of micro-organisms in the environment and keep all surfaces clean and tidy.
- ▶ Procedures are to be implemented for the safe handling and appropriate disposal of contaminated materials and waste.
- ▶ Procedures for disinfecting and sterilising reusable clinical instruments and equipment are to be implemented to assist in preventing infections. The Sterilisation Area within the facility will play a key role in eliminating potentially infectious material from reusable devices.

Occupational Health and Safety

The facility must provide a safe working environment which will not cause any risks to the health of the occupants. In addition to those risks and hazards commonplace in health care environments, there are specific occupational health and safety issues associated with oral health facilities.

Examples of health and safety issues of particular relevance to oral health facilities include:

- ▶ leaning over reclined patients to provide treatment
- ▶ working with infectious materials
- ▶ working with hazardous chemicals in laboratory
- ▶ heat and noise associated with sterilising procedures

Hazards commonplace within healthcare environments generally relate to:

- ▶ Physical hazards
- ▶ Chemical hazards
- ▶ Biological hazards
- ▶ Manual Handling

It will be important to identify, assess and control risks or hazards which exist within the facility to produce a safer and healthier workplace. Facility design will have to be such that it supports the management of risks and hazards in oral health facilities.

Requirements

- ▶ Regular safety audits are to be conducted.
- ▶ Occupational Health and Safety (OH&S) specialists are to be consulted to ensure potential hazards are identified and appropriate procedures to control risks and resolve health and safety issues are implemented.

On-site Parking

It will be important to consider the car parking demands generated by oral health facilities. This is particularly relevant when clinics are located within community health centres or hospital complexes. Adequate car park capacity will need to be ensured with regard to the high level of outpatient activity in oral health clinics

Requirements

- ▶ Car parking provisions will need to be in line with Local Authority requirements and standards for health buildings as presented in Queensland Government's Integrated Planning Act.

Patient Administration and Management

Entry to the clinic must allow easy barrier free access for ambulant, wheelchair and stretcher patients. Access needs to comply with AS 1428.1 and AS 1428.2 and the intent of the Australian Government Disability Discrimination Act.

Patients (both adult & child) attending the dental clinic will report to reception where appointment will be made or confirmed, details taken and/or record of past attendance prepared, after which patients will be directed to the waiting area. An occasional patient may present on an ambulance stretcher and will be transferred to a wheel chair or dental clinic stretcher and held in the Recovery area to await treatment.

Patients will be escorted to and from the dental surgery by a dental assistant. The area within the dental clinic is to be secure from the waiting area. The most effective and appropriate way to ensure this security should be discussed with key stakeholders at the planning stage. In most cases a door or other access deterrent will be adequate. In some extreme cases a door with a security lock system (key or swipe card) may be required.

Requirements

- ▶ Reception desk is to be suitable for ambulant and wheelchair patients to provide information in privacy.
- ▶ Space is to be provided in waiting area for ambulant and wheelchair patients, as well as a play area for children.
- ▶ Alcove space is to be provided within the secure clinic area for a wheelchair and/or patient hoist. Space for a patient stretcher is required in the recovery holding area.
- ▶ Some form of access deterrent or barrier is required between waiting area and clinical / administrative areas.

Record Storage

Current dental records (a minimum of 2 years) are to be stored adjacent to reception so as to allow administrative staff easy access.

Requirements

- ▶ Metal shelving or a compactus system adjacent to reception capable of holding 2 year's dental records for both adult and school dental services as required.
- ▶ Archive space for non-current records. Depending on space, these may be located off site or at a centralised location. Records should still be reasonably accessible.

Medical Emergencies

Post treatment, there is a possibility for patients to feel faint or nauseous, experience bleeding or require medical assistance for other reasons. In such cases, appropriate medical assistance will need to be given. Likewise, staff may require medical assistance from time to time.

Requirements

- ▶ A centrally placed easily accessible first aid kit, close to the recovery area
- ▶ A Laerdal mask to be available in each surgery
- ▶ Oxygen therapy to be available in a medical emergency
- ▶ Staff to undergo training in CPR at least annually.

Communication Systems

- ▶ Consideration should be given to the following communication systems:
 - PABX (telephone/intercom) system
 - public telephone
 - intercom
 - public address system / background music
 - computer & data systems (comms box)
 - close circuit television (CCTV)
 - MATV

Sign Posting

External and internal areas will be clearly sign posted in accordance with the recommendations of Signposting for Health Care Facilities (1994) and Queensland Health signposting requirements.

Requirements

- ▶ External signs clearly indicating the Oral Health Clinic, its address, phone number and operating hours.
- ▶ Internal signs which direct patients and visitors;
- ▶ Internal signs which identify rooms as appropriate.

Patient and Visitor Amenities

Toilets should be provided for ambulant and disabled patients in an area adjoining the waiting area and with direct access from the waiting area. A baby changing facility should be provided in the persons with disabilities (PWD) cubicle.

A water cooler with disposable cups will also be provided in the waiting area (Cuspidor type coolers are not appropriate due to infection control concerns.)

Requirements

- ▶ Male and female toilets and a toilet for use by disabled patients
- ▶ A fold down baby changing table in the PWD toilet
- ▶ A water cooler using bottled water.

Staff Amenities

Staff are to have access to a lunchroom with a beverage making facility and male and female toilets and change rooms. Access to a uni-sex shower is to be considered.

For oral health clinics located in community health or hospital clinics, sharing of staff amenities is recommended.

Requirements

- ▶ A lunchroom with table and chairs and a beverage facility (sink, boiling water unit, refrigerator and microwave)
- ▶ Male and female toilets and change areas with lockers (adequate space must be provided to accommodate staff numbers)
- ▶ Unisex shower if identified as appropriate.

Education

Maintaining an appropriately skilled oral health workforce has emerged as an issue of concern for Queensland Health. Providing student teaching and staff in-service training is a key element of this and it is desirable to have a purpose designed area in major facilities with 6 or more chairs.

Requirements

- ▶ A lecture / tutorial room with appropriate seating, white board, overhead projector and wall or ceiling mounted TV with video facilities.
- ▶ Open plan surgeries will facilitate easier supervision of students and should be considered for larger facilities.

Stores, cleaning & plant

The efficient receipt and distribution of goods and supplies and the recycling of items with disposal of refuse is an important consideration.

Ideally goods and supplies will be brought into the dental facility through a loading bay / goods reception area and taken to the appropriate storage area. Conversely, used goods will be stored to await removal through the loading bay / goods reception area while refuse will be collected and held pending removal by the local authority or contractors.

Those larger facilities acting as a 'hub' for other smaller clinics in the area may require additional storage space and a packing area with bench space to prepare materials for redistribution.

A Cleaner's Room will be provided with direct access to the secure circulation.

A secure easily accessible Plant Room will be provided. Provision is to be made for after hours access to the Plant Room.

The area allocations set aside for each of these functions will depend upon the size of the dental facility, however consideration should be given to the following requirements.

Requirements

- ▶ Loading bay / goods reception at ground level for reception and dispatch of goods (most delivery trucks have facilities for delivering goods at ground level). An adjacent area for refuse awaiting collection.
- ▶ A General Store for unpacking goods and supplies and for the secure storage of miscellaneous good and back-up supplies.
- ▶ A packing area (within General Store) with adequate bench space to facilitate distribution of materials to other facilities.
- ▶ A centrally placed Linen Store with easy access to dental surgeries.
- ▶ A Disposal Store or area for holding returnable goods (linen), recyclable items and refuse etc.
- ▶ A secure Cleaner's Room to hold cleaning equipment and supplies and provided with a cleaner's sink and hand basin.
- ▶ A Plant Room of sufficient size to accommodate all the mechanical and electrical plant. Service supply lines (compressed air, vacuum, extraction systems etc) and plumbing lines should be run under a **suspended floor slab** to allow for easy service maintenance and future alteration, expansion or upgrade of equipment.

3 What oral health facilities include

Oral health services are provided across Queensland to a diverse range of communities. In order to service these communities effectively, it is important to develop oral health facilities appropriate to their context. At the planning stage it will be important to consider how many chairs are to be included in the facility, what range of services are to be provided and how access to support functions will be ensured.

The size of oral health facilities can range from single chair clinics to large clinics of twenty chairs or more. Depending on the size of the facilities, and where they are located, different facilities will need to be included in oral health clinics. However, regardless of size, all facilities will need access to the areas outlined below.

| | |
|----------------|---|
| Consumer Areas | Entry Patient Waiting Children Waiting Sanitary Facilities |
| Clinical Areas | Dental Surgery Sterilising Area Recovery / Holding Area Dental Laboratory Orthopantomograph (OPG) X-ray |
| Clerical Areas | Reception General Office Records Offices |
| Support Areas | Corridors Tutorial Staff Lunchroom Linen Alcove Staff Sanitary Facilities Store Areas Cleaners' Room Loading Bay – Goods Reception |

Decisions will need to be made as to how this access to these areas will best be achieved.

For example, oral health clinics in rural and remote locations are generally quite small and may only be serviced by a single dentist or on a visiting basis. It is common for these facilities to be located within hospital or community health service complexes and it may not be appropriate for a full range of dedicated oral health sterilising and laboratory areas to be provided.

Options include:

| Option | Example Areas |
|--|---|
| Provision of facilities exclusive for oral health facilities. | Dental Surgery |
| Sharing of facilities within hospital or community health complexes. | Consumer Areas Support Areas Clerical Areas Sterilising Area |
| Utilisation of off site facilities | Laboratory Sterilising Area Orthopantomograph (OPG) X-ray |

All facilities are to give consideration to utilising centralised, off site sterilising and laboratory facilities. This ‘hub and spoke’ type arrangement provides opportunity to achieve capital and operational cost efficiencies and can be appropriate in remote, regional and metropolitan areas. In determining whether such an arrangement is sustainable, reference is to be made to Oral Health District service plans and strategies.

Consideration may also be given to utilising private service providers in the area and taking advantage of Medicare arrangements. For example, the inclusion of an OPG is not supported in any but the large facilities. Private providers can be accessed in the case of full mouth x-rays being required.

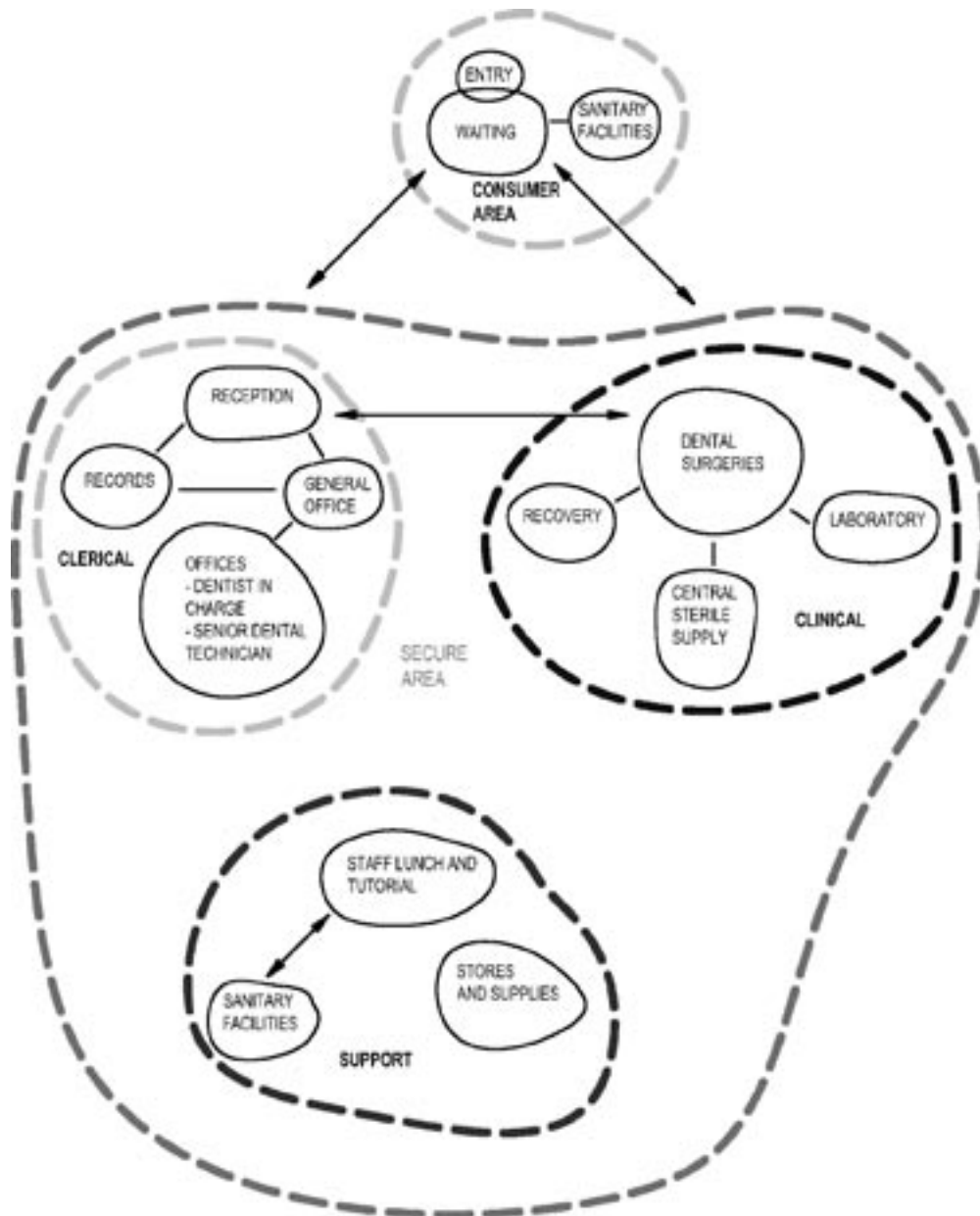
Additional comments on how access to critical areas can be ensured are provided in Design Recommendations – Critical Areas.

It is important that the functional relationships between facility areas support effective and efficient service delivery. Key functional relationships are presented below. Oral health facility designs will need to ensure these key functional relationships are achieved.

Indicative space requirements for various sized facilities have been developed and are presented in a Table of Accommodation, following. These areas are a guide only. Specific requirements will depend on room designs selected.



Functional relationships - Facility areas



Functional relationships - Waiting room/ reception/dental

Table of Accommodation

| Type of accommodation | Suggested room size m ² | Comments | Amount of accommodation | | | | | |
|---------------------------------------|------------------------------------|-------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|
| | | | 1 chairs | 4 chairs | 8 chairs | 12 chairs | 16 chairs | 20 chairs |
| Consumer areas | | | | | | | | |
| Entry | | | | 6 m ² | 8 m ² | 8 m ² | 10 m ² | 10 m ² |
| Patient Waiting | 14 m ² | | | 18 m ² | 23 m ² | 30 m ² | 36 m ² | 40 m ² |
| Children Waiting | | | | 3 m ² | 3 m ² | 3 m ² | 5 m ² | 5 m ² |
| Clerical areas | | | | | | | | |
| Reception | 12 m ² | + 2 m ² /fte | | 12 m ² | 12 m ² | 16 m ² | 18 m ² | 20 m ² |
| General Office | 10 m ² | + 2 m ² /fte | 10 m ² | - | 10 m ² | 10 m ² | 14 m ² | 18 m ² |
| Records | | | | 10 m ² | 20 m ² | 26 m ² | 32 m ² | 38 m ² |
| Offices | | | | | | | | |
| - dentist in charge | 12 m ² | | | | 12 m ² | 12 m ² | 12 m ² | 15 m ² |
| - senior dental assistant | 10 m ² | | 10 m ² | 10 m ² * | 10 m ² | 10 m ² | 12 m ² | 24 m ² |
| Clinical areas | | | | | | | | |
| Dental Surgery | 16 m ² | | 16 m ² | 64 m ² | 128 m ² | 192 m ² | 256 m ² | 320 m ² |
| OPG | 6 m ² | | - | - | - | 6 m ² | 6 m ² | 6 m ² |
| Sterilizing | | | | | | | | |
| - decontamination | | | | | | | | |
| - sterilizing | | | 10 m ² | 17 m ² | 36 m ² | 36 m ² | 40 m ² | 42 m ² |
| - storage | | | | | | | | |
| Recovery / holding | 6 m ² | | 4 m ² | 6 m ² | 6 m ² | 6 m ² | 10 m ² | 12 m ² |
| Dental Laboratory | | | | | | | | |
| - barrier lab | | | | | | | | |
| - casting room | | | | | | | | |
| - clean room | | | | | | | | |
| - plaster & packing | | | - | 28 m ² | 100 m ² | 168 m ² | 168 m ² | 184 m ² |
| - polishing | | | | | | | | |
| - preparation room | | | | | | | | |
| - technicians w/s | | | | | | | | |
| - ceramics room | | | | | | | | |
| - office chief tech | | | | | | | | |
| Support areas | | | | | | | | |
| Tutorial | | | - | 12 m ² | 20 m ² | 28 m ² | 36 m ² | 44 m ² |
| Staff lunch | | | 6 m ² | 12 m ² | 15 m ² | 20 m ² | 30 m ² | 35 m ² |
| Linen Alcove | | | 2 m ² | 2 m ² | 2 m ² | 4 m ² | 4 m ² | 6 m ² |
| Sanitary Facilities | | | | | | | | |
| - consumers | | | 4 m ² | 10 m ² | 14 m ² | 18 m ² | 18 m ² | 22 m ² |
| - staff toilets & change | | | 4 m ² | 12 m ² | 20 m ² | 20 m ² | 24 m ² | 24 m ² |
| Store – general | | | | | | | | |
| Store – clean linen | 6 m ² | | | 6 m ² | 6 m ² | 6 m ² | 10 m ² | 12 m ² |
| Store – disposal | | | | 6 m ² | 9 m ² | 9 m ² | 9 m ² | 12 m ² |
| Cleaner's room | 8 m ² | | | 6 m ² | 9 m ² | 9 m ² | 9 m ² | 12 m ² |
| Sub-total | | | 94 m ² | 246 m ² | 473 m ² | 647 m ² | 774 m ² | 921 m ² |
| Circulation (25%) | | | 24 m ² | 61. m ² | 118 m ² | 162 m ² | 194 m ² | 230 m ² |
| Travel & Engineering (20%) | | | 19 m ² | 49 m ² | 95 m ² | 129 m ² | 155 m ² | 184 m ² |
| TOTAL AREA | | | 137 m² | 357 m² | 686 m² | 938 m² | 1123 m² | 1335 m² |
| Area / chair (m²) | | | 137 | 89 | 86 | 76 | 70 | 67 |