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Preamble

280.1.00

The Queensland Department of Health is committed to the delivery of safe, appropriate and sustainable oral health services. Queensland public Oral Health Services provide oral health care to eligible patients in a number of settings, including standalone adult and child and adolescent clinics within community health and hospital complexes, as well as single and double surgery mobile dental clinics.

A number of issues are being raised and initiatives introduced which may impact on existing infrastructure and have implications on planning for future oral health units. These include:

- challenge to the traditional segregation of children and adults for treatment - consider the building of larger ‘family-friendly’, community based facilities where all members of the family will receive treatment for oral health disease
- recognition of tooth decay as preventable disease - progress prevention and promotion as a key strategy in addressing future oral health issues across the state
- introduction of an intern year for oral health professionals
- increased numbers of students undertaking clinical placements.

The guidelines in this document respond to the current functional requirements of oral health clinics while providing guidance for future flexibility and the ability to adapt to changes in technology and service provision.

Introduction

280.2.00

GENERAL

This guideline is a resource to assist with the planning, design and construction of Oral Health units in Queensland. It must be read in conjunction with generic planning requirements and Standard Components which are described in Parts A, B, C, D and E of the Australasian Health Facility Guidelines (AusHFG).

The guideline is developed for use by:

- health service personnel involved in the planning and design of a unit
- architects, planners, engineers and other who have been engaged to plan and design the unit
- personnel from the relevant health authorities whose role it is to oversee and monitor projects.

A clearly defined Clinical Services Plan, Models of Care, outline of community requirements and Operational Policies must be developed and approved in accordance with appropriate delegations before embarking on the capital planning process.

Infection Control is a key issue in all Oral Health Units and compliance with The Queensland Department of Health policy framework is mandatory. Standard measures such as clinical hand washing, the use of personal protective equipment and maintenance of a clean and safe environment are vitally important. Other important issues include:

- zones of aerosol infection in surgeries
- air flows
- dust creation in laboratory area
- sterility conformity of reusable medical devices and dental instrumentation
- disposal of contaminated waste
- workflow patterns – dirty/clean/sterile flow, barriers which prevent crossover.
A wide range of patient treatment, patient and staff/student educational and teaching activities may be undertaken. The capacity to undertake training, supervision, educational and group programs should be considered.

An oral health unit’s capacity to deliver a particular level of service depends on the presence of oral health staff with qualifications, skills and experience compatible with the defined level of care.

**Service:** Provided by:

- **Preventive**<br> All oral health staff and other primary health care providers.
- **General (school)**<br> Dentists, Oral Health Therapists, Dental Technicians, Dental Therapists, Dental Prosthetists, Dental Assistants.
- **General (adult)**<br> Dentists, Oral Health Therapists, Dental Prosthetists, Dental Technicians, Dental Assistants.
- **Emergency**<br> Dentists, Oral Health Therapists, Dental Therapists, Dental Assistants.
- **Specialist**<br> Dentist Specialists, Dental Prosthetists, Dental Technicians, Dental Assistants.


**Policy Framework**

280.3.00 An understanding of the policy framework for Oral Health Facilities within Queensland is essential to safe and efficient health facility design and most relevant documentation can be found within the reference section of this document.

**Description of the Unit**

280.4.00 DEFINITION OF ORAL HEALTH FACILITY HEALTH PLANNING UNIT (HPU)

The prime function of the Oral Health Unit is to provide suitable accommodation to facilitate the delivery of oral health care whilst also providing facilities and conditions to meet the working needs of staff.

Oral Health units range from single chair clinics to large teaching hospital units providing complex specialist care. They can be either stand-alone buildings or integrated with other healthcare or hospital facilities. Requirements for the Unit are determined by the range of services provided and the model of service delivery as described in the Service Plan.

It is envisaged that most units will provide predominantly outpatient services but there may be a requirement in hospital-based units for some inpatient access. Dental Officers may need access to operating or day procedure facilities for oral surgery that cannot be undertaken in the unit, particularly children and people with special needs.

This guideline provides the information necessary to plan and design Oral Health units of various sizes and complexity.

It is envisaged that a 4 chair unit would be the minimum size for a unit operating as an Oral Health Service “Hub” with a 2 chair unit being the minimum size for an Oral Health Service “Spoke”. Units in rural communities should be a minimum of 2 chairs to allow for additional visiting and hygienist services to occur in conjunction with the dental officer services.

In some locations, the design may provide multifunctional rooms which can be shared with other services such as podiatry, Ear Nose and Throat (ENT) and renal dialysis. Prior advice should be sought from Infection Control personnel.
A Schedule of Accommodation for Spoke services is presented at the end of this guideline. It is not intended to be prescriptive but rather provide the building blocks from which an Oral Health unit is suitable for its stated purpose and service plan may be developed.

280.4.05 SERVICES PROVIDED

There are a number of changing trends in service delivery models which will impact on future design. These include:

- changing patient profile with increased numbers of frail aged, people with a disability, bariatric and medically compromised patients
- increased teaching and training responsibilities in collaboration with universities
- utilisation of a range of workforce roles and skills within public sector services including dental specialists, hygienists and prosthetists
- more centralised models of service provision, for example, mixing of child and adolescent services with adult services has resulted in more children using fixed clinic facilities which were previously used predominantly for adults.

Dependant on the agreed service plan, the unit may provide the following services:

- dental therapy/hygiene services for children and adolescents
- general and emergency services to all ages
- denture or prosthesis manufacture and adjustment
- specialist services - oral surgery, endodontics, orthodontics, periodontics
- community education programmes
- teaching and training of students undertaking clinical placements and supervision of graduates
- education of patients
- call centre services.

Call centre staff require office accommodation within their district. This may or may not be attached to the Oral Health Unit.

Some centres also provide additional administration, financial and other coordination and support services to the larger service provision area and therefore need to accommodate additional staff numbers.

Consideration could be given to the installation of a consulting chair without usual surgery facilities to be utilised when a patient requires oral health education/instruction or monitoring after a procedure, palliative dental care (i.e. for temporary relief only), minor denture adjustment, issue of denture repairs, consultations, etc. This could also be a location for teaching children dental hygiene.

280.4.10 FACILITY DESIGN

Priority should be given to ensuring that the physical environment is welcoming for all users, including children, people of culturally and linguistically diverse backgrounds and others with special needs.

However welcoming the environment, there is always the possibility that some persons may be agitated or aggressive and potentially a risk to themselves or others, including staff. Therefore, the environment must also have an appropriate level of security for both visitors and staff in accordance with local risk assessment and management systems.

Built oral health units should support the effective and efficient provision of oral health services to eligible clients. In order to do this, the following outcomes should be achieved by facility designs:

- safe, hygienic buildings
- capacity to achieve accreditation to an appropriate level
- innovative, stimulating and responsive environment for patients and staff
- flexibility to allow for future change
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- maximum energy efficiency
- accessibility for people with disabilities
- capacity to support the development and retention of high quality staff to meet the needs of patients.

Refer to the relevant sections of the AusHFG, Part C – Design for Access, Mobility, OHS and Security and Part D - Infection Prevention and Control.

280.4.15

CALCULATION OF NUMBER OF CHAIRS REQUIRED

Calculations for chairs should be based on a multi-factorial approach including population eligible for care, demand and services capacity. Future needs and student and training requirements should be taken into account in the calculations.

The figures will need to be adjusted to suit the level of service provided and units with a role in student teaching will affect the length of sessions and in consequence, the number of chairs required. Planning should also consider or allow for a possible internship/junior dental officer/overseas trained dentists under supervision in the future and regular operating sessions by dental surgeons.

The following formula may be used and adjusted to assess the number of chairs required:

Total days available (excluding public holidays & closures = 5 weeks) = 47 weeks x 5 days = 235 days x 8 hours/day = 1880 hours.

Non clinical time:
- Chairside cleaning allowance = 1 hour/day (1/2 hr between and after sessions) = 235 hours
- 80% occupancy assumed = 376 hours (allows for meetings, training, and allowance for managing the work patterns of part time staff etc).

Total non clinical hours = 611.

Available hours pa = 1880 - 611 = 1269 hours pa (5.4 hours / day).

Based on 1/2 hour appointments, each dental chair has the capacity to support 11 patient appointments per day or 2585 patient appointments per year.

Therefore: 12,000 appointments per year require 4.6 chairs (rounded up to 5).

280.4.20

ELIGIBLE CLIENTS

For the full range of eligible clients please refer to Oral Health Services Policy, Procedures Manual Section 5, available from:

280.4.25

CARE / TREATMENT OFFERED

Care and treatments most commonly offered include:
- oral examination and diagnosis including radiographic examinations
- preventive care including fissure sealing and fluoride applications
- dental hygiene
- general dental care including restorative care at a non-specialist level, e.g. cavity preparation and fillings
- limited crown and bridge work and endodontics
- sedation where indicated
- extraction of teeth and oral surgery
- fitting, manufacture and adjustment of dentures
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- treatment of periodontal disease
- referral of patients as required
- oral health education and promotion programs to individuals and groups.

Services may be provided to patients requiring specialist treatment or advice beyond the scope of the general practice dentist in larger regional clinics and in hospital based services.

PLANNING

Operational Models

280.5.00 HOURS OF OPERATION

The unit will usually operate during business hours, Monday to Friday, but may operate outside these hours.

There should be policies and procedures in place for management of emergencies after hours and this will have implications for access, security and safety of practice that need to be considered during the planning and design stages.

In the future, units may need to consider options to provide after hours and weekend services to meet demand, particularly in cities or larger regional centres. Design implications may result from after hours services.

280.5.05 TYPE OF UNIT

The type of Oral Health Unit will be determined by the Service Plan and may be delivered from a fixed clinic and/or a mobile service. Fixed site clinics include:

- community-based, standalone units in a metropolitan or rural area
- a component of a school, community health centre or other multi-purpose community-based centre
- general hospital-based unit
- teaching hospital unit.


280.5.10 FIXED CLINICS

Oral Health units may be in a community based setting or attached to a hospital.

Hospital-based oral health units mainly provide outpatient care. However, services are also provided to inpatients who require urgent oral care or oral care as part of an inpatient admission. The extent of services provided by dental officers in support of other clinical disciplines, e.g. facio-maxillary surgery, will depend on the role and function of the health facility itself but it is likely that the majority of such services will be provided in the Operating Suite or Day Procedure Unit and will have minimal impact on the design of the Oral Health Unit itself. However, it will affect available hours of dental officers that need to be factored in to any assessment of the number of chairs required.

Community based units provide outpatient care. In large regional centres, a range of dental specialties may be provided, usually on a visiting basis.

Oral Health units in rural and remote locations are generally quite small and may be serviced by a single dentist or on a visiting basis. It is common for these units to be located within the local hospital, the multipurpose health facility or community health service complexes.

Consideration may need to be given to the development of a relocatable modular design building as an option instead of either a fixed clinic or mobile van. The building could remain in a fixed
location for a longer period than the mobile service, but could be relocated to a new site as the demographics of the service area change.

280.5.15 MOBILE DENTAL CLINICS

Single surgery Mobile Dental Clinics (MDCs), double surgery Mobile Community Dental Clinics (MCDCs) and self-drive MDCs (drovers) are utilised for the provision of oral health services to the eligible community including children, adolescents and adults. Single surgery MDCs and double surgery MCDCs are towable vehicles.

Single surgery MDCs are used predominantly to facilitate the delivery of child and adolescent dental services on site within school grounds throughout all Health Service Districts in the state.

Double surgery MCDCs are utilised to provide an integrated adult, child and adolescent community model of care.

Drovers are used for a number of differing purposes which include delivery of oral health services in rural and remote locations, delivery of services in aged care facilities and delivery of services in child and adolescent dental services.

For further information on mobile dental clinics, refer to the Queensland Department of Health Office of the Chief Dental Officer for Technical Specifications of Single Surgery and Double Surgery Mobile Dental Clinics.

280.5.20 PRIVATE CONTRACT ARRANGEMENTS

Consideration may be given to utilising private service providers in the area and taking advantage of Medicare arrangements. Private providers can be accessed in the case of full mouth x-rays being required.

As a recruitment and retention incentive, public dentists may be given the right to private practice from public facilities. This may have design implications, for example, collection of payments and traffic flow.

Refer to Queensland Health (2009) Human Resources Policy B57, Use of Public Facilities for Private Practice – Allied Health Professionals and Dental Practitioners.

Operational Policies

280.6.00 GENERAL

Operational Policies have a major impact on the design requirements and capital and recurrent costs of health facilities. The mandatory requirements and roles and accountabilities for the delivery of oral health services in Queensland are in the Oral Health service Policy, Procedures Manual: [http://qheps.health.qld.gov.au/oralhealth/content/pol_proc_manual.htm](http://qheps.health.qld.gov.au/oralhealth/content/pol_proc_manual.htm)

280.6.05 DENTAL RECORDS

Current dental records (a minimum of 2 years) including x-rays should be stored on fixed metal shelving or a compactus system, adjacent to Reception so as to allow administrative staff easy access. Archival space for non-current records may be off site but must be accessible within a reasonable time-frame.

Electronic records are an increasingly used alternative and must be stored and backed up appropriately. At some point in the future, a records room may be unnecessary, so this room should be designed so that it can be converted into another functional area such as another dental surgery space or data server room.

280.6.10 REPROCESSING OF REUSABLE DENTAL INSTRUMENTS – OFF SITE
In line with the Queensland Department of Health Policy and Standards centralisation of reprocessing of reusable medical devices is the preferred option. In consultation with the Centre for Healthcare Related Infection Surveillance and Prevention (CHRISP) Sterilising Program the option of centralising dental instrument reprocessing is to be assessed for all building and refurbishment projects. Consultation will be undertaken between CHRISP, Health Planning and Infrastructure Division, Health Service District and other relevant parties prior to the delivery of any infrastructure which includes sterilising services including in the planning, business solution design and construction phases. The benefits associated with a centralised reprocessing of reusable medical devices and dental instrumentation includes:

- reduced operational and infrastructure costs
- reprocessing of medical devices and dental instrumentation by dedicated staff who are appropriately trained
- improved compliance with quality management systems
- reduced building footprint
- reduced maintenance requirements.

Offsite reprocessing may occur at a Central Sterilising Department or an Oral Health Hub Service. Prior to a decision being made the following factors need to be assessed:

- capacity of the proposed reprocessing site
- hours of operation of the proposed reprocessing site
- agreed turn-around times (usually 24 hours for reprocessed medical devices)
- ability to meet requirements for transportation of used and reprocessed instruments
- ability to meet instrumentation requirements to fulfil service demand and meet agreed instrument reprocessing turnaround times
- adequate storage space for used and reprocessed instruments
- use of single use instruments where possible e.g. for all dental examinations
- cost benefit analysis as part of the service plan
- operational issues such as waste management.

280.6.15

REPROCESSING OF REUSABLE DENTAL INSTRUMENTS – ON SITE

If reprocessing of reusable dental medical devices is to be undertaken in the ‘new’ or refurbished local Oral Health Facility, CHRISP must be consulted with regards to design, area accommodation, health technology, information systems and mechanical service requirements.

Instrument reprocessing design, area accommodation, health technology and mechanical services requirements for an Oral Health Hub Service are outlined in AusHFG Part B Health Facility Briefing and Planning: 190 Sterile Supply Unit. Note: Guidance provided in 190 Sterile Supply Unit should be considered in the context of oral health requirements to ensure services are not duplicated and space allocations are reflective of equipment and processes specific to the oral health context.

In most instances, reusable dental medical devices will be reprocessed within the local Oral Health facility by staff who have undertaken formalised training in sterilising services.

The most efficient and reliable method of sterilisation is by steam under pressure (autoclaving) and is the preferred method in oral health. In an Oral Health Spoke Service these sterilisers are usually bench-top.

In an Oral Health Spoke Service the following dedicated areas are mandatory in order to reduce the risk of cross contamination and ensuring compliance with relevant Queensland Department of Health policies/standards and Australian Standards:

- instrument decontamination
- packaging and sterilising processes
- storage of sterile stock.
The size of the space, equipment and plant required will depend on the number of chairs being serviced, workplace processes and staffing, i.e. the number of staff requiring access to the reprocessing area at any one time. Consultation with CHRISP is to occur with regards to design, area accommodation, health technology and mechanical services requirements.

For both Off-Site and On-Site services, refer to the following policies and standards:

- Draft Implementation Standard: Planning Sterilising Services Infrastructure
- Queensland Health (current published version) Disinfection and Sterilisation Infection Control Guidelines.

280.6.20 MANUFACTURING OF DENTURES

Manufacturing of dentures may be performed in-house or at an alternative Queensland public Oral Health Services facility. The need for inclusion of a dental laboratory in an Oral Health facility will to some extent be dependant on the age of the main patient group and the services being provided. On occasion, outsourcing to a private provider may be required, but this will necessitate consultation and negotiation with unions under the current Enterprise Bargaining Agreements.

The Service Plan needs to consider the feasibility and costs of in-house versus alternative Queensland public Oral Health Services facility versus outsourced models to assess the need for a dental laboratory that is capable of manufacturing dentures.

If an in-house laboratory is not provided, a minor prosthetic adjustment area may be required for denture fitting and adjustment.

280.6.25 MEDICAL EMERGENCIES AND PATIENT RECOVERY

Depending on the size of and services provided by the unit, consideration should be given to discrete facilities for resuscitation, oxygen therapy and recovery for post-treatment observation of patients who have received sedation and the occasional patient feeling faint, nauseous or bleeding.

Requirements may include:

- centrally located, easily accessible first aid kit in or near the recovery area
- a Laerdal mask available in each surgery
- oxygen therapy available for a medical emergency
- sufficient space within the surgery area for emergency personnel and a stretcher
- space and equipment for staff to undergo annual training in Cardiopulmonary Resuscitation (CPR).

280.6.30 PATIENT MANAGEMENT

Patients attending the Oral Health Unit will report to Reception where appointments will be made or confirmed, personal details taken and records retrieved or generated after which patients will be directed to the waiting area. Patients presenting by ambulance may be transferred to a wheelchair or trolley and, depending on condition, held in the recovery area to await treatment.

Acoustic privacy and the confidentiality of patients attending the reception area should be a high priority.
Consideration must be given to providing adequate space and amenities for support persons (parents, carers, etc).

In larger facilities, it is desirable to have an interview room immediately adjacent to the waiting room, to assist patients with difficulties, appropriately manage aggressive patients, and to allow for a confidential area to discuss treatment plans and concerns with patients. This area can also be used as an oral health education room to allow for health promotion outside the surgery area in a more relaxed and appropriate setting.

280.6.35

RADIOLOGY

Ideally there should be capacity for intra-oral radiology in all individual surgeries and a shared unit for the therapy chairs. Shared units need to consider privacy and radiation safety issues.

The intra-oral x-ray units are wall-mounted with remote exposure switches/panels outside the room.

Radiation shielding is addressed in the Section ‘Radiation Screening’ of this Guideline.

Facilities for processing of dental film should be readily available in the unit. The use of digital imaging should be considered to obviate the need for dark room/daylight processing facilities and will require the appropriate cabling infrastructure and viewing monitors in the surgeries.

Orthopantomograph (OPG) and other extra-oral radiography facilities will be established in large, hospital-based units and the option to outsource dental radiography from Radiology Departments should be considered. Smaller rural and remote units will require OPG facilities within a reasonable distance of the unit.

280.6.40

STORAGE – GENERAL SUPPLIES

The frequency and volume of the stock delivered will determine the physical space requirements. As few of the supplies are standard to a hospital's main supply inventory, most items will be ordered by and stored within the unit.

In hospital-based units, items that are available on the hospital's stores inventory may be drawn on an imprest system. There should be a stock imprest system within new oral health units.

Larger units acting as a 'hub' for other smaller units in the area will require additional storage space, de-boxing area, a packing area with bench space to prepare materials for redistribution and a workstation for maintaining records of goods sent/received.

Consideration may be given to a designated goods delivery entry with or without a loading dock and a de-boxing area but will depend on site constraints, cost, security, etc.

280.6.45

SEDATION

The range of general or specialist treatment services provided by the Oral Health Unit will dictate the type of sedation infrastructure required.

In most instances, no general anaesthesia will be administered in the unit but oral, local, intramuscular, intravenous, nasal and inhalational (nitrous oxide) substances will/may be used. If the unit is to provide sedation, there must be a dental operating chair which will allow the patient to be placed rapidly in the horizontal or head-down position.

Patients needing general anaesthesia (mainly children and adults with special needs) will be placed onto sessional lists in a Day Procedure Unit or Operating Suite depending on the anaesthetic policies of the unit.
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280.6.50.1

STERILE STOCK STORAGE – Reusable Medical Devices including Dental Instruments and Single Use Only Consumables.

The following environmental requirements are to be considered with all sterile stock storage areas (for further information refer to the Queensland Health Sterile & Non Sterile Stock Storage Design Guidelines for New and Refurbished Healthcare Facilities):

- secured to limit access
- controlled environment, e.g. temperature ranges 18-22° C; relative humidity range 35%-68%
- protected from direct sunlight
- wall, floors and work surfaces are to be non-porous, smooth, and capable of being easily cleaned
- area should be configured so that there is limited difficult to clean corners and areas for dust to collect
- lighting should be fitted flush into ceiling to reduce dust entrapment
- adequate space is required around sterile product to enable air circulation
- sterile stock storage area should be constructed that there is no risk that the sterile stock will come in contact with water
- sterile storage area is not to be used as a shared equipment storage space (e.g. wheelchairs etc)
- there is to be an area dedicated to de-boxing of commercially prepared sterile stock from outer store/transportation packaging before being brought into the sterile stock storage area.

The following are general requirements to be considered when choosing a sterile stock storage system:

- protects the integrity of the sterile stock packaging system
- does not facilitate dust collection
- facilitates inventory management and stock rotation
- both reprocessed and commercially prepared sterile stock can be stored in the same area
- shelving systems should be flexible (not fixed) to facilitate product changes – adjustable shelving, not fixed to the wall
- shelving should take into consideration Occupation Health & Safety issues/concerns such as height of shelving and storage, and accessibility to stock
- prevents sterile stock from coming in contact with walls
- sterile stock is to be stored on open shelving must be at least 250mm from the floor & 440mm below ceiling fixtures
- shelving to be manufactured from non-shedding material, easily cleanable and with smooth surface that will not damage packaging
- shelving should be constructed of a continuous solid (not hollow) single piece of material (e.g. such as Stainless Steel, not “plated” with another material, recommended stainless steel 316). Joins and hard to clean corners should be minimised or avoided
- adjustable to accommodate all common dimensions of sterile stock to prevent damage of the packaging and the item.

280.6.55

WASTE DISPOSAL – GENERAL

General and clinical waste will be managed in accordance with overall hospital/unit policy.

Disposal of used radiographic fixer and developer should be in accordance with the local policy (hospital or local government) waste management guidelines.

280.6.60 WASTE DISPOSAL – HEAVY METALS

A key risk is that oral health units generate a number of waste products that have the potential to be discharged to the waste-water system through dental suction systems. A number of heavy metals can be discharged including silver, cadmium, chromium, copper, mercury, nickel, lead and zinc. In all instances, heavy metals should be collected for disposal; or treated to levels acceptable to Environmental Protection Agency (EPA) standards.

Hazardous materials waste includes items discarded from dental and prosthetic manufacturing laboratories which are classified as Regulated Waste and are subject to legislative requirements.

Trade waste approvals are generally required to discharge some wastes into the sewerage infrastructure. Refer to the Queensland Water Supply Safety and Reliability Act 2008 and local government requirements.

280.6.65 WASTE DISPOSAL – MERCURY

Dental clinics are recognised as significant contributors to mercury contamination of the environment. It is recommended that mercury wastes be returned to metal or precious metal recyclers for reclamation. Waste amalgam must not be incinerated.

The Australian Dental Association recommends installation of amalgam separators in all oral health units, to prevent mercury entering the water system. Consideration of space to allow for easy installation of an amalgam separator may be required. Refer to local government or sewerage service provider and Environmental Authority regarding amalgam requirements.

Refer to:

280.6.65 STAFF STRUCTURE

The staff structure of the unit will have an impact on the nature, size and location of offices, administrative and teaching spaces and staff amenities.

The staffing structure of the proposed unit, including students undertaking clinical placements and academic staff, should be developed in the early stages of planning.

Planning Models

280.7.00 LOCATION

An oral health unit should be located in an area accessible to the community by both public and private transport.

Ground floor locations provide for ease of access by high volume outpatients many of whom may be disabled to some extent. However, there may be advantages to an elevated floor for installation, maintenance and replacement of equipment such as dental chairs.

However, care must be taken with location of surgeries and x-ray units on ground floors to ensure no radiation hazard to passing pedestrians.

If positioned in a school ground the unit should be easily accessed with minimal or no disruption to the school by children, adolescents and members of the public. Patients may attend the unit, but not have a relationship with the school. Therefore, location of fixed clinics and pads for mobile units on a school boundary is desirable. For information about Department of Education and Training or other relevant school authority approval processes for construction plans and specifications of fixed clinics and pads for mobile units refer to Memorandum of Understanding.
between Queensland Health and Department of Education and Training – Licence of Area for Dental Clinics and Services (2010).

280.7.05 CONFIGURATION

The unit may have single chair surgeries or open plan surgeries or, in larger facilities, a mix of both, with the support areas located to ensure optimal work flows and efficient and safe working practices.

For example, a 12 chair unit may have:
- one single chair surgery - 16m²
- one single chair surgery - 18m²
- five double chair surgeries - 15m² each chair space (i.e. 30m² with 10m² workspace).

Open plan surgeries need to consider:
- x-rays (a separate small x-ray room may be required)
- sedation gases
- privacy and patient confidentiality
- supervisory requirements for teaching students undertaking clinical placements
- location of computer monitors to facilitate use of electronic oral health record

The unit must be designed to prevent unauthorised access from the Reception/Waiting Area into the treatment areas.

Functional Areas

280.8.00 FUNCTIONAL ZONES

Functional zones will comprise:
- Entry / Reception / Waiting
- Clinical Treatment Areas (Surgeries, Recovery)
- Clinical Support Areas (on/off site)
- Staff Areas - offices and amenities.

280.8.05 SHARED AREAS

In small units only the dental surgery will be a dedicated space. Entry, reception, waiting, support areas and staff areas may be shared with adjoining units.

Access to these areas must be available at all times the service is operating. When units are located in schools, wider health facilities or other multi-purpose locations (e.g. Community Centres), agreements will need to be reached between health services and school boards or other facility operators to ensure access to common areas when dental services are operational and to ensure that the necessary cleaning and waste management continue during, for example, school holidays.

280.8.10 ENTRY / WAITING

Design of the entry will depend on whether the unit is accessed from inside a building or directly from outside. If accessed from outside, there needs to be a covered entry or porch.

There should be a dedicated Waiting Area that allows, as a minimum, the same number of places as there are chairs, plus a seat for a supporter (particularly for parents who are encouraged to be present when their child is treated). Ideally an additional number of places equivalent to 50% of the number of chairs should be provided to allow for times when appointment scheduling is running over time. Space is allowed at a rate of 1.2m² per seat and at least one space of 1.5m² for a wheelchair, and allowance for two in larger units. Space should also be considered for prams, and patients with walking frames, electric wheelchairs and other mobility aids.
A Child Play Area may be located adjacent to the main Waiting Area. Children must be under the supervision of parents / carers, not unit staff.

Inpatients should be called for only when the dental surgery is about to be become vacant so that the patient can be trolleyed in. This may be via a separate entry.

**280.8.15 RECEPTION**

Reception will accommodate administration staff. The number of staff will depend on the size of the unit. Direct access to patient records will be required preferably from a secure room adjacent to the reception area (it should be noted that Medical Records may be electronic in the future). Facilities at the Reception for collecting and storing money may need to be considered.

The counter should have one wheelchair accessible section.

Consideration should be given to the safety and security of reception staff. A duress alarm should be provided and consideration given to provision of security screens. This may be determined through a security risk assessment.

Acoustic privacy and the confidentiality of patients attending the reception area should be a high priority.

Access to computer monitors for reception staff is required.

**280.8.20 PATIENT AND VISITOR AMENITIES**

Patients and their supporters, particularly those who may have travelled long distances in rural areas, should have access to, either in the Unit or in close proximity, a full range of amenities that should include:

- toilet - including access toilet
- baby change
- telephone
- audiovisual for oral health education and entertainment
- chilled water.

A shower may be considered for hygiene purposes for patients with special needs.

**280.8.25 DENTAL SURGERY – SINGLE ROOM**

**DESCRIPTION AND FUNCTION**

A Dental Surgery, which is essentially a cubicle or a room with a dental chair, is utilised for the interview, examination and treatment of patients, some of whom will be accompanied by relatives / carers / interpreters, and for the storage of equipment and materials associated with such treatment. Therefore, this area may need to accommodate up to 5 occupants including staff.

Allowance also needs to be made for undergraduate and postgraduate teaching to be accommodated in the space.

**LOCATION AND RELATIONSHIPS**

The area is closely associated with the Instrument Processing Room, X-ray Processing Room, Waiting Room and Recovery Room.

**CONSIDERATIONS**

At least one dental surgery will need to be large enough to accommodate any of the following:

- wheelchair access
- space for patient transfer from wheelchair to dental chair
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- space to accommodate bariatric patient
- space for a patient in a bed (in hospital based units)
- space for a patient hoist (either portable or integrated in the surgery construction)
- space for a patient with special needs or a distressed patient.

The workspaces for surgery staff need to be separate so there is no cross over of workflow paths. Key considerations are location of clinical hand basins, placement of sharps / waste containers and access to the operator work station in the operator zone. Each surgery (single or 2 chair) requires its own hand basin, paper towel dispenser, soap dispenser and glove dispenser. Hand basin types and uses are detailed in Part D - Infection Prevention and Control - of the AusHFG. Number and type of basins (eg. clean and dirty) in the dental surgery will be provided based on a review of statewide and local operational and infection control requirements.

Other considerations include:

- high level sound attenuation
- medical gases (oxygen, suction, nitrous oxide and gas scavenging)
- secure storage of gas cylinders and other hazardous chemicals
- dental services - filtered water, compressed air and suction (not to be confused with medical air and suction) delivered via the fixed dental unit, wall mounted unit or mobile cart high volume evacuation (HVE) & low volume evacuation (LVE) suction
- storage for lead aprons, gowns and masks, protective eye wear as indicated
- air handling systems designed to maintain a comfortable temperature, 100% exhaust ventilation with suitably placed registers will deal equally well with the problem of aerosol generation
- floors and walls - non-slip, non-porous, welded joins, smooth and easily cleaned
- walls may require reinforcement for weight bearing equipment
- dividing cabinets between twin surgeries should be full height for patient privacy
- low voltage and general power
- RCD protected electrical fittings (minimum 8 outlets)
- lighting - natural plus high intensity colour corrected artificial lighting
- fibreoptic data cabling infrastructure for phones, computers and digital imaging if provided
- some administrative functions are undertaken within the dental surgery, however these need to be physically separated from the operative area, e.g. located behind a partition in an open plan or in a part of the room remote from the patient treatment zone in a single chair surgery.

Allowance should be made for changes in practices in relation to technology advancements, for example:

- space for information technology (IT) equipment
- space for digital radiography
- space for computer workstation (for patient records – both clinical and management)
  - workstation to be located in a position for entering and retrieving electronic oral health records easily
  - workstation to be at least 1 metre from the area where aerosols are produced
- allowance for monitor cabling to the arm, with fixture to easily mount a monitor
- wireless LAN connectivity
- “wipe clean” mouse and keyboard
- easily accessible printing devices
- may require a barcode reader.

Fixtures and fittings will/may include:

- dental chair with removable arm rest
- dental operating unit - may be mobile or fixed
- wall-mounted intra-oral x-ray unit with controls outside the room
- x-ray viewer (computer screen if digital)
- operator and assistant stools
- dental cabinetry - fixed and/or mobile
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- support person’s chair/s
- computer terminal (for patient details)
- digital photography equipment
- clinical hand basin (elbow touch or non-touch taps)
- wall mounted absorbent disposable paper towels
- wall mounted hand wash solution dispensers
- phone, intercom, duress call
- non-touch bins for general, clinical waste and sharps
- white board
- clock
- ceiling-mounted patient hoist (optional).

Single room design incorporates all services and equipment required for the assessment and treatment of one patient and is appropriate when:
- only 1 or 2 chairs will be provided in a unit
- an existing space lends itself to this form of design
- patient privacy is of paramount concern
- stretcher or wheelchair access is required
- patient hoist is required
- additional space for bed bound or bariatric patient is required.

280.8.30 OPEN PLAN DESIGN

In an open plan surgery design, chairs are usually arranged in pairs with shared hand washing, x-ray and storage facilities located between them and separated from each other, preferably with partial or full height partitions for privacy and infection control requirements, e.g. aerosols. Design must also ensure privacy from the circulation corridor.

Advantages of an open plan design include:
- space efficiency
- cost efficiencies through shared resources
- a better environment for teaching and supervising students undertaking clinical placements.

Disadvantages:
- privacy and confidentiality compromised (e.g. medical history)
- the Radiation Health Unit may not allow x-ray units in open plan cubicles
- inhalational sedation will be more difficult in open space and there may be problems if insufficient scavenging of gases
- limited ability to attenuate noise of patient and environment.

An increased number of open plan surgeries compared to single chair rooms is recommended in both urban and rural “hub” centres to support future teaching and student supervision requirements. Because most supervision occurs from the area surrounding the head of the patient, this space needs consideration.

Again, one chair space will need to be large enough to accommodate a patient with special needs e.g. bariatric, immobile requiring hoisting, the presence of additional persons such as guardian / carer / parent.

For more information on the needs of bariatric patients, please refer to Queensland Health (2007) Large Patient – Management Plan and Equipment Database, OHWS1583.

280.8.35 DENTAL SURGERY – MULTIPLE ROOMS

A multi-chair surgery is recommended for proposed community clinics in urban areas. These units will usually include single room dental surgeries accommodating one operating chair and/or
surgeries of open plan design accommodating 2 operating chairs. The final configuration and number of chairs will depend on the population served and the unit functions, e.g. clinical training.

Larger community based units offer the opportunity to:
- engage a dental team consisting of dentist, oral health and dental therapists, dental assistants and administration reception staff
- improve access to services through increased open hours
- offer training programs for health professionals and support personnel
- provide more flexible models of care.

280.8.40 DENTAL SURGERY LAYOUT

Whether single room or open-plan, the dental surgery historically has the dental chair positioned close to the centre of the room or cubicle with the foot of the chair facing away from the entry. This orientation of the chair is considered to address both privacy and modesty concerns for patients, ensures easy staff movement in and out of the room and ready means of staff egress if a patient becomes aggressive.

The dentist and dental assistant operate around the head of the chair with the dentist normally positioned on the patient's right; however, the surgery needs to be designed to accommodate both left and right handed dentists.

A dental assistant’s workstation is located behind the head of the chair with allowable operating space and incorporates the storage of dental materials and equipment, disposable items and a work surface for retrieving and mixing dental materials. Therefore, it is essential there is enough space at the head of the chair when the chair is in the reclined position.

In both single room and open-plan surgery design, the provision of the dental assistant’s workstation and adequate shared storage units for equipment and disposable items is specifically designed for user accessibility, space efficiency, infection control and easy maintenance of a clean, clutter-free work environment.

Allowance should be made for changes in practices in relation to technology advancements. Public clinics will increasingly utilise electronic patient records and digital radiography in the future. There will need to be administrative writing area and access to computers in each surgery, whether single or multiple layout.

280.8.45 DENTAL HYGIENE FACILITIES FOR CHILDREN

The facilities necessary for teaching children how to properly brush their teeth are a sink or basin with a mirror above. If a basin or sink is in a surgery, it will need to be in addition to the clinical hand basin used by staff.

The child is usually accompanied by a parent.

280.8.50 RECOVERY

The need for a recovery area will be determined by the size, function and the type of services provided by a unit but will usually only be provided in larger facilities.

Ideally, a discrete room off a secure corridor with space for a trolley and wheelchair should be provided when necessary. However, a curtained and recessed bay may be satisfactory. A patient /staff assist call system should be available and access to oxygen, suction (piped or portable) and resuscitation equipment.

It may also be possible to co-locate the Resuscitation Trolley with Recovery.

280.8.55 SUPPORT AREAS
Careful consideration of the necessity and size of the following areas will depend on the size, operational policies and location of the unit:

- laboratory/s
- adjustment room
- x-ray processing (unless a digital system)
- plant room
- instrument reprocessing (refer Non-Standard Components for details)
- linen store
- resuscitation trolley bay
- stores - supplies and equipment
- records (may be electronic in the future)
- equipment bays - hoists etc
- secure gas cylinder storage
- dirty utility / disposal room
- cleaner's room.

For example:

- in small single surgery units serviced by a visiting dentist, the full range of facilities will not be appropriate and arrangements will need to be made for sterilising and laboratory needs
- if operational policy prohibits the use of sedatives and anaesthetic agents, recovery and resuscitation areas can be minimised
- careful defining of the variety and volume of clean equipment and disposables to be accommodated in the stores, clean utility room or linen store will help reduce space required and all three areas may not be required
- dirty utility room may only be required for small amounts of dirty linen and rubbish, so space in this area may be minimised (i.e. the area may be smaller than that defined in the AusHFG, Part B, 90 Standard Components, which is more suitable to inpatient hospital units where the volume of human waste is much greater).

280.8.60 XRAY PROCESSING ROOM

Facilities should be built to accommodate digital radiography. Digital radiography negates the need for processing, uses lower doses of radiation, results in less scatter radiation and has other advantages over film radiography. However, additional IT software and hardware will need to be considered and accommodated.

If traditional film is the method in use, options for film processing are dark room or daylight processing. A dark room will be required if a processor without a daylight loader is not used while a processor with a daylight loader can be positioned in an assigned bench area of the unit.

Where digital radiography is used, a daylight loader or daylight processing bench still needs to be provided to allow for situations where the digital technology is not available and traditional x-ray film needs to be processed urgently.

Water supply, and storage for chemicals and chemical waste is required.

Adequate ventilation is also required to prevent build up of fumes and odours from chemicals.

280.8.65 STAFF OFFICES AND AMENITIES

Provision of offices and workstations will be consistent with the Queensland Health Work Place and Office Accommodation Policy and Guidelines.

Provision must be made for staff lockers in a secure environment. Depending on the type of unit and location, staff room and toilets may be shared with other units. Access to a staff shower is desirable and should be provided in large facilities.
A dedicated staff room is highly recommended for mid to large size units to facilitate rotational meal breaks and minimise staff travel time to access tea room facilities. If no dedicated staff room is provided, a small beverage bay separate from the clinical facilities may be considered or these facilities may be located within the facility, e.g. a Health Centre or School.

A tutorial room with access to personal computers (PCs) should be provided in units that support student teaching and staff in-service training.

280.8.70

LABORATORY

Dental laboratories provide support activities associated with dental surgeries. Laboratory activities primarily involve the fabrication of various prosthetic appliances. Laboratories generally consist of several separate functional areas. These include:

- **Barrier Area** – All incoming work from the dental surgeries is decontaminated in the Barrier Area, unless decontaminated in the surgery, before entering the laboratory. This is a dirty workspace and does not have direct access to the laboratory.

- **Laboratory Administration** - This is a clean area where the decontaminated work passed from the Barrier Area is registered on a computer, labelled and assigned to a colour coded, wall-mounted shelving system. The Laboratory Administration area is generally an extension of the Dental Technicians Workspace. In larger facilities, a separate office is also required for the Senior Dental Technician to carry out administrative duties.

- **Preparation Area** - This is a wet area where a plaster model of the patient’s upper and/or lower jaw is poured from the preliminary impression taken by the dentist. In smaller facilities, where space is limited, the function of the Preparation Area can be incorporated with Plaster and Packing.
  - **Dental Technicians Workspace** - This workspace is the core of the Laboratory where dental technicians carry out a variety of work processes.

The technicians work at individual, ergonomic, height adjustable workbenches which are fitted with extraction units, compressed air, gas for bunsen burners, micro-motor handpieces and task lighting. Additional bench space is required for bench-mounted equipment, such as soldering irons, light-curing machines, a vacuum former (for making mouthguards), cast surveyors and pressure pots for cold curing process (used for small denture work). Storage cupboards, shelving, tooth cabinet, hand-wash basin and an eyewash station are also required to be incorporated into the workspace. The workspace is positioned to have direct access to all other laboratory functions, other than the Barrier and Preparation Areas. These areas should be fitted with localised dust extraction systems.

- **Ceramics Area** - This is a separate enclosed clean area, located adjacent to the Dental Technicians Workspace, where technicians carry out the ceramic work. The room must be a dust-free environment with good natural lighting for ceramic work with colour corrected lighting for matching porcelain colours. The technicians work at individual ergonomic, height adjustable workbenches which are fitted with extraction units, compressed air, gas for bunsen burners, micro-motors, task lighting and bench space at each workstation for a vacuum furnace.

- **Plaster and Packing Area** - This area is located adjacent to the Dental Technicians Workspace and is used for the investing and processing of dentures.

- **Casting Room** - This area is located adjacent to the Plaster and Packing Area. It is a hot area used for the heat processing of dentures and for fabricating metal castings. In addition to the boiling water urns (acrylisers), other equipment in the Casting Room includes burn-out furnace (for wax elimination process), centrifugal casting machine and sandblasting machine (for removing investment material from the casting).

- **Polishing Area** - This area is located adjacent to the Dental Technicians Workspace and is used for the polishing and trimming of acrylic and chrome dentures. The investing of chrome work can also be carried out in this room. This is a noisy area and acoustic control measures are required.
Clean Area - This is ideally a room located adjacent to the Dental Technicians Workspace and is used for decontaminating all completed work. The work is decontaminated with detergent, disinfected in a bath of Milton solution, rinsed, bagged in plastic and then placed in a wall-mounted shelving system within the room, ready for collection. If space is an issue, then the Clean Area can simply be reduced to an alcove, with bench and sinks for decontaminating and rinsing, positioned close to the laboratory entry / exit point.

Flexibility is essential for laboratory design as the work becomes increasingly diverse and there is more use of chrome and ceramic materials rather than the traditional acrylic. Chrome work is a major component of the laboratory work and the specialised equipment used for investing and polishing needs to be accommodated either in a separate area or within the Polishing Room.

Crown and Bridge work can be performed in a separate, dedicated laboratory; otherwise it may be integrated in the Dental Laboratory, only if a separate Ceramic Area is provided.

Fume cabinets or similar should be installed to enable technicians to work safely with hazardous chemicals such as methyl methacrylate. Factors such as volume and types of chemicals used should be considered in determining the most appropriate option. Refer to AS/NZS 2243.8 Fume cupboard and AS/NZS 2243.9 Recirculating fume cabinets.

Appropriate storage areas for chemicals and waste must be incorporated.

Increased use of modular equipment improves flexibility.

The design options are:

- Single Room - Single room design incorporates two compartments to separate dirty and clean areas. Incorporated in the design are a barrier area for adjustment, pouring up area, plaster and packing area, technician’s workspace, clean area for dispatch, and administration workshop. The single room design will accommodate a single technician and is appropriate for small to medium sized facilities.

- Multi-room - The multi-room design accommodates individual work areas into separate rooms. This design is appropriate for larger facilities which undertake laboratory work for satellite clinics.

- External - Prosthetic work may sometimes be outsourced. In this case, the minimum accommodation requirement for oral health facilities is a Barrier Room for decontamination and an adjoining small Laboratory for plaster and wax work. Small adjustment of prosthetics can be made in the surgery.

Refer to:

- AS/NZS 2982.1:2010 Laboratory Design and Construction Part 1: General Requirements
- AS/NZS 2243.1:2005 Safety in Laboratories Part 1: Planning and Operational aspects

Functional Relationships

280.9.00

EXTERNAL

If located on a hospital site, there should be easy access to:

- Medical Imaging services for OPG
- Operating Theatres
- Central Sterilising Department if off-site reprocessing of reusable dental instruments is to occur
- bulk storage
- Linen Service
- Waste Disposal Units.
Reception requires a clear view of entry and exit/egress points of the unit and of the Waiting Area.

There must be easy but controlled access from the Waiting Area to the Patient Treatment Areas.

Staff areas, offices and amenities should be separate from patient and public access to provide privacy and quiet areas.

Other key functional relationships include:
- surgeries to reprocessing area
- records storage to administration and surgeries
- loading dock to stores.

It should be noted that records storage may not be required in the future with the implementation of electronic medical records.

**DESIGN**

**Accessibility**

**EXTERNAL**

Consideration should be given to public transport availability.

Off street access for vehicles transporting patients should be provided.

All-weather vehicle drop-off points should be provided for easy access by patients who are elderly, frail, disabled, have limited mobility or who are wheelchair bound, particularly in areas of high rainfall.

Ambulance access and trolley access to all large and hospital-attached units will be required.

If the unit is a stand-alone building on a hospital site, an undercover link should be provided to the main hospital.

**INTERNAL**

Entry to the clinic must allow easy barrier free access for ambulant, wheelchair and trolley patients and must comply with Australian Standard 1428 - Design for Access and Mobility.

Separate entry for inpatients may be provided.

Bed / trolley access to at least one surgery should be provided if the facility is hospital-based.

**Parking**

**READY ACCESS TO PARKING FOR PATIENTS AND THEIR SUPPORTERS INCLUDING DROP-OFF PARKING FOR PEOPLE WITH DISABILITIES. THE HIGH VOLUME OF ATTENDANCES MUST BE ADDRESSED.**

Staff parking should be provided under or within close range of the workplace. The area should be well lit and protected from the elements. In high risk areas, the car park may need to be monitored by security personnel or cameras.

Consideration should be given to security for bicycles.

Where the oral health unit provides visiting services to schools and residential aged care facilities, there may be a number of government vehicles which will require garaging at or in close proximity to the unit. Secure parking may be required in areas where there is potential for vandalism and the vehicles remain at the facility overnight or on weekends.
Car parking provisions will need to be in line with Local Authority requirements and standards for health buildings as presented in the Queensland Government’s Integrated Planning Act, 1997.

**Signage and Wayfinding**

280.11.05

The orientation of people to and within healthcare facilities, and even safety and security issues, are greatly assisted or hampered by the quality and location of signage which may be directional, used as a means of identification, and/or statutory.

Wayfinding – both signage and design features – needs to reflect the service role and profile of the oral health unit and should be logical and supportive of the needs of the patients, visitors and staff of the unit.

All signage and wayfinding should be easily understood by staff and the general public whether patients or visitors. Where necessary and appropriate, language other than English and/or consistent use of pictograms / symbols can be used. Signage should comply with guidelines to promote access for people with disabilities. Refer to:

- AusHFG Part C Section 750 – Signage

Consideration needs to be given to the system used in the numbering of rooms. These rooms should be given non-permanent functional names for future flexibility.

Any signposting, or other initiative put in place, should be considered from the perspective of out-of-house use. Certain access points may be locked out of office house or after visiting hours. Directions indicated through signposting should, therefore, be evaluated in this context.

**Disaster Planning**

280.12.00


**Infection Control**

280.13.00

**ENVIRONMENTAL CONTROL**

The planning and construction of any facility must incorporate the principles of environmental infection prevention and control to minimise contamination from particulates (solids and aerosols) and micro-organisms.

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

- zones of aerosol infection in surgeries
- air flows
- dust creation in laboratory area
- sterility conformity of reusable medical devices and dental instrumentation
- disposal of contaminated waste
- workflow patterns – dirty/clean/sterile flow, barriers which prevent crossover.

The general layout of the dental surgery is based on a streamlined design applying infection control principles. Design must focus on minimising the number of surfaces likely to be exposed to aerosols (generated by the dental handpiece and air/water application) by concealing equipment (other than that associated with the dental chair) or locating certain items, e.g. the x-ray viewer and administration areas away from the zone of aerosol contamination.

The use of high-volume evacuation suction equipment and providing barriers over surfaces is also important to minimise aerosol effects.

Oral health staff must ensure that the following supportive measures are able to be implemented in the environment:
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- use of rubber dam
- use of high volume suction
- pre-procedural chlorhexidine mouth wash
- ventilation which exhausts to the outside and with a 8-10 air change rate per hour.

Regular cleaning of the unit is to be undertaken in order to minimise the number of microorganisms 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.

280.13.05 PERSONAL HYGIENE AND PROTECTION

Hand washing facilities are essential in every dental surgery and must be specifically designated for hand washing. Dedicated clinical hand basins are required in all areas with the exception of public facilities (refer to AusHFG – Part D, Infection Prevention and Control). Hand hygiene is not to occur in sinks which are used for either instrument cleaning, or disposal of blood, body substances or chemicals.

Emphasis should be given to the use of ‘hands free’ facilities where possible.

Appropriate personal protective equipment (such as gloves, protective eyewear, gowns and facemasks) are to be used to reduce the risk of exposure to aerosols, blood and body fluids. Convenient access to dispensers and storage for personal protective equipment must be considered in each surgery to ensure their ease of use.

Hands-free access to bins for paper, clinical waste and sharps must be provided.

Environmental Considerations

280.14.00 ACOUSTICS

Patients both undergoing treatment and in the waiting area should be protected from disturbing or distracting noises from other patients or equipment where possible.

Acoustic covers are available for most compressors.

280.14.05 LIGHTING

Natural light is not essential in the surgeries; however light and views may do much for staff morale and to alleviate patient anxiety. Low energy lighting is appropriate for most areas with use of “task” lighting as necessary.

Colour-corrected lighting will be required in surgeries and laboratories where shading / matching of teeth colour is undertaken. Refer to AS 4004:2006 - Lighting booths for visual assessment of colour and colour matching.

Dental examination lights are usually mounted on the chair or dental unit.

280.14.10 PRIVACY

The planning and design of oral health units must ensure that every consumer has the right to have his or her privacy respected.

The unit should be designed to:
- ensure confidentiality of patient discussions and records
- appropriately configure dental surgeries to optimise patient privacy.

280.14.15 INTERIOR DECOR
This includes furnishings, style, colour, and use of textures. Good application can assist in relaxing patients by providing a non-intimidating and child friendly atmosphere.

Some colours and patterns can be disturbing to some patients. Bold primary colours and green should be avoided in treatment areas.

Consideration may be given to providing visual interest points on the ceiling.

Cleaning, infection control, fire safety, and the perception of a professional environment must be considered while avoiding an institutional atmosphere.

Surfaces should be of material that is easily cleaned and does not allow a build up of dust.

**Space Standards and Components**

280.15.00  
**HUMAN ENGINEERING**

Human Engineering covers those aspects of design that permit effective, appropriate, safe and dignified use by all people, including those with disabilities. It includes occupational ergonomics, which aims to fit the work practices, furniture, fittings and equipment (FF&E) and work environment to the physical and cognitive capabilities of all persons using the building.

As the requirements of OHS and antidiscrimination legislation will apply, this section needs to be read in conjunction with AusHFG Part C, Section 790 - Safety and Security Precautions - in addition to OHS related guidelines.

280.15.05  
**ERGONOMICS**

Oral health units should be designed and built in such a way that patients, staff, visitors and maintenance personnel are not exposed to avoidable risks of injury.

Badly designed recurring elements such as height, depth and design of workstations and counters, shelving, and the layout of critical rooms, have a great impact on the occupational health and safety of staff as well as the welfare of patients.

Refer to AusHFG - Part C, Section 730 - Human Engineering - for more details.

280.15.10  
**ACCESS AND MOBILITY**

Design must comply with AS 1428:2003 – Design for Access and Mobility.

Refer to AusHFG - Part C, Section 730 – Human Engineering - for details.

280.15.15  
**BUILDING ELEMENTS**

Building elements include walls, floors, ceilings, doors, windows and corridors and are addressed in detail in AusHFG - Part C, Section 710 – Space Standards and Dimensions.

Doorways must be sufficiently wide and high to allow access for bariatric patients and to permit the manoeuvring of wheelchairs, trolleys and equipment without risk of damage or manual handling risks.

**Safety and Security**

280.16.00  
**SAFETY**

The unit must provide a safe working environment which will not cause any risks to the health and safety 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 that include:

- staff leaning over reclined patients to provide treatment
- aerosol contamination
- working with infectious materials
- working with hazardous chemicals in laboratories
- heat and noise associated with sterilising procedures and in laboratories
- manual handling
- potential for patient aggression and violence
- radiological hazards.

It will be important to identify, assess and control risks or hazards that exist within the unit to produce a safer and healthier workplace and unit design will have to be such that it supports the management of those risks and hazards.

Requirements include:

- regular safety audits
- consult OHS specialists to ensure potential hazards are identified and appropriate procedures to control risks and resolve health and safety issues are implemented.

Refer also to AusHFG - Part C, Section 790 – Safety and Security Precautions and the Queensland Department of Health Occupational Health and Safety Management System (OHSMS) for further information.

280.16.05

SECURITY

Patient access to surgical areas needs to be restricted so that patients do not have ready access to surgical areas. Patient movement within surgical areas should always be in the company of facility staff, usually a dental assistant, and patients should be escorted from the entry point to the surgery and then from surgery to the entry point on completion of treatment.

Some form of access deterrent or barrier is required between waiting area and clinical/administrative areas. Controlled after-hours access will be necessary and should be possible independent of other facilities within which the unit may be located (e.g. school, health centre).

Other issues for consideration include:

- security of records and, when required, monies
- security of reception
- security of staff - duress alarm system at reception and personal duress alarms for other staff
- security of patient and staff property
- facilities must have clear entry and egress points; in general this will require a facility with 2 external doors
- security of non-patient areas such as reprocessing area and sterile stock storage area.

Finishes

280.17.00

GENERAL

The use of smooth, easily cleaned surfaces (not tiles) should be implemented. Avoid joined laminated and textured surfaces on bench tops and walls.

Refer to AusHFG – Part C - Design for Access, Mobility, OHS and Security, and Part D – Infection Prevention and Control.

280.17.05

WALL PROTECTION
280.17.10 FLOOR FINISHES

Refer to AusHFG - Part C – Design for Access, Mobility, OHS and Security, and Part D – Infection Prevention and Control.

280.17.15 CEILING FINISHES

Refer to AusHFG - Part C – Design for Access, Mobility, OHS and Security, and Part D – Infection Prevention and Control.

280.18.00 Fixtures & Fittings

DEFINITION

Within the context of the AusHFG and the Room Data and Room Layout Sheets in the associated Health Facility Briefing System (HFBS), Fixtures and Fittings can be described as follows:

- **Fixtures** - refers to fixed items that require service connection (eg electrical, hydraulic, mechanical) and includes basins, light fittings, clocks, medical service panels, etc (but excluding services equipment such as theatre pendants)
- **Fittings** - refers to fixed items attached to walls, floors or ceilings that do not require service connections such as curtain and IV tracks, hooks, mirrors, blinds, joinery, pin boards etc.

Refer to AusHFG Part F – Furniture, Fittings and Equipment.

280.19.00 Building Service Requirements

GENERAL

All services should satisfy the unit’s specific service level and procedure requirements. Services should be designed and installed in a manner that will allow easy access for maintenance and cause only minimal disruption when maintenance is required.

Three phase power will be required for washer/disinfectors and sterilisers that are medium to large (not benchtop sterilisers).

280.19.05 INFORMATION TECHNOLOGY / COMMUNICATIONS

Planning of IT systems to support clinical and operational activities is an essential component of any facility design. For individual surgery requirements please refer to section 280.8.25 of this document. Further requirements include:

- **network connectivity**
  - with the ever increasing reliance on information systems and additional projects either nearing completion or being planned, network into the building should be fixed line – preferably LAN / wireless LAN, however fixed WAN (GBIP/GWIP) can be used if necessary
  - provision of a data cabinet and when required, a data room
- central sterilising areas / rooms may require data points or wireless connectivity to the Queensland Department of Health network for technical support and/or integration with Instrument Inventory Management Systems
- printing devices with
  - ability print to a target tray
  - ability to scan to the network
  - ability to print barcode labels
  - minimum of three separate printing/sorting trays.
Unit layout must include appropriate data cabling and connection lines to support internal and external networks and a server room may be required.

Cabling for patient management systems and telecommunications should be available in all dental surgeries and administration and teaching areas. In addition, there may need to be access to:

- public phones / taxi phone
- Master Antenna Television (MATV) in waiting rooms and possibly in surgeries
- Closed-Circuit Television (CCTV) if indicated
- public address system
- background music
- duress alarm system
- nurse/emergency call system.

280.19.10 RADIATION SCREENING

All x-ray equipment and rooms where x-rays are taken must meet the radiation safety requirements of state and local authorities. State guidelines will determine the use of lead aprons and where required they should be provided for patient and operator. Lead apron hangers to be installed within the room. Weight of lead aprons needs special support. For paediatric work a thyroid shield should be considered, which may be incorporated into patient apron.

Requirements for shielding may differ for digital radiography with shorter exposures.

Each District will have a local Radiation Safety and Protection Plan in accordance with the Queensland Radiation Safety Act 1999.


Refer to AusHFG – Medical Imaging 440 - Radiation Protection and Orthopantomography (OPG).

280.19.15 AIR-CONDITIONING, VENTILATION AND HEATING

Air-conditioning is required in all areas during standard operating hours with the exception of the sterile stock storage area. Capacity to override air-conditioning to provide emergency service in either one surgery or the total unit after hours is required.

All occupied areas should be heated with thermostatically controlled heaters. This may be part of an air-conditioning system. Portable heaters and unflued gas heaters should not be installed in patient areas.

If a full laboratory is included, special consideration should be given to the specialised equipment requiring removal of noxious fumes, dust, and heat. Many units will be provided with specialised proprietary equipment and benching requiring extraction and other services, e.g. fume cupboards. High quality exhaust/extraction system is required for the burn-out oven.

All Sterilising and related machinery discharging vapour should be connected to a suitable exhaust system in accordance with the manufacturers instructions observing the requirements of air breaks.

Air conditioning systems and controls for the Instrument Reprocessing/Sterilising Area are to be configured to maintain appropriate conditions such as:

- varying heat load
- appropriate pressure differentials across demarcated work zones
- provision of appropriate air filtration with HEPA (high efficiency particulate air) in inspection/packaging and all sterile zones.
Film processing areas and sink units used in connection with the regular cleaning of x-ray processors should be provided with adequate exhaust ventilation to prevent the uncontrolled escape of chemical emissions, i.e. capable of removing any vapour released from the process.

Recommended fresh air supply rate should not be less than 5-8 litres per second per occupant or 8-10 complete air changes per hour.

280.19.20

WATER

Potable water filtered for particulate matter is required for dental units and metering of water to clinical area is required for waste management purposes.

All water for manual washing and automatic washer/disinfectors (hot and cold) is to be softened to less than 3 parts per million total dissolved solids (TDS).

Demineralised water from an RO Water System to 10 microns (with a membrane pore size of 10 Angstrom Units minimum = 0.0001 microns or 0.1 nanometres) is to be provided for final rinse stages (i.e. manual at dedicated rinse station and automated washer final rinse connections). For Oral Health Spoke Service these systems can be under bench units.

All dental operating units have integral suction systems which remove contaminated water and body fluids from the operation site. This waste requires coarse filtering (usually integral to the unit), separation of heavy metals and then disposal.


280.19.25

MEDICAL GASES

All surgeries and designated recovery areas require access to medical oxygen and suction. Services should ideally be piped but may be via portable cylinders in small units.

Depending on the operation policies with regard to level of sedation and care/treatments provided, medical air, nitrous oxide and scavenging may also be required.

Industrial Compressed air for instrument blow through and drying needs. Air is dry, oil free and filtered.

280.19.30

DENTAL SUCTION

Material and fluid from the patient’s mouth is extracted via the dental suction system. This material is contaminated biologically and will contain mercury when amalgam fillings have been removed. The extracted solids are trapped, either within the chairside unit or in the Dental Plant Room. The suction containers from the chairside units must be emptied on a regular basis. Plant Room traps are emptied by maintenance staff/contractors, during routine servicing.

Dental suction systems must not be confused with medical suction systems.

280.19.35

PLANT ROOM AND SUPPLY LINES

A Plant Room of sufficient size is required 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. For an on the ground concrete slab, services should be place in a covered (removable) services trench.

In an Oral Health Spoke Service office based dental instrument reprocessing area dedicated plant room is not required.

Consideration may need to be given to a back-up generator in some facilities.
ENVIROMENTALLY SUSTAINABLE DESIGN (ESD)

Possible ESD considerations include:
- orientate the building to best suit the topography and climatic zone
- separate enclosed office machine room (rather than just an alcove) with its own exhaust system to provide better air quality and acoustic separation from the office areas
- select skylight to internal room/corridor models that minimise glare and do not increase the heat load, e.g. solar tubes
- reduce the quantity of artificial lighting according to the levels of daylighting available, e.g. Digital Addressable Lighting Interface (DALI) protocol
- reduce glare and direct sunlight with external sunscreens; this will also reduce the heat load for the heating, ventilation and air conditioning (HVAC)
- dehumidify the air with a pre-conditioner unit to achieve greater efficiencies from the HVAC system and provide better indoor air quality
- use low-polyvinyl chloride (PVC) or PVC free materials, e.g. acrovyn are low PVC
- use low volatile organic compound (VOC) paints, adhesives, sealants and carpets
- use low formaldehyde timber composite products, e.g. E1 or E0 Medium Density Fibreboard (MDF) for joinery
- insulate with an ozone depleting potential (ODP) of zero
- break light and HVAC switch into smaller zones so that services are provided only to areas being used
- meter services so that users can monitor use
- provide cyclist facilities for both visitors and staff - bike racks and showers/lockers for staff
- provide an extensive area for recycling bins, including paper, glass, aluminium cans, plastics and possibly compost.

Refer to Queensland Health (2011) Ecologically Sustainable Queensland Health Facilities Policy # QH-POL-052, version 1.1.

COMPONENTS OF THE UNIT

Standard Components

Rooms/spaces are defined as “Standard” and “Non Standard” Components.

Standard Components (SC) refer to rooms/spaces for which room data sheets (RDS), room layout sheets (RLS) (drawings) and textual description have been developed. Their availability is indicated by “Yes” in the SC column of the Schedule of Accommodation.

Refer to AusHFG - Part B Section 90 – Standard Components - for the text and to separately itemised RDS and RLS.

Provide the Standard Components as identified in the Schedule of Accommodation.

Non-Standard Components

Non Standard Components are generally very unit-specific. Provide the Non Standard Components as identified in this section and in the Schedule of Accommodation, according to the Operational Policy and Functional Brief.

DENTAL SURGERY
See Sections 280.8.25 – 280.8.40 for Dental Surgery Components

DENTAL LABORATORY

DESCRIPTION AND FUNCTION
A Dental Laboratory is an area for adjusting and polishing dentures and for the construction of prosthetic appliances and other items related to dental treatment (unless outsourced).

Large Laboratories may be broken down into some/all of the following functional areas:
- Barrier Area
- Laboratory Administration
- Preparation Area
- Dental Technicians Workspace
- Ceramics Area
- Plaster and Packing Area
- Casting Area
- Polishing Area
- Clean Area.

LOCATION AND RELATIONSHIPS

The Dental Laboratory should be located with ready access to the Dental Surgery rooms but sufficiently removed to minimise transfer of dust, noise and fumes.

CONSIDERATIONS

The following will need to be considered:
- lighting - natural / fluorescent mix for colour matching
- moisture-resistant joinery - all surfaces including drawers must be laminated or moulded plastic or stainless steel for ease of cleaning
- storage area for models
- inclusion of a plaster trap under the sink is advised if there is a high denture workload envisaged
- mechanical debris/dust extraction (external exhausting) through hoods in polishing bays and at desk-tops is required
- natural gas connections & compressed air outlet/s.
- a ducted fume cabinet (external exhausting) complying with AS/NZS 2243.8:2006 Safety in Laboratories. Part 8 - Fume cupboards is required where the mixing and or use of volatile liquids are performed. This includes, but is not limited to, methyl methacrylate monomer.

Furniture, fittings and equipment will/may include:
- plaster bins
- skip for waste plaster
- ultrasonic cleaner
- model trimmer
- plaster vibrator
- casting machine
- polishing machine
- dental lathe
- vice
- boil-out unit with exhaust system
- Bunsen burners
- vacuum former
- processing tank
- bench press.

ADJUSTMENT ROOM (MINI DENTAL LABORATORY)

DESCRIPTION AND FUNCTION
An Adjustment Room and is used for adjusting and polishing dental prostheses and making minor adjustments to ‘set-ups’.

LOCATION AND RELATIONSHIPS

This area should be adjacent to the dental surgery/surgeries used by the dentist undertaking prosthetic treatments and/or by the dental prosthetist.

CONSIDERATIONS

The following will need to be considered:

- lighting - natural / fluorescent mix
- moisture-resistant joinery - all surfaces including drawers must be laminated or moulded plastic for ease of cleaning
- non-slip vinyl flooring
- storage
- mechanical debris / dust extraction (external exhausting where possible) through hoods in polishing bays
- a ducted fume cabinet (external exhausting) complying with AS/NZS 2243.8:2006 Safety in Laboratories. Part 8 - Fume cupboards is required where the mixing and or use of volatile liquids are performed. This includes, but is not limited to methyl methacrylate monomer.
- natural gas connections 

Furniture, fittings and equipment will/may include:

- sink
- stainless steel benches with splash back
- laboratory handpiece (micromotor) / control box
- Bunsen burner
- dental lathe and polisher.

INSTRUMENT PROCESSING/STERILISING AREA

For instrument reprocessing area for an Oral Health “Hub Service” refer to AHFG Part B Health Facility Briefing and Planning: 190 Sterile Supply Unit. Note: Guidance provided in 190 Sterile Supply Unit should be considered in the context of oral health requirements to ensure services are not duplicated and space allocations are reflective of equipment and processes specific to the oral health context.

DESCRIPTION AND FUNCTION ORAL HEALTH SPOKE SERVICE

This area is a designated area for the cleaning and sterilisation of reusable dental instruments and equipment. Its size will depend on the clinical service plan, number of surgeries, patient throughput and procedure types which determines instrumentation reprocessing volumes and turnaround times.

Queensland Health Centre for Healthcare Related Infection Surveillance and Prevention (CHRISP) is to be involved in the consultation process and will inform the Project Team and User Groups about area accommodation, room configuration and layout, health technology and mechanical services requirements.

Oral Health “Spoke Service” with four or less chairs will be based on office-based practice. An assessment by CHRISP is required to determine if small automatic washer/disinfectors and bench-top sterilisers are appropriate. Dedicated room configurations of an office based Instrument Reprocessing/Sterilising Area includes:

- decontamination area for cleaning of dental instruments
- packaging and sterilising area
- sterile stock storage and dispatch area.
These facilities require the following functions and these functions will physically separate dirty, clean and sterile functions using pass through Health Technology:

- receipt area for contaminated dental instruments
- decontamination area for cleaning of dental instruments
- packaging area to prepare cleaned dental instruments for sterilisation
- sterilising and cooling area
- sterile Stock Storage and dispatch area.

Refer to:

- Queensland Health Draft Implementation Standard- Planning Sterilising Services Infrastructure.
- Queensland Health (2011) Infection Control Guidelines
- AusHFG Part D - Infection Prevention and Control
- AHFG Part B Health Facility Briefing and Planning: 190 Sterile Supply Unit

There must be “zones” for the following functions:

If sterilising services are provided off-site, a separate dirty instrument trolley bay and sterile stock receipt and dispatch area is required. An area for the rinsing of dirty instruments is to be situated outside the clinical area and away from public access.

See Section 280.6.50 for the general and environmental requirements to be considered with sterile stock storage areas.

**FUNCTION AND RELATIONSHIPS**

The area should be centralised to minimise distance from Dental Surgeries and Dental Laboratory.

**CONSIDERATIONS**

Non-slip flooring should be provided. It should be continual and wherever possible cove up the wall (typically by 100-150mm). Refer to AusHFG Part C – Design for Access, Mobility, OHS and Security - for further information.

Furniture, fittings and equipment for an Oral Health Spoke Service may include:

- ultrasonic cleaner mobile
- washer disinfecter under bench
- rapid decontamination wash station
- steriliser: bench-top steam pre-vacuum
- return hatch
- magnifier with task lighting
- mobile height adjustable workbenches- packing
- mobile storage system- multi-level shelving (all areas)
- reverse osmosis water treatment system.

Equipment must comply with relevant Australian and International Standards.
### Schedule of Accommodation

280.22.00 A Schedule of Accommodation follows. Units of greater than 6 chairs will require flexibility of interpretation of floor space requirements.

280.22.05 Entry / Reception

<table>
<thead>
<tr>
<th>ROOM / SPACE</th>
<th>Standard Component</th>
<th>1 Chair (Qty x m²)</th>
<th>2 Chair (Qty x m²)</th>
<th>4 Chair (Qty x m²)</th>
<th>6 Chairs (Qty x m²)</th>
<th>8 Chair (Qty x m²)</th>
<th>12 Chair (Qty x m²)</th>
<th>16 Chair (Qty x m²)</th>
<th>20 Chair (Qty x m²)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTRY</td>
<td>Yes</td>
<td>Included in waiting</td>
<td>1 x 6</td>
<td>1 x 6</td>
<td>1 x 6</td>
<td>1 x 8</td>
<td>1 x 8</td>
<td>1 x 10</td>
<td>1 x 10</td>
<td>Optional depending on location</td>
</tr>
<tr>
<td>RECEPTION</td>
<td>Yes</td>
<td>1 x 10</td>
<td>1 x 10</td>
<td>1 x 12</td>
<td>1 x 12</td>
<td>1 x 12</td>
<td>1 x 16</td>
<td>1 x 18</td>
<td>1 x 20</td>
<td>Dependent on number of staff and type of work tasks. Suggest workstation space + 2.3m² per FTE.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The allocated space recommendations above generally relate to space required for air ventilation rather than practical work space.</td>
</tr>
<tr>
<td>STORE - FILES</td>
<td>Yes</td>
<td>1 x 6</td>
<td>1 x 8</td>
<td>1 x 10</td>
<td>1 x 20</td>
<td>1 x 26</td>
<td>1 x 32</td>
<td>1 x 38</td>
<td></td>
<td>Compactus or fixed shelving. May need to accommodate additional records, e.g. child and adolescent dental service. May not be required in the future (Electronic Oral Health Record) so should be easily converted to another functional area</td>
</tr>
<tr>
<td>STORE - PHOTOCOPIER / STATIONERY</td>
<td>Yes</td>
<td>Share</td>
<td>Share</td>
<td>1 x 8</td>
<td>1 x 8</td>
<td>1 x 8</td>
<td>1 x 8</td>
<td>1 x 8</td>
<td>1 x 8</td>
<td></td>
</tr>
<tr>
<td>ADMINISTRATION OFFICE</td>
<td>Yes</td>
<td>0</td>
<td>0</td>
<td>1 x 9</td>
<td>1 x 10</td>
<td>1 x 10</td>
<td>1 x 14</td>
<td>1 x 18</td>
<td></td>
<td>Dependent on number of staff. Suggest workstation space + 2.3m² per FTE.</td>
</tr>
<tr>
<td>WAITING</td>
<td>Yes</td>
<td>1 x 10</td>
<td>1 x 10</td>
<td>1 x 18</td>
<td>1 x 20</td>
<td>1 x 23</td>
<td>1 x 30</td>
<td>1 x 36</td>
<td>1 x 40</td>
<td>Include chilled water dispenser</td>
</tr>
<tr>
<td>CHILD PLAY AREA</td>
<td>No</td>
<td>Included in waiting</td>
<td>1 x 10</td>
<td>1 x 10</td>
<td>1 x 10</td>
<td>1 x 10</td>
<td>1 x 10</td>
<td>1 x 10</td>
<td>1 x 10</td>
<td>Optional</td>
</tr>
<tr>
<td>BAY - WHEELCHAIR PARK</td>
<td>Yes</td>
<td>-</td>
<td>Share</td>
<td>1 x 2</td>
<td>1 x 2</td>
<td>1 x 2</td>
<td>1 x 2</td>
<td>1 x 2</td>
<td></td>
<td>Assessment of projects, i.e. may require further spaces, for 10 – 20 chair units</td>
</tr>
<tr>
<td>TOILET - PUBLIC</td>
<td>Yes</td>
<td>Refer to Building Code of Australia for space allocations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOILET / BABY CHANGE - DISABLED</td>
<td>Yes</td>
<td>Refer to Building Code of Australia for space allocations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

280.22.10 Treatment Areas

<table>
<thead>
<tr>
<th>ROOM / SPACE</th>
<th>Standard Component</th>
<th>1 Chair (Qty x m²)</th>
<th>2 Chair (Qty x m²)</th>
<th>4 Chair (Qty x m²)</th>
<th>6 Chairs (Qty x m²)</th>
<th>8 Chair (Qty x m²)</th>
<th>12 Chair (Qty x m²)</th>
<th>16 Chair (Qty x m²)</th>
<th>20 Chair (Qty x m²)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENTAL SURGERY - SINGLE</td>
<td>Yes</td>
<td>1 x 16</td>
<td>3 x 16</td>
<td>5 x 16</td>
<td>7 x 16</td>
<td>11 x 16</td>
<td>15 x 16</td>
<td>19 x 16</td>
<td></td>
<td>Test for fit, i.e. monitors, trolleys, safety. Based on service need, a proportion of surgeries may be considered at a smaller size, appropriate for the requirements of independently mobile clients and functionality check via test for fit. Impact on future flexibility of these surgeries will need to be considered. At least one dental surgery room will need to be large enough to</td>
</tr>
</tbody>
</table>
### Queensland Health Facility Guideline

#### ORAL HEALTH UNIT

<table>
<thead>
<tr>
<th>ROOM / SPACE</th>
<th>Standard Component</th>
<th>1 Chair (Qty x m²)</th>
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<th>4 Chair (Qty x m²)</th>
<th>6 Chairs (Qty x m²)</th>
<th>8 Chair (Qty x m²)</th>
<th>12 Chair (Qty x m²)</th>
<th>16 Chair (Qty x m²)</th>
<th>20 Chair (Qty x m²)</th>
<th>Remarks</th>
</tr>
</thead>
</table>
| DENTAL SURGERY - LARGE SINGLE | Yes (new)          | 1 x 18             | 1 x 18             | 1 x 18             | 1 x 18              | 1 x 18             | 1 x 18             | 1 x 18             | 1 x 18             | Bed access may require 20m²
| DENTAL SURGERY - 2 CHAIRS   | Yes                | 1 x 40             | 2 x 40             | 3 x 40             | 4 x 40              | 6 x 40             | 8 x 40             | 10 x 40            | 12 x 40            | 40m² includes 15m² per chair space plus workspace area 10m²
| CHILD EDUCATION AREA        | No                 | 1 x 2              | 1 x 4              | 1 x 4              |                    |                    |                    |                    |                    | Optional Sink and mirror 1, 2, and 3
| PATIENT BAY - RECOVERY      | Yes                | 1 x 4              | 1 x 6              | 1 x 6              | 1 x 6              | 1 x 6              | 1 x 6              | 1 x 6              | 1 x 6              | May not be required, depends on the facility
| BAY – HANDWASHING TYPE B    | Yes                | 1 x 1              | 1 x 1              | 1 x 1              | 1 x 1              | 1 x 1              | 1 x 1              | 1 x 1              | 1 x 1              | May be able to collocate with Recovery, needs to be in a central location
| RESUSCITATION TROLLEY BAY   | Yes Share Share    | 1 x 2              | 1 x 2              | 1 x 2              | 1 x 2              | 1 x 2              | 1 x 2              | 1 x 2              | 1 x 2              | Needs to be in a central location

#### 280.22.15 Support Areas

<table>
<thead>
<tr>
<th>ROOM / SPACE</th>
<th>Standard Component</th>
<th>1 Chair (Qty x m²)</th>
<th>2 Chair (Qty x m²)</th>
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<th>6 Chairs (Qty x m²)</th>
<th>8 Chair (Qty x m²)</th>
<th>12 Chair (Qty x m²)</th>
<th>16 Chair (Qty x m²)</th>
<th>20 Chair (Qty x m²)</th>
<th>Remarks</th>
</tr>
</thead>
</table>
| X-RAY PROCESSING - DARK ROOM | Yes                | 1 x 6              | 1 x 6              | 1 x 6              | 1 x 6               | 1 x 6              | 1 x 6              | 1 x 6              | 1 x 6              | Not required if digital system in use
| OPG ROOM                    | No                 | 1 x 7              | 1 x 7              | 1 x 7              | 1 x 7               | 1 x 7              | 1 x 7              | 1 x 7              | 1 x 7              | Optional All facilities must have access, so may be required in some rural/remote facilities
| DATA/COMMUNICATIONS ROOM    | No                 |                    |                    |                    |                    |                    |                    |                    |                    | Pending size of clinic. Refer to Building Codes and Queensland Health Cabling Standards regarding size and location. For example smaller clinics (1-2 chairs) may only require a data cabinet fixed to a wall.
| DENTAL LABORATORY - TOTAL SINGLE ROOM ONLY | Yes |                    |                    |                    |                    |                    |                    |                    |                    | Space allocation will be dependent on the number of technicians and equipment
| ADJUSTMENT ROOM             | Yes                |                    |                    |                    |                    |                    |                    |                    |                    | Refer to Queensland Health Work Place & Office Accommodation Policy and Guidelines
| BARRIER ROOM ADMINISTRATION ROOM | No | 1 x 8              | 1 x 8              | 1 x 8              | 1 x 8               | 1 x 8              | 1 x 8              | 1 x 8              | 1 x 8              | 4.5 – 5.5m² per technician – workstation space only
| SENIOR DENTAL TECHNICIAN OFFICE PREPARATION ROOM | No | 7                 |                    |                    |                    |                    |                    |                    |                    |                     9
| DENTAL TECHNICIAN WORKSPACE CERAMICS ROOM PLASTER & PACKING CASTING POLISHING CLEAN ROOM | No | 6                 |                    |                    |                    |                    |                    |                    |                    |                     16
| STERILISING - TOTAL         | Yes                | 1 x 10             | 1 x 14             | 1 x 18             |                    |                    |                    |                    |                    |                     12
### ROOM / SPACE

<table>
<thead>
<tr>
<th>Standard Component</th>
<th>1 Chair (Qty x m²)</th>
<th>2 Chair (Qty x m²)</th>
<th>4 Chair (Qty x m²)</th>
<th>6 Chairs (Qty x m²)</th>
<th>8 Chair (Qty x m²)</th>
<th>12 Chair (Qty x m²)</th>
<th>16 Chair (Qty x m²)</th>
<th>20 Chair (Qty x m²)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DECONTAMINATION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>For Oral Health Hub Service refer to AHFG Part B Health Facility Briefing and Planning: 190 Sterile Supply Unit. Also refer to section 280.6.15 &amp; 280.21.25 of this HPU for further information regarding Sterilising considerations.</td>
</tr>
<tr>
<td>PACKAGING/ STERILISING STERILE STOCK STORE</td>
<td>No</td>
<td>1 x 10</td>
<td>1 x 12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Local arrangements. Rubbish, dirty linen, minimal fluid disposal, soiled linen holding etc. Pan sanitisers / holders probably not required unless servicing defined inpatient/bed bound population</td>
</tr>
<tr>
<td>DIRTY UTILITY / DISPOSAL ROOM</td>
<td>Yes</td>
<td>1 x 8</td>
<td>1 x 8</td>
<td>1 x 8</td>
<td>1 x 9</td>
<td>1 x 9</td>
<td>1 x 9</td>
<td>1 x 12</td>
<td>Used for storage of clean linen, disposables. May be split into two or more rooms</td>
</tr>
<tr>
<td>BAY - LINEN TROLLEY</td>
<td>Yes</td>
<td>1 x 2</td>
<td>1 x 2</td>
<td>1 x 2</td>
<td>1 x 2</td>
<td>1 x 4</td>
<td>1 x 4</td>
<td>1 x 6</td>
<td></td>
</tr>
<tr>
<td>STORE - GENERAL / REPACKING / CLEAN LINEN</td>
<td>Yes</td>
<td>6</td>
<td>9</td>
<td>12</td>
<td>14</td>
<td>16</td>
<td>25</td>
<td>32</td>
<td>Used for storage of clean linen, disposables</td>
</tr>
<tr>
<td>CLEANERS ROOM</td>
<td>Yes</td>
<td>1 x 6</td>
<td>1 x 6</td>
<td>1 x 9</td>
<td>1 x 9</td>
<td>1 x 9</td>
<td>1 x 12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLANT ROOM</td>
<td>No</td>
<td>1 x 9</td>
<td>1 x 12</td>
<td>1 x 16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>After-hours access</td>
</tr>
<tr>
<td>TRAVEL AND ENGINEERING</td>
<td>No</td>
<td>19</td>
<td>49</td>
<td>95</td>
<td>129</td>
<td>155</td>
<td>184</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GOODS RECEPTION /LOADING DOCK</td>
<td>No</td>
<td>15</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Space for one truck</td>
</tr>
</tbody>
</table>

### Staff Areas

<table>
<thead>
<tr>
<th>Standard Component</th>
<th>1 Chair (Qty x m²)</th>
<th>2 Chair (Qty x m²)</th>
<th>4 Chair (Qty x m²)</th>
<th>6 Chairs (Qty x m²)</th>
<th>8 Chair (Qty x m²)</th>
<th>12 Chair (Qty x m²)</th>
<th>16 Chair (Qty x m²)</th>
<th>20 Chair (Qty x m²)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OFFICE - SENIOR DENTIST</strong></td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Number of offices may need to increase where the service acts as a Host District and therefore has a Manager and Clinical Director</td>
</tr>
<tr>
<td>WORKSTATION</td>
<td>Yes</td>
<td>5.5</td>
<td>5.5</td>
<td>5.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Number to suit staff establishment</td>
</tr>
<tr>
<td>MEETING / TUTORIAL ROOM</td>
<td>Yes</td>
<td>0</td>
<td>1 x 12</td>
<td>1 x 20</td>
<td>1 x 20</td>
<td>1 x 28</td>
<td>1 x 36</td>
<td>1 x 44</td>
<td></td>
</tr>
<tr>
<td>STAFF ROOM</td>
<td>Yes</td>
<td>1 x 6</td>
<td>1 x 6</td>
<td>1 x 12</td>
<td>1 x 15</td>
<td>1 x 15</td>
<td>1 x 20</td>
<td>1 x 30</td>
<td>1 x 35</td>
</tr>
<tr>
<td>BAY - BEVERAGE</td>
<td>Yes</td>
<td>1 x 3</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Usually in Staff Room</td>
</tr>
<tr>
<td>STAFF PROPERTY BAY</td>
<td>Yes</td>
<td>1 x 1</td>
<td>1 x 1</td>
<td>1 x 2</td>
<td>1 x 3</td>
<td></td>
<td></td>
<td></td>
<td>Lockers may be required</td>
</tr>
<tr>
<td>STAFF TOILETS</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Refer to Building Code of Australia for space allocations</td>
</tr>
<tr>
<td>STAFF SHOWERS</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Showers optional</td>
</tr>
<tr>
<td>DISCOUNTED CIRCULATION</td>
<td>25</td>
<td>32</td>
<td>32-35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25% – 35% Based on % of total floor area of the clinic</td>
</tr>
</tbody>
</table>
The following diagram sets out the relationships between zones in an Oral Health facility.

It is recommended that the surgery areas are not directly opening onto the patient waiting area to facilitate security and privacy. The alternative is for a control corridor between the surgeries and the waiting area with one point of entry for all the traffic flow. The entry point should be external but adjacent to the reception area so that it can be monitored by reception staff. The area for Sterilising Services should be separately shown from the Utility/Store. The Store will need to have access to the delivery bay. Surgery areas ideally should have access to natural light as this is important for matching tooth colouring. Surgeries also need ready access to sterilising and laboratory areas. A Data Server Room for facilities with less than 2 chairs should be considered.
FUNCTIONAL RELATIONSHIP DIAGRAM – ORAL HEALTH HUB SERVICE STERILISING AREA

The following diagram sets out the relationships between zones in an Oral Health Hub Service sterilising area.

Checklists

For planning checklists, refer to AusHFG - Parts A, B, C and D.

References and Further Reading

The following documents may have associated guidelines and standards which should also be referred to.

280.25.05

LEGISLATION, REGULATIONS AND LEGISLATIVE STANDARDS


Queensland Building Act, 1975

Queensland Building Fire Safety Regulation, 2008

Queensland Environmental Protection (Waste Management) Regulation, 2008, reprinted 2011

Queensland Public Health Act, 2005
Queensland Radiation Safety Act, 1999
Queensland Radiation Safety Regulation, 2010
Queensland Radiation Safety Standard, PR100:2010, Standards for Premises – Ionising Radiation Sources
Queensland Waste Reduction and Recycling Regulation 2011
Queensland Water Supply Safety and Reliability Act 2008
Queensland Work Health and Safety Act, 2011
Queensland Work Health and Safety Regulation, 2011

280.25.10 NON-LEGISLATIVE STANDARDS, GUIDELINES, PLANS AND POLICIES

Australasian Health Facility Guidelines
  Part A (Introduction and Instructions for use)
  Part B (Health Facility Briefing and Planning)
  Part C (Design for Access, Mobility, OHS and Security)
  Part D (Infection Prevention and Control)
  Part E (Building Services and Environmental Design)
  Part F (Project Implementation).


Australian Standard 1428 (Set):2010. Design for access and mobility

Australian Standard 4004:2006. Lighting booths for visual assessment of colour and colour matching

Australian Standard/New Zealand Standard 4187:current version. Cleaning, disinfecting and sterilising reusable medical and surgical instruments and equipment, and maintenance of associated environments in health care facilities

Australian Standard/New Zealand Standard 2982.1:2010. Laboratory design and construction Part 1: General requirements


Australian Standard/New Zealand Standard 2243.(Set). Safety in laboratories


Queensland Health Facility Guideline

ORAL HEALTH UNIT

National Health and Medical Research Council (2010) Australian Guidelines for the prevention and control of infection in healthcare


Queensland Health (2008) Disinfection and Sterilisation Infection Control Guidelines

Queensland Health Draft Implementation Standard- Planning Sterilising Services Infrastructure.

Queensland Health (2008) Ecologically Sustainable Development Policy

Queensland Health (2011) Ecologically Sustainable Queensland Health Facilities Policy # QH-POL-052, version 1.1

Queensland Health (2011) Fire Safety Statewide Mandatory Implementation Standard, OHSMS 2-24#21

Queensland Health Hazardous Chemicals Implementation Standard, OHSMS 2-28#21

Queensland Health (2009) Human Resources Policy, Use of Public Facilities for Private Practice – Allied Health Professionals and Dental Practitioners

Queensland Health (2011) Infection Control Guidelines


Queensland Health Occupational Health and Safety Management System (OHSMS)


Queensland Health (2010) Oral Health Services Policy


Queensland Health (2009) Patient Handling Tasks Statewide Mandatory Implementation Standard, OHSMS 2-22#21
Mobile Units - Design

MOBILE UNITS – DESIGN

“Mobile Dental Clinics – are purpose built transportable facilities, either towed by a vehicle or self driven and are utilised for the provision of oral health services”


The detailed technical specifications for design and construction of mobile dental clinics are available from the Office of the Chief Dental Officer.