

Australasian Health Facility Guidelines

Part B - Health Facility Briefing and Planning
0280 – Oral Health Unit

Uncontrolled when printed

COPYRIGHT AND DISCLAIMER

Copyright

© 2015 Australasian Health Infrastructure Alliance

The Australasian Health Facility Guidelines (AusHFG) and the information in them are the copyright of the Australasian Health Infrastructure Alliance (AHIA). The information in the AusHFG is made freely available.

Australasian Health Facility Guidelines

Address: PO Box 1060, North Sydney NSW 2059

Website: <http://www.healthfacilityguidelines.com.au>

Email: webmaster@healthfacilityguidelines.com.au

The AusHFGs are an initiative of the Australasian Health Infrastructure Alliance (AHIA). AHIA membership is comprised of representatives from government health infrastructure planning and delivery entities in all jurisdictions in Australia and New Zealand.

Disclaimer

AHIA gives no warranty or guarantee that the information in the AusHFG is correct, complete or otherwise suitable for use. AHIA shall not be liable for any loss howsoever caused whether due to negligence or otherwise arising from the use of or reliance on this information.

AHIA recommends that those seeking to rely on the information in the AusHFG obtain their own independent expert advice.

Index

01 INTRODUCTION	4
1.1 Preamble.....	4
1.2 Introduction	4
1.3 Policy Framework.....	4
1.4 Description	4
1.4.1 Definition of an Oral Health Unit.....	4
1.4.2 Service Levels	5
1.4.3 Services Provided	5
1.4.4 Calculation of Numbers of Chairs Required	6
02 PLANNING	7
2.1 Operational Models	7
2.1.1 Type of Unit	7
2.1.2 Rural and Remote Services	8
2.2 Operational Policies	8
2.2.1 General.....	8
2.2.2 Hours of Operation.....	8
2.2.3 Patient Management.....	8
2.2.4 Dental Imaging.....	9
2.2.5 Instrument Reprocessing and Sterilisation	10
2.2.6 Major and Minor Dental Laboratories	11
2.2.7 Analgesia and Sedation	11
2.2.8 Dental Records.....	11
2.2.9 Medical Emergencies and Patient Recovery	11
2.2.10 Storage – General Supplies	11
2.2.11 Storage – Sterilised Instruments and Equipment	12
2.2.12 Waste Disposal.....	12
2.2.13 Staff Structure.....	13
2.3 Planning Models.....	13
2.3.1 Location	13
2.3.2 Configuration	13
2.3.3 Dental Surgery – Enclosed Room	13
2.3.4 Open Plan Design.....	13
2.3.5 Shared Areas.....	14
2.4 Functional Areas	14
2.4.1 Functional Zones	14
2.4.2 Entry / Reception / Waiting.....	14
2.4.3 Treatment Area – Dental Surgeries.....	15
2.4.4 Support Areas including dental plant room.....	15
2.4.5 Staff Work Areas and Amenities	15
2.5 Functional Relationships	16
2.5.1 External	16
2.5.2 Internal.....	16
03 DESIGN	17
3.1 Accessibility.....	17
3.1.1 Internal.....	17
3.1.2 External	17

3.2	Parking.....	17
3.3	Disaster Planning	17
3.4	Infection Control	17
3.5	Environmental Considerations.....	18
3.5.1	Acoustics	18
3.5.2	Lighting	18
3.5.3	Privacy.....	19
3.5.4	Interior Decor.....	19
3.6	Space Standards and Components.....	19
3.6.1	Human Engineering	19
3.6.2	Ergonomics.....	19
3.6.3	Building Elements	19
3.7	Safety and Security	20
3.7.1	Safety	20
3.7.2	Security.....	20
3.8	Finishes.....	20
3.8.1	General.....	20
3.9	Fixtures, Fittings & Equipment.....	20
3.9.1	Definition.....	20
3.10	Building Service Requirements	21
3.10.1	General.....	21
3.10.2	Information, Communications and Technology	21
3.10.3	Radiation Screening.....	21
3.10.4	Air-conditioning, Ventilation and Colling.....	22
3.10.5	Water	22
3.10.6	Gases	22
3.10.7	Dental Suction	22
3.10.8	Plant Room and Supply Lines.....	23
04	COMPONENTS OF THE UNIT	24
4.1	Standard Components	24
4.2	Non-Standard Components.....	24
4.2.1	Dental Surgery – Large.....	24
4.2.2	Dental Clean Up Room.....	24
4.2.3	Dental Reprocessing.....	25
4.2.4	Major Dental Laboratory.....	26
4.2.5	Plant Room.....	26
4.2.6	Treatment Room.....	27
05	APPENDICES.....	28
5.1	Schedule of Accommodation.....	28
5.2	Functional Relationships / Diagrams	32
5.3	References.....	33
5.4	Further Reading	33

01 INTRODUCTION

1.1 PREAMBLE

This Health Planning Unit (HPU) has been developed by the Australasian Health Infrastructure Alliance (AHIA). This revision has been informed by an extensive consultation process that was completed in 2020.

The document is intended to be used by design teams, project managers and end users to facilitate the process of planning and design.

1.2 INTRODUCTION

This HPU outlines the specific requirements for the planning and design of an Oral Health Unit. The document refers to dental surgeries which is the space, either an enclosed room or open bay, used to undertake oral health consultations, examinations and treatments. Each room or bay contains a dental chair.

The requirements for planning mobile oral health services have not been included in the scope of this HPU. Planners are advised to refer to the relevant jurisdictional authority for guidance on technical specifications.

This document should be read in conjunction with the AusHFG generic requirements and Standard Components, as described in:

- Part A: Introduction and Instructions for Use;
- Part B: Section 80: General Requirements;
- Part B: Section 90: Standard Components, Room Data and Room Layout Sheets;
- Part C: Design for Access, Mobility, Safety and Security; and
- Part D: Infection Prevention and Control.

It is recognised that statutory and regulatory requirements will vary between jurisdictions but, in general, all provide oral health services to very similar categories of eligible patients within the public health sector, with a significant focus being on prevention activities. This HPU is aimed at ensuring a consistent approach to the design of Oral Health Units to meet the needs of patients and staff.

1.3 POLICY FRAMEWORK

Before undertaking a project, planners and project personnel are encouraged to familiarise themselves with local jurisdictional plans, policies, service specific guidelines and reports.

State and territory specific policy information is contained in Section 5.4 'Further Reading' of this HPU.

1.4 DESCRIPTION

1.4.1 Definition of an Oral Health Unit

An Oral Health Unit provides facilities and equipment to deliver oral health services. Services are delivered in dental surgeries that provide a purpose designed dental chair for patients and specialised furniture, fittings and equipment for staff to use when providing oral health care.

Oral Health Units range from single chair surgeries to large teaching hospital units providing complex specialist care. These services can be provided in stand-alone buildings or integrated with other community or hospital facilities. Requirements for the unit are determined by the service level and range of services to be provided, as described in the Clinical Service Plan (refer to AusHFG Part B).

The majority of oral health services are provided as outpatient services. In some cases, there may be a requirement for inpatient access within hospital-based units. This HPU provides the information necessary to plan and design Oral Health Units of varying sizes and complexity. Dental surgical procedures requiring a general anaesthetic will be undertaken in an operating theatre. For these services refer to HPU 520 Operating Unit.

As a general guide, it is envisaged that a four chair unit would be the minimum size for a unit operating as an Oral Health Unit "hub"; a single chair unit being the minimum size for an Oral Health Unit "spoke". This arrangement may vary depending on local factors, such as service provision to remote regions. Final chair numbers will be dependent on clinical services planning.

1.4.2 Service Levels

Most jurisdictions will refer to service levels to determine the characteristics of the service to be provided. Broadly, the types of service include:

- general oral health services - providing general and preventative care and including some specialist services via outpatients, limited access for inpatients, and providing clinical placements for undergraduate and post graduate students; and
- dental teaching centres - providing a full range of specialist dental services including advanced imaging, manufacturing services and training for undergraduate and postgraduate oral health trainees.

It is the scope of services provided that is the differentiating factor between general oral health services and dental teaching hospitals rather than whether the unit hosts students or not.

Teaching responsibilities, including student placements, will impact on the number of chairs required within the unit.

1.4.3 Services Provided

In accordance with the agreed Clinical Services Plan, the unit may provide the following services:

- general, preventive and emergency services for adults and children;
- denture or prosthesis adjustment and / or manufacture;
- specialist services, including oral surgery, paediatrics, endodontics, orthodontics, periodontics and special needs care;
- health promotion and community education programmes;
- patient education;
- teaching, training and supervision of students and graduates; and
- simulation environment for the training of staff and students in a tertiary centre (not included in the scope of this HPU).

As oral health services may be networked across health regions, some of these services may be centralised and / or provided on an outreach basis. Examples include regional administration and call centres, dental laboratories manufacturing dentures and prostheses, and specialist services.

1.4.4 Calculation of Numbers of Chairs Required

Calculations for chairs should be based on a multi-factorial approach including the population eligible for care, demand, services capacity, hub and spoke networking arrangements, outsourcing and staffing models. Student and training requirements should be considered in the calculations, as well as projected growth in demand to ensure that future expansion of the service, where required, can be readily achieved.

Most health jurisdictions will have agreed methodologies for calculating chair requirements.

02 PLANNING

2.1 OPERATIONAL MODELS

2.1.1 Type of Unit

The location and size of the Oral Health Unit will be determined by the Clinical Service Plan and may be a:

- stand-alone unit;
- core component of a community health centre;
- core component of a Multipurpose Service (MPS) / small rural hospital; or
- hospital-based unit.

Stand – Alone Unit

While Oral Health Units normally form part of a broader range of services, stand-alone units are provided. Such units need to be planned with a full range of support services, as sharing opportunities are limited.

Core Component of a Community Health Centre

Most Oral Health Units providing general outpatient services can be collocated with other community-based services to promote easy access and integrated care options for the catchment population. These units are commonly collocated with community health centres.

The size of these units will vary. Larger services will have permanent staff and may provide training opportunities for students.

Core Component of a Multipurpose Service (MPS) / Small Rural Hospital

Oral health services within an MPS or small rural hospital are often provided as a visiting service, with access to a single chair that is dedicated or arranged as part of a shared treatment room.

For further information, refer to AusHFG HPU 350 Multipurpose Service.

Hospital Based Unit

The main point of difference for dedicated oral health services provided as part of a hospital campus is that, although the focus of the service will continue to be the provision of outpatient care, limited services may also be provided to inpatients. This may be for urgent dental care or dental care as part of an inpatient admission.

Some oral health services are located within the hospital but are operated independently.

The extent of services provided by dental surgeons in support of other clinical disciplines (for example oral and maxillofacial surgery) will depend on the role and function of the health service. These dental practitioners will utilise the dental chairs to assess patients and undertake some procedures. Surgical procedures requiring a general anaesthetic will be undertaken in an operating theatre with appropriate support services, such as anaesthetics and recovery.

2.1.2 Rural and Remote Services

The planning process for regional and remote facilities servicing large geographical catchment areas needs to consider:

- access for patients to specialised services such as imaging and manufacturing services;
- storage for outreach services (this is relevant for both hub and spoke sites as hub services will need to accommodate portable carts and equipment);
- delivery and collection cycles are likely to be less frequent to more remote services, translating to the need for additional storage for consumables and instrumentation;
- the approach to instrument reprocessing;
- the increasing use of tele-dentistry enabled by fixed or mobile telehealth units;
- ICT capability to support access to electronic medical records and communication of digital images for timely advice;
- temperature controlled, secure storage of dental materials on site and in transit; and
- security considerations relating to small staff numbers working in often isolated locations.

2.2 OPERATIONAL POLICIES

2.2.1 General

Operational policies have a major impact on the design requirements and capital and recurrent costs of health facilities and must be established at the earliest stage possible. Refer to Part B Section 80 of these Guidelines for a list of general operational policies that may apply.

2.2.2 Hours of Operation

The unit will usually operate Monday to Friday during business hours but may operate outside these hours. This will have implications for access, security and safety of practice and needs to be considered during the planning and design stages.

There should be policies and procedures in place for the management of emergencies after hours.

Some services may operate reprocessing services outside of normal business hours, which will also require consideration in relation to staff safety and security.

2.2.3 Patient Management

Many oral health services have established call centre systems for appointment scheduling, which are typically based off-site and centralised for a geographic catchment.

Patients attending the Oral Health Unit will generally report to a 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. Services will generally be provided to both adults and children.

Consideration must be given to providing adequate space and amenities for support persons (parents, carers etc.), as well as appropriate furniture and play equipment for children. For the purposes of this HPU it is assumed that waiting space is provided at a rate of three spaces per dental surgery. Some jurisdictions across Australia have service co-payments and reception staff will be required to handle money.

Smaller services may not have reception staff and patients may be directed via signage to a designated waiting area.

Patients presenting in wheelchairs, elderly patients, bariatric patients and inpatients that are bed bound will require consideration to inform the provision of appropriate facilities.

Once called for their appointment, patients will only access the dental surgeries and imaging areas within the unit.

Some services may have established models of care whereby oral health education and non-complex care, e.g. fluoride applications, are provided in dedicated areas separate to the dental surgeries to deliver a more efficient service.

2.2.4 Dental Imaging

For the purposes of the guideline, digital radiography is assumed.

Where possible, production of images should be provided via the use of digital plate scanner, which is usually shared by multiple chairs and located in a nearby bay.

Refer to Section 3.10.3 Radiation Screening for further information.

Imaging modalities to be considered are outlined below.

Intra-oral Radiography

There should be capacity for intra-oral radiography in all individual dental surgeries.

In open-plan dental surgeries, refer to jurisdictional and local regulatory requirements when determining intra-oral radiography options. These may include one x-ray unit shared between two chairs or a shared imaging room that also provides space for reading.

The intra-oral x-ray units are wall-mounted with remote exposure switches / panels which can be operated outside the room while maintaining view of the patient in line with local regulatory requirements.

Orthopantomogram (OPG) and Cone Beam Computed Tomography (CBCT)

OPG is a commonly used modality in oral health services.

Most units will require access to an OPG. Where they are not provided as part of the oral health service, the patient may be referred to another service within the network, or a medical imaging unit (services may be outsourced to a private medical imaging unit).

Larger facilities may require more than one OPG to meet the service demand.

CBCT supports the provision of oral surgery and implants. The provision of a combined OPG / CBCT unit should be considered within new or refurbished units, however this will depend on service needs, acknowledging the additional capital cost associated with CBCT and additional precautions relating to radiation shielding.

The geographical catchment and access to other services should also be considered when deciding whether CBCT is justified for ease of patient access.

Refer to HPU 440 Medical Imaging Unit for further information.

Intra-Oral Scanners

Intra-oral scanners are becoming increasingly common and are used to capture a digital impression of the oral cavity, rather than using traditional methods of developing impressions for crowns, study casts, stents and dentures using moulds.

Digital images can be sent directly to a 3D printer or computer aided design / computer aided manufacturing (CAD/CAM) system to create the required case. This can be undertaken within the same unit or the image may be sent to a 'hub' site to produce the items.

The scanners are usually provided on a mobile console and moved into the dental rooms as required. They will require storage within the unit.

2.2.5 Instrument Reprocessing and Sterilisation

The reprocessing of dental instruments within the Oral Health Unit must comply with the following Australian/New Zealand Standards:

- Standards Australia, 2006, AS/NZS 4815:2006 Office-based health care facilities - Reprocessing of reusable medical and surgical instruments and equipment, and maintenance of the associated environment; or
- Standards Australia / Standards New Zealand, 2014, AS/NZS 4187:2014 Reprocessing of reusable medical devices in health service organisations.

The Australian Dental Association, 2015, ADA Guidelines for Infection Control (Third Edition) notes that AS/NZS 4815 is relevant to office based dental practices. Large public dental units may be required to operate under AS/NZS 4187. However, project teams will need to confirm the relevant standard relating to their particular project.

An analysis should be undertaken regarding the provision of on-site or off-site reprocessing and the volume of single use instrumentation to be provided. Single use instrumentation can be used as a supplement to reduce the volume of reprocessing required, however there are significant costs relating to the transport / delivery, storage and disposal of these items. There are also environmental considerations associated with single use instrumentation, although some recycling can occur.

On-Site Reprocessing Services

Where instruments are reprocessed within the unit, a dedicated reprocessing area is required including separate areas for cleaning and decontamination; sterilising; and storage of sterile instruments. Consider the method of transporting clean and dirty instruments throughout the unit e.g. via trolleys and their required storage space.

The space allocated, and the equipment selected, will depend on the number of dental surgeries being serviced (including any instrumentation received from outreach services), workplace processes and staffing.

Consultation with local infection control personnel and reprocessing staff is advisable. Planners are also recommended to refer to local policies and guidelines for further details.

Off-Site Reprocessing Services

Used instruments and equipment may be sent to a Sterile Supply Unit within a hub Oral Health Unit or to a local health service for processing. This approach is more commonly adopted when the Oral Health Unit is based on a hospital site.

Off-site reprocessing may reduce the operational and infrastructure outlay (particularly at small facilities) while increasing the service provider's ability to apply monitoring processes and improve quality standards. It is recommended that providers complete a cost benefit analysis of the options in relation to their specific service plan as this model may:

- necessitate a significant increase in dental instruments;
- require additional resources in order to transport instruments between the Oral Health Unit and the Sterile Supply Unit; and
- require a larger sterile instrument storage area.

If off-site instrument reprocessing is used, the unit will still require sufficient spaces to rinse and store dirty instruments, and for the receipt and storage of sterile instruments when returned / delivered. These areas will be required to apply the applicable reprocessing standard, even though other elements of instrument reprocessing are carried out off-site.

2.2.6 Major and Minor Dental Laboratories

The manufacture of dental prostheses may be performed in-house or may be outsourced.

In a hub and spoke service arrangement, the manufacture of dental prostheses is usually centralised. Major dental laboratories are usually only provided in a small number of sites across each jurisdiction. Spoke sites will then require a minor dental laboratory for the pouring and trimming of patient moulds, and for denture adjustments.

Additional information relating to requirements for these areas is contained in the Non-Standards Components section.

If a milling machine is used for the manufacturing of dental prostheses, the appropriate environmental conditions for operation will require consideration.

2.2.7 Analgesia and Sedation

Nitrous oxide is commonly used in most Oral Health Units for relative analgesia. This would usually be provided in a select number of rooms across the unit, with patients scheduled accordingly when access to nitrous oxide is required.

IV sedation (conscious sedation) can be provided in a dental surgery as long as relevant legislation is adhered to. It can be carried out by a medical practitioner (including anaesthetist) and also by Australian Health Practitioner Regulation Agency (AHPRA) endorsed dental practitioners.

Procedures requiring general anaesthetic will be provided in a dental hospital or in an acute hospital operating theatre rather than in an Oral Health Unit. Additional requirements to support these services include dedicated medical (anaesthetists) and nursing staff, associated equipment and recovery space. Relevant legislation and policies will need to be adhered to when designing areas where general anaesthetic is administered.

2.2.8 Dental Records

Facilities should be planned to support electronic records systems. The ICT infrastructure implications need to be considered during the planning and design stage to ensure that optimal staff work practices are supported.

There will continue to be a requirement for some paper-based storage within Oral Health Units.

Paper-based records, where provided, should be stored in a secure and lockable space, adjacent to the reception area where possible, to enable administrative staff easy access. Archival space for old records may be provided off-site.

Some services will require storage space for old models if scanning is not available.

Dental records must be retained for the minimum period required by local legislation.

2.2.9 Medical Emergencies and Patient Recovery

Services located within hospitals may be required to store a resuscitation trolley within the unit.

2.2.10 Storage – General Supplies

General supplies will be obtained through routine imprest and elected direct purchase arrangements.

Where Oral Health Units are collocated with other services, delivery of goods may occur through a dedicated goods receipt point such as a loading dock / bay.

Oral health stores for receipt of delivered goods should be located close to the Oral Health Unit.

Consideration of specialised storage is required including lockable refrigerated storage and flammable liquid storage, as per local regulations.

2.2.11 Storage – Sterilised Instruments and Equipment

As noted under Section 2.2.5, project teams will need to confirm the relevant standard to refer to regarding reprocessing services, i.e. AS/NZS 4815 or AS/NZS 4187.

AS/NZS 4815:2006 states that:

- storage areas for sterile items shall be controlled to prevent contamination and shall be dedicated for that purpose only;
- the storage environment shall be free of dust, insects and vermin;
- for open shelving within a dedicated storage area, all items shall be stored above floor level by at least 250mm and from ceiling fixtures by at least 440mm and protected from direct sunlight; and
- walls, floors, ceiling lights and work surfaces shall be constructed so that difficult to clean corners are minimised and must be non-porous, smooth and capable of being easily cleaned.

AS/NZS 4187:2014 states that:

- the temperature within the storage area should be controlled within the range of 18°C to 25°C;
- relative humidity should be controlled within the range of 35% to 70%; and
- air conditioning and ventilation systems requirements of AS 1668.2 apply.

2.2.12 Waste Disposal

General and clinical waste will be managed in accordance with overall health service policies.

Also refer to Australian Dental Association, 2015, ADA Guidelines for Infection Control (Third Edition).

Dental Amalgam Waste

Oral Health Units generate a number of waste products that have the potential to be discharged into 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. Of principle concern is mercury discharge as dental surgeries are recognised as significant contributors to mercury contamination of the environment.

Although mercury in the form of dental amalgam is very stable, amalgam should not be disposed of in the general waste, infectious waste “yellow bag,” pharmaceutical waste or sharps container. Amalgam also should not be rinsed down the drain.

Project staff should refer to their relevant environmental authority for guidelines on disposal of both liquid and solid mercury waste, back-flow prevention and waste-water disposal. All surgeries should include amalgam waste traps that comply with ISO 11143.

It is recommended that mercury wastes be returned to metal or precious metal recyclers for reclamation.

For the handling and storage of mercury related dental waste, refer to:

- Australian Dental Association (2007) Policy Statement 6.11 on Amalgam Waste Management – Best Practice Guide;
- National Health & Medical Research Council (NHMRC), 1999, ‘Dental Amalgam and Mercury in Dentistry’ Report of an NHMRC Working Party; and
- jurisdictional policies and guidelines referenced in Section 5.4 Further Reading.

2.2.13 Staff Structure

The staff structure of the unit will have an impact on the nature, size and location of staff work areas including administrative and teaching spaces, and staff amenities. The staffing structure of the proposed unit, including students and academic staff, should be developed in the early stages of planning.

2.3 PLANNING MODELS

2.3.1 Location

An Oral Health Unit should be located in an area accessible to the community by both public and private transport.

2.3.2 Configuration

The unit may have dental chairs arranged as:

- one chair per dental surgery;
- open plan dental surgeries; or
- a mix of the two, with support areas located to ensure optimal work flows and efficient and safe working practices.

In all scenarios, the layout of each room must be optimised so that:

- clean and dirty zones are identified within the space;
- clinical staff are in easy reach of all patient treatment equipment when seated;
- patient privacy is maintained;
- noise is contained; and
- dedicated air conditioning temperature control is provided to each dental surgery.

2.3.3 Dental Surgery – Enclosed Room

An enclosed room design incorporates all services and equipment required for the assessment and treatment of one patient and is appropriate in most situations. This configuration ensures patient privacy and contains noise. This type of room will accommodate most ambulant patients and those using walking aids.

A larger single room may be considered where:

- trolley, patient bed or wheelchair access is needed; or
- a patient hoist is required.

This may include access for inpatients, bariatric patients and those with special needs such as a physical or intellectual disability.

2.3.4 Open Plan Design

When considering an open plan dental surgery design, these spaces are often grouped in pairs with shared hand washing, x-ray (as per jurisdictional requirements) and storage facilities located between them and may be separated from each other with partial height partitions for privacy and infection control requirements (e.g. aerosols). Patients will usually be positioned away from the circulation corridor which ensures a level of privacy.

This arrangement of chairs is normally adopted for teaching and supervising students, however it may also be provided in other situations.

2.3.5 Shared Areas

In small units, only the dental surgeries will be a dedicated space. The entry, reception and waiting areas; most support areas; and staff areas may be shared with adjoining units.

When a shared reception area is provided, it is preferred that a reception space will be dedicated to the oral health service owing to specialised administrative tasks associated with eligibility and/or co-payments.

Waiting areas should only be shared where close proximity to the dental service is achieved to minimise staff and patient travel time.

Even when larger units are collocated with community health centres and hospitals, opportunities should be explored to share space, including visitor and staff amenities.

2.4 FUNCTIONAL AREAS

2.4.1 Functional Zones

Functional zones will comprise:

- entry / reception / waiting;
- treatment areas – dental surgeries,
- support areas including dental plant room; and
- staff – work areas and amenities.

2.4.2 Entry / Reception / Waiting

Where Oral Health Units are collocated with other services, patients will enter the facility via a shared entrance.

The waiting area may be shared with other services, however a sub-wait area for oral health services is recommended to minimise travel distances for staff and patients. Three waiting spaces per dental surgery is generally recommended to accommodate one to two patients waiting with a support person.

Space should be considered for prams and patients / visitors with walking frames or in wheelchairs, as well as bariatric and elderly patients. A children's 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 become vacant so that the patient can be transferred directly in via a separate entry.

ICT infrastructure should support the installation of electronic queueing and ticketing systems.

The size of the reception will be determined by the number of staff required and will have oversight of the entry and waiting areas. Disability access provision is mandatory.

The acoustic privacy and the confidentiality of patients attending the reception area must be considered.

Consideration should be given to the safety and security of reception staff including through the provision of a duress alarm and a design that supports safe egress of reception staff back into the unit. Design solutions to address safety requirements must also support optimal communication between staff and patients and included hearing assisted technology.

Consideration should be given to physical distancing requirements and access to hand sanitising stations in line with contemporary infection control requirements.

2.4.3 Treatment Area – Dental Surgeries

Whether enclosed rooms or open-plan, the typical dental surgery has the dental chair positioned close to the centre of the room or cubicle. The dental practitioner and dental assistant operate around the head of the chair with the dental practitioner normally positioned on the patient's right (if right-handed).

In a closed surgery, the position of the dental chair is often determined by the reach of the (wall or ceiling mounted) x-ray arm to enable exposure of x-rays on either side of the patient's face. Ease of access by the dental practitioner and dental assistant behind the head of the reclined dental chair must also be considered.

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. Clean and dirty workflows will be facilitated.

Dental surgery layouts are provided in the AusHFG Standard Components. The required layout for each facility will vary depending on proposed workflows and the equipment and accessories procured. Minimum widths and depths are important to ensure that the dental practitioner and dental assistant can operate effectively.

Allowance should be made for changes in practices relating to technology advancements such as space for IT equipment, digital radiography, telehealth and intra-oral cameras. A suitable location for computer monitors is required to accommodate the use of the electronic oral health record. Consider x-ray screening requirements and structural reinforcement to support mounting of the x-ray unit.

Seating is usually provided for a carer.

For rural and remote services, portable dental carts may be used for greater flexibility of use and ease of removal and repair.

2.4.4 Support Areas including dental plant room

The extent of support areas required will depend on the size and location of the unit. In small single surgery units, serviced by a visiting dental practitioner for example, the full range of facilities will not be appropriate, and arrangements will need to be made for reprocessing and laboratory needs. It may also be possible to share some support space if located with other services (e.g. disposal room, cleaner's room).

A dental plant room is a key element of the unit and cannot be located remotely from the dental unit. Design information relating to the plant room is included at Section 4.2.5.

Recommended room requirements are included in Section 5.1 Schedule of Accommodation.

2.4.5 Staff Work Areas and Amenities

The provision of staff work areas will comply with local policies.

Provision must be made for staff lockers in a secure environment. Depending on the type of unit and location, a staff room and toilets may be shared with other units. Access to a staff shower is desirable.

If no dedicated staff room is provided, in the case of stand-alone Oral Health Units, a beverage bay, separate from the clinical facilities, will be required. Alternatively, a staff room may be provided within a community health centre and shared between services.

Access to a meeting room should be provided to support student teaching and staff in-service training.

2.5 FUNCTIONAL RELATIONSHIPS

2.5.1 External

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

- the sterile supply unit with the health facility if this is the proposed model for reprocessing of dental instruments. Under this arrangement, the sterile supply unit should be located within the same building as the Oral Health Unit to minimise transport time;
- a loading dock / bay if access to off-site reprocessing services and deliveries is required; and
- 'back of house' support services including waste disposal units.

2.5.2 Internal

The reception area requires a clear view of entry and exit / egress points and of the waiting area.

There must be easy but controlled access from the waiting area to the patient treatment areas. Staff must be able to move between the treatment areas and reception.

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

03 DESIGN

3.1 ACCESSIBILITY

3.1.1 Internal

Entry to the unit must allow easy barrier free access for ambulant, wheelchair and trolley patients.

A separate entry is ideally provided for inpatients, where indicated. If a hospital-based unit, bed / trolley access to at least one surgery is to be provided.

Unit access design must comply with Standards Australia, 2010, AS 1428 (Set) 2010 Design for access and mobility Set (SAI Global).

3.1.2 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, have limited mobility or who are wheelchair bound.

Consideration should be given to ambulance access and trolley access to units located within hospitals.

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

3.2 PARKING

Ready access to parking is required for patients and their carers including drop-off parking for people with disabilities.

For further information regarding staff parking, refer to AusHFG Part C: Design for Access, Mobility, Safety and Security.

3.3 DISASTER PLANNING

For further information refer to information on disaster planning in the Operational Policies section of AusHFG Part B: Section 80 General Requirements.

3.4 INFECTION 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. The general layout of a 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 (such as computer screens and administration areas) away from the zone of aerosol contamination. There must be clear distinction between zones (for example reception / administration and treatment areas) and prevention of crossover of dirty, clean and sterile workflows.

The use of high-volume evacuation suction equipment is also important in minimising aerosol effects.

Regular cleaning of the unit is to be undertaken to minimise the number of micro-organisms in the environment and keep all surfaces clean and tidy. This must be in line with current environmental cleaning protocols relating to COVID-19 and other pandemics.

Procedures are to be implemented for the safe handling and appropriate disposal of contaminated materials and waste.

Hand and hygiene facilities are essential in every dental surgery. 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. Access to dispensers and storage for personal protective equipment must be considered in each surgery to ensure easy access.

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

Consideration should be given to physical distancing in design and reducing the number of surfaces needing to be touched to transit through the unit. Hand sanitising stations should be located in areas where frequently touched surfaces are located. Reference should be made to contemporary guidelines regarding COVID-19 / other pandemics.

Some larger, specialised facilities may be required to treat clients with a confirmed airborne infection and will require access to a negative pressure room. In the context of a pandemic this would only be undertaken for urgent / emergency dental treatment. The use of mobile dental units may also be considered.

Consideration of operational practices and / or access to positive air pressure environments for severely immunocompromised or highly allergy sensitive patients may also be required in specialised facilities.

For further information, refer to:

- Australian Dental Association, 2015, ADA Guidelines for Infection Control (Third Edition);
- NHMRC, 2019, Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019); and
- local jurisdictional policies.

3.5 ENVIRONMENTAL CONSIDERATIONS

3.5.1 Acoustics

Noise can be a frequent source of complaint from patients and staff. The following factors should be considered:

- minimising noise through the use of acoustic ceiling tiles while maintaining infection control requirements;
- isolating noisy areas or equipment from patient treatment and waiting areas;
- accommodating all mechanical plant in a separate service specific Plant Room; and
- ensuring optimal acoustic treatment of plant rooms.

3.5.2 Lighting

Natural light is highly desirable in dental surgeries as light and views assist in alleviating patient anxiety and improving staff morale.

Colour-corrected lighting will be required in surgeries and laboratories where shading / matching of teeth colour is undertaken.

Dental examination lights can be mounted on the dental chair or on the ceiling.

3.5.3 Privacy

The planning and design of Oral Health Units must optimise patient privacy.

The unit should be designed to:

- ensure confidentiality of patient discussions and records; and
- appropriately configure dental surgeries to optimise patient privacy.

3.5.4 Interior Decor

Interior decor includes furnishings, style, colour, and use of textures. Appropriate selections of interior decor can assist in relaxing patients by providing a non-intimidating, welcoming atmosphere.

Some colours and patterns can be disturbing to some patients and also interfere with teeth matching. Bold primary colours and green should be avoided in treatment areas for that reason.

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

Cleaning, infection control, fire safety, and maintaining a professionally presented environment must be considered while avoiding an institutional atmosphere.

Interior décor choices must also consider local cultural requirements.

3.6 SPACE STANDARDS AND COMPONENTS

3.6.1 Human Engineering

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

As the requirements of Work Health and Safety (WHS) and antidiscrimination legislation will apply, this section needs to be read in conjunction with AusHFG Part C Section 4 Human Engineering.

Issues to be considered in Oral Health Units include:

- electric dental chairs that can be operated to adjust for height and position;
- access to hoists for patient lifting; and
- the use of a larger dental surgery for those with special needs, such as those in wheelchairs or bariatric patients. These special needs will impact on chair types and the weight capacity of dental chairs. This larger surgery will be located so that access is easy and direct from the waiting room.

3.6.2 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.

Configuration of dental surgeries is important so staff work within easy reach of all instruments and equipment used in patient care.

For more details regarding ergonomic design and accessibility refer to Part C: Design for Access, Mobility, Safety and Security.

3.6.3 Building Elements

Building elements include walls, floors, ceilings, doors, windows and corridors.

Doorways must be sufficiently wide and high to permit the manoeuvring of wheelchairs, trolleys and equipment without risk of damage or manual handling risks. The larger dental surgery will accommodate entry by a bariatric wheelchair.

For more information and guidance refer to Part C: Design for Access, Mobility, Safety and Security.

3.7 SAFETY AND SECURITY

3.7.1 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 WHS issues associated with Oral Health Units that include:

- staff leaning over reclined patients to provide treatment;
- aerosol contamination;
- working with infectious materials;
- working with medical gases and hazardous chemicals in laboratories;
- heat and noise associated with sterilizing procedures and in laboratories;
- manual handling;
- potential for patient aggression and violence; and
- 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 unit design. For further information refer to AusHFG Part C.

3.7.2 Security

Issues to be considered in Oral Health Units include:

- barrier requirement for controlled access between waiting areas and clinical and administrative areas;
- controlled after-hours access should extended hours services be provided;
- security of reception areas, patient records and cash storage; and
- the safety of staff and property.

3.8 FINISHES

3.8.1 General

Finishes in this context refer to walls, floors, windows and ceilings.

The use of smooth, easily cleaned surfaces is required. Avoid joined laminated and textured surfaces on bench tops and walls. Floor vinyl to be covered from floor to walls and joinery.

Refer to AusHFG Part C and the relevant AusHFG Standard Components.

3.9 FIXTURES, FITTINGS & EQUIPMENT

3.9.1 Definition

The Room Data and Room Layout Sheets in the Australasian Health Facility Guidelines contain standard rooms as described in this HPU. Consider early equipment selection so that services / joinery can accommodate requirements.

Medical equipment used in Oral Health Units should be consistent with Australian Standards where available.

For more detailed information refer to the Room Data Sheets (RDS) and Room Layout Sheets (RLS), and to AusHFG Part C.

3.10 BUILDING SERVICE REQUIREMENTS

3.10.1 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.

3.10.2 Information, Communications and Technology

Planning of ICT systems to support clinical and operational activities is an essential component of any facility design. Systems to consider include:

- patient management system;
- 'chair-side' computing to support electronic oral health records and digital imaging;
- telecommunications;
- other technology, such as digital radiography, telemedicine and instrument tracking and inventory management systems; and
- telehealth services using fixed or mobile units.

The unit layout must include appropriate data cabling and connection lines to support internal and external networks and a server room will / may be required.

Cabling for patient management systems and telecommunications should be available in all dental surgeries and in administration and teaching areas.

In addition, access may be required to support:

- a building maintenance system;
- 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; and
- nurse / emergency call systems.

3.10.3 Radiation Screening

All medical imaging equipment and rooms where x-rays are taken must meet the radiation safety requirements of state and local authorities.

Radiation shielding, including requirements for wall shielding, must comply with ARPANSA Radiation Protection Series No. 14 Code of Practice for Radiation Protection in the Medical Applications of Ionizing Radiation (2008).

3.10.4 Air-conditioning, Ventilation and Colling

Air-conditioning is required in all areas during standard operating hours. Capacity to override air-conditioning to provide emergency service in either one surgery or the total unit after hours will also be needed. Staff working in individual dental surgeries should be able to adjust the temperature of each room to maintain the comfort of practitioners and patients.

Air conditioning requirements of treatment rooms will vary according to the type of treatment being offered, the location, and the construction material of the room.

If a Major Dental 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. High quality exhaust / extraction system is required for the burn-out oven.

Provision also needs to be made for exhaust from the steriliser in the Instrument Processing Room. Refer to relevant jurisdictional guidelines regarding building and engineering services for health facilities.

3.10.5 Water

Potable water is required for dental units and may need to be filtered for particulate matter depending on local requirements. Metering of water to clinical area is required for waste management purposes.

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

Dental reprocessing areas will require access to reverse osmosis or demineralised water.

Equipment must comply with technical regulations in each jurisdiction to ensure that cross contamination is eliminated.

3.10.6 Gases

All surgeries will require compressed air and dental suction. Services should ideally be piped if sufficient volumes are used but may be provided via portable cylinders in small units.

Depending on the types of procedures provided, oxygen, medical air, nitrous oxide and scavenge may also be required in a select number of rooms and laboratory areas.

Compressed air will be needed in the dental reprocessing areas.

Access to compressed air and a fume hood will also be required in major dental laboratories.

3.10.7 Dental Suction

Excess dental material / matter, water and saliva 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 chair-side unit or in the Dental Plant Room. The suction containers from the chair-side 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.

3.10.8 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 hydraulics may 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 placed in a covered (removable) services trench, or consideration given to running services through ceiling and wall spaces where possible.

The distance between the plant room and Oral Health Unit, must not exceed the equipment manufacturer's recommendations, including vertical distances.

Consultation will be required with bio-medical technicians and engineers regarding the type, size, location and service requirements of the dental plant equipment to achieve maximum efficiencies. Suction unit efficiencies are assisted by gravity therefore they are preferably not located higher than the level of the dental chairs.

Refer to Section 4.2.5 for further design information.

04 COMPONENTS OF THE UNIT

4.1 STANDARD COMPONENTS

Rooms / spaces are defined as:

- standard components (SC) which refer to rooms / spaces for which room data sheets, room layout sheets (drawings) and textual description have been developed;
- standard components – derived rooms are rooms, based on a SC but they vary in size. In these instances, the standard component will form the broad room ‘brief’ and room size and contents will be scaled to meet the service requirement;
- non-standard components which are unique rooms that are usually service-specific and not common.

The standard component types are listed in the attached Schedule of Accommodation.

The current Standard Components can be found at:

<https://www.healthfacilityguidelines.com.au/standard-components>.

4.2 NON-STANDARD COMPONENTS

Non-standard components are unit-specific and provided in accordance with specific operational policies and service demand. The non-standard components for Oral Health Units are detailed below.

4.2.1 Dental Surgery – Large

Description and Function

A larger surgery to accommodate patients with a disability, wheelchair bound patients, bariatric patients, and those on a patient trolley.

Design requirements are consistent with the Standard Components for a 14m² Dental Surgery, with the exception of additional clearance for access by trolleys and bariatric sized wheelchairs.

Location and Relationships

This room should be located so that the entry is a direct run from the entry to the Treatment Area. This will avoid manoeuvring of wheelchairs and trolleys through corridors.

Considerations

There should be sufficient space beside the dental chair to accommodate a patient trolley or wheelchair. Consideration should be given to the use of a “knee-break” chair in a room such as this to make the transfer of the patient from a wheelchair easier.

A one and a half leaf door will be required to accommodate patient trolleys and bariatric wheelchairs.

4.2.2 Dental Clean Up Room

Description and Function

The dental clean up room is where dirty instruments are received and washed using manual methods, mechanical instrument washers / disinfectors and / or ultrasonic cleaners prior to sterilisation.

Once these instruments are decontaminated, they are passed through to the dental reprocessing area where they are packed and sterilised.

Clinical waste may be stored in this location.

For off-site reprocessing models, the dental clean up room will be used to store dirty instruments awaiting collection and to accommodate clinical waste. Under this arrangement, any visible debris is removed from the instruments at the point of care prior to transferring them into a transport container before being sent for reprocessing. Some remote services may need to provide a greater level of decontamination prior to transferring the instruments for reprocessing.

Location and Relationships

Depending on local requirements, this area may be separated from the reprocessing area with a pass through connection or it may be provided as a combined area with one way dirty to clean flows including separated points of entry and exit.

The clean up and reprocessing rooms should be located to avoid high volumes of patient traffic given there are frequently trolleys of instruments entering and exiting the room.

Considerations

Key fit out requirements of the dental clean up room include:

- stainless steel sink and benches;
- hand wash basin type B;
- ultrasonic cleaner;
- dental instrument washer - underbench washer disinfectant or floor mounted batch washer with appropriate water supply and drainage systems, as well as space underbench for chemical supplies to the unit. The washers will require access to reverse osmosis or demineralised water;
- dental handpiece cleaner;
- access to compressed air; and
- ability to enclose the room given the noise generated.

4.2.3 Dental Reprocessing

Description and Function

The dental reprocessing area will be used to pack and sterilise dental instruments.

Location and Relationships

Refer to note above re: collocation with the dental clean up room.

Considerations

Key fit out requirements of the dental reprocessing room include:

- stainless steel bench;
- magnifying light;
- heat sealer;
- storage for consumables;
- handwash basin type B;
- autoclave/s with reverse osmosis or demineralising unit, appropriate plumbing, drainage and power (the room design will also need to consider which way the autoclave doors open);
- benchtop steriliser label printer; and
- trolleys.

4.2.4 Major Dental Laboratory

Description and Function

An area for adjusting and polishing dentures and for the construction of prosthetic appliances and other items related to dental treatment (unless outsourced).

This room is not routinely provided in an Oral Health Unit as the manufacture of dentures etc. is usually centralised. Instead, a Minor Dental Laboratory is usually provided (refer to Section 2.2.6).

Location and Relationships

The Major 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

- 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.
- Non-slip vinyl flooring.
- Mechanical debris / dust extraction (external exhausting) through hoods in polishing bays and at desk-tops is required.

4.2.5 Plant Room

Description and Function

Dedicated equipment selected to support the size and purpose of the mechanical functions of the Oral Health Unit.

Location and Relationships

This plant cannot be located remotely from the dental unit as proximity to dental chairs is integral to suction efficiency.

The plant must not be located above the level of the dental chairs to allow gravity assisted flow of liquids.

External access is required and an external wall location is preferred due to noise levels. The equipment located in the plant, including suction power unit can be noisy and this must not impact on staff and / or patient treatment areas.

Considerations

The plant room should be a separate room and not shared due to the biohazard risk associated with contaminated aerosols.

It must be air conditioned and dust free as much as possible.

Drainage needs to be available in the plant room for waste water disposal from the suction unit.

Suction exhaust ventilation needs to be provided to allow suction exhaust to be directed outside the building. Pipework for the suction should provide a straight run from the chair to the plant room and with a constant slope down to the plant room. Dips and bends in the pipework must be minimised as they can trap fluids and debris and reduce performance of the suction capacity.

The air compressor supply pipe to the dental chair needs to be ½ inch copper (standard dental recommended pipework).

Equipment selection will determine the size of the plant.

Consider the location and acoustic treatment of this room to minimise noise levels.

4.2.6 Treatment Room

Description and Function

In cases where there is low utilisation of a dental chair, health services may instead provide a treatment room that is sized to accommodate a dental chair with a fixed light but is large enough to be used for other patient services (e.g. wound care, podiatry, ophthalmology) when a supine position is required. A size of 16m² is recommended.

The use of portable equipment such as the dental cart and dental suction is recommended so it can be stored when not in use. Lockable storage, either fixed or portable, will be required for other dental materials.

Location and Relationships

Ready access to reception and waiting areas. Ready access to Clean-up Room or Dirty Utility to wash and store used instruments.

Considerations

The dental chair must still be positioned with enough circulation to allow the safe and effective delivery of oral health services.

An assessment should be made as to whether a mobile dental x-ray unit could be utilised in place of a fixed unit should a fixed solution impede access for alternate patient care. This assessment will need to consider Environmental Protection Agency (EPA) restrictions on use of portable x-ray.

A dental chair with knee-break should be considered as it provides a more flexible solution to deliver other patient care.

Location of the wall mounted x-ray unit needs to allow for reach of the x-ray arm to enable x-rays of both sides of the patient's mouth.

05 APPENDICES

5.1 SCHEDULE OF ACCOMMODATION

A schedule of accommodation is shown below and lists generic spaces for this HPU.

Quantities and sizes of spaces will need to be determined in response to the service needs of each unit on a case-by-case basis.

Large facilities with significant teaching responsibilities will need to adjust the area allocations to account for the lower turnover of patients associated with student placements.

The recommended circulation rates for Oral Health Units, as described in AusHFG Part C, are included. The higher circulation rates are associated with services requiring inpatient access.

The 'Room / Space' column describes each room or space within the unit. Some rooms are identified as 'Standard Components' (SC) or as having a corresponding room which can be derived from a SC. These rooms are described as 'Standard Components –Derived' (SC-D). The 'SD / SD-C' column identifies these rooms and relevant room codes and names are provided.

All other rooms are non-standard and will need to be briefed using relevant functional and operational information provided in this HPU.

In some cases, Room / Spaces are described as 'Optional' or 'o'. Inclusion of this Room / Space will be dependent on a range of factors such as operational policies or clinical services planning.

ENTRY / RECEPTION / WAITING

AusHFG Room	Room / Space	SC / SC-D	2 Chairs		4 Chairs		12 Chairs		Remarks
			Qty	m2	Qty	m2	Qty	m2	
AIRLE-10	Airlock - Entry	Yes	1	10 (o)	1	10 (o)	1	10 (o)	Optional depending on location and scale of development. Only required for large, stand alone services.
RECL-10	Reception / Clerical	Yes	1	9	1	9	1	12	1 and 2 staff.
	Bay - Storage	Yes	1	1	1	1	1	2	Facilities should be planned to support electronic records. Some paper based storage will be required.
WAIT-10	Waiting	Yes	1	8	1	16	1	40	Based on 3 people per dental chair, 1.2m2 per seat and 1.5m2 per wheelchair space. This may be reduced for units with significant teaching / student activity given lower turnover of patients. ICT infrastructure should support the installation or future provision of electronic queueing systems.
PLAP-10	Play Area - Paediatrics	Yes		Incl. in Waiting	1	8 (o)	1	10 (o)	Optional
BWC	Bay - Wheelchair Park	Yes		Share	1	1	1	2	
WCPU-3	Toilet - Public	Yes		Share	1	3 (o)	1	3 (o)	Optional as visitor amenities may be shared with other services
WCAC	Toilet - Accessible	Yes		Share		Share	1	6 (o)	Optional as visitor amenities may be shared with other services.
	Discounted Circulation %			25%		25%		25%	

TREATMENT AREAS

AusHFG Room Code	Room / Space	SC / SC-D	2 Chairs		4 Chairs		12 Chairs		Remarks
			Qty	m2	Qty	m2	Qty	m2	
DENSR-1 DENSR-2	Dental Surgery	Yes	1	14.5	3	14.5	11	14.5	
	Dental Surgery, Large	Yes	1	16	1	16	1	16	Additional area for access by patients on a trolley/bed or bariatric sized wheelchairs. 18m2 is required should a wheelchair lifter be needed.
CONS	Consult Room	Yes					1	12 (o)	Optional. For oral health education and non-complex care. Will require a patient chair rather than examination couch.
BHW	Bay - Height/Weight	Yes	1	1	1	1	1	1	
BMEQ-4	Bay - Mobile Equipment	Yes	1	2	1	2	2	2	For central storage of trollies and X-Ray scanner. Include bench with power and data.
BRES	Bay - Resuscitation	Yes	Share		1	1.5 (o)	1	1.5 (o)	Optional - dependent on Unit policy.
	Discounted Circulation %			25%		32%		32-35%	

INSTRUMENT REPROCESSING

Project teams will need to confirm the approach to instrument reprocessing and allocate appropriate areas to support either on-site or off-site reprocessing.

Option 1 - On Site Reprocessing

Instruments are reprocessed within the unit. The space allocated, and the equipment selected will depend on the number of dental surgeries being serviced (including any instrumentation received from outreach services).

AusHFG Room Code	Room / Space	SC / SC-D	2 Chairs		4 Chairs		12 Chairs		Remarks
			Qty	m2	Qty	m2	Qty	m2	
	Dental Clean Up Room			8		12		16	Includes instrument washer / disinfectors, ultrasonic cleaner, and preparation areas. This may be separated from the reprocessing area with a pass through connection or may be provided as a combined area with one way dirty to clean flows subject to infection control requirements. May include clinical waste.
	Dental Reprocessing			6		9		14	Includes sterilisers / autoclaves and cooling area. May be separated from clean up area with a pass through connection or a combined area with one way flow from dirty to clean.
	Store - Sterile Instruments			4		6		12	Storage solution to consider dental requirements given small sterile pack sizing requiring more (shallow depth) baskets.
	Discounted Circulation %			25%		25%		25%	

Option 2 – Off-Site Reprocessing

The common approach for units based on a hospital site is to send used instruments and equipment to the local Sterile Supply Unit or off-site to another networked health service.

AusHFG Room Code	Room / Space	SC / SC-D	2 Chairs		4 Chairs		12 Chairs		Remarks
			Qty	m2	Qty	m2	Qty	m2	
	Dental Clean Up / Dirty Collection			6		10		14	Dirty instruments awaiting collection for SSD / off-site reprocessing. Remote areas may need to provide a greater level of decontamination prior to transfer for reprocessing. May include clinical waste.
	Store - Sterile Instruments			6		8		16	Storage of returned sterile instruments including trolley receiving area . Area requirement will depend on volume of instrumentation required to support frequency of reprocessing service. Storage solution to consider dental requirements given small sterile pack sizing requiring more (shallow depth) baskets.
	Discounted Circulation %			25%		25%		25%	

SUPPORT AREAS

AusHFG Room Code	Room / Space	SC / SC-D	2 Chairs		4 Chairs		12 Chairs		Remarks
			Qty	m2	Qty	m2	Qty	m2	
	OPG Room				1	12 (o)	1	12 (o)	Optional, may be combined with CBCT. Includes console/write up area.
DENW	Minor Dental Laboratory	Yes	1	8	1	12	1	12	This is not intended as a major laboratory which would be used for the manufacture of prosthetics. May include storage of dental molds if retained on site. Details of requirements for a Major Dental Laboratory have been included in Non-Standard Components.
DISP-8	Disposal Room	Yes	Share		1	3 (o)	1	6 (o)	Optional, only required in large hospital based services. Not typically required in community health services. Includes waste bins, dirty gowns etc. May be combined with clean up area for smaller units or provided as a 'disposal bay'.
STGN-9	Store - General		1	6	1	9	1	16	Includes clean staff gowns, dental consumables and locked store for medications. Refer to local policies re medication storage requirements.
CLRM-5	Cleaners' Room	Yes	Share		1	5 (o)	1	5 (o)	Optional - may be shared with other services.
	Dental Plant Room		1	9	1	9	1	16	After-hours access
	Discounted Circulation %			25%		32%		32-35%	

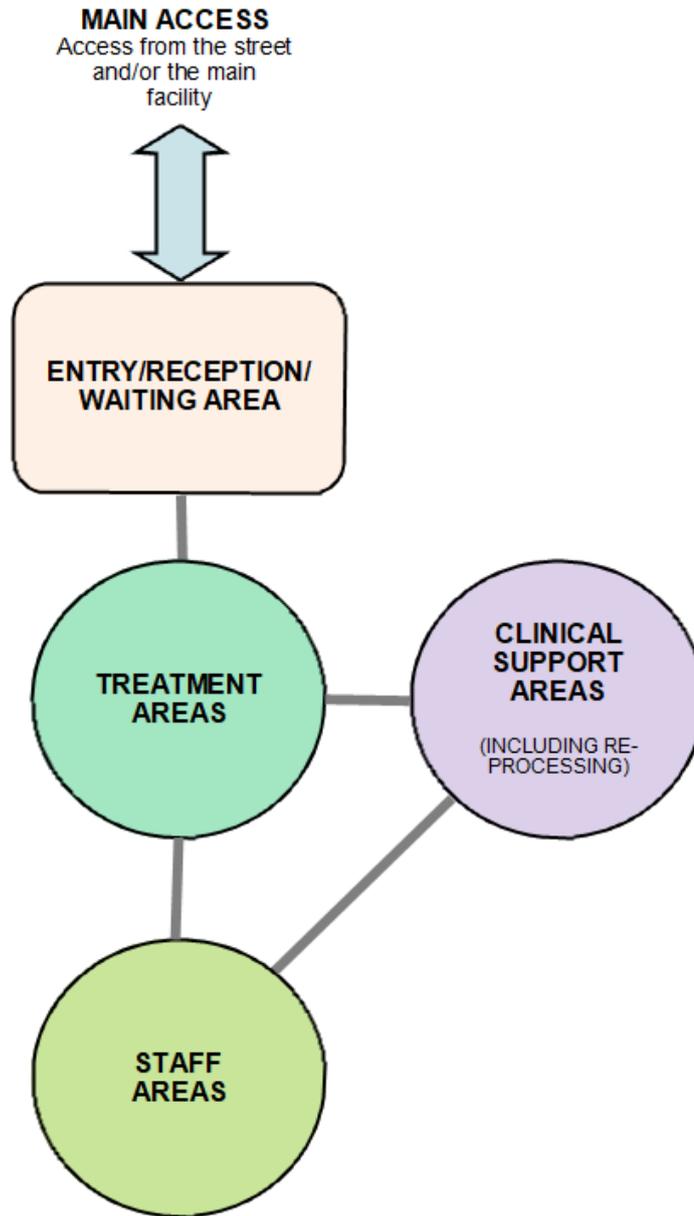
STAFF AREAS

Staff work areas and amenities will be allocated in line with local jurisdictional policies.

AusHFG Room Code	Room / Space	SC / SC-D	2 Chairs		4 Chairs		12 Chairs		Remarks
			Qty	m2	Qty	m2	Qty	m2	
OFF-S9	Office - Single Person	Yes		9		9		9	Number and area allocation will depend on staff profile and local jurisdictional policies.
	Office - Workstation			4.4		4.4		4.4	Number and area allocation will depend on staff profile and local jurisdictional policies.
STPS-8	Store - Photocopier / Stationery	Yes	Share		1	4	1	8	Includes multifunction device.
MEET-L-20	Meeting Room	Yes			1	15	1	24	Suitable for videoconferencing unless provided nearby.
SRM-15	Staff Room	Yes			1	12	1	20	
BBEV-OP	Bay - Beverage, Open Plan	Yes	1	3	0	0	0	0	
PROP-2	Property Bay - Staff	Yes	1	1	1	2	1	6	
SHST	Shower - Staff	Yes	Share		1	3	1	3	Can be shared with other services.
WCST	Toilet - Staff	Yes	1	3	1	3	3	3	Number dependent on staff numbers. Access to an accessible toilet is also required.
	Discounted Circulation %			25%		25%		25%	

5.2 FUNCTIONAL RELATIONSHIPS / DIAGRAMS

The following diagram sets out the functional relationships between zones in an Oral Health Unit.



5.3 REFERENCES

- AHIA, 2016, AusHFG Part B: Health Facility Briefing and Planning, Australasian Health Facility Guidelines, Australasian Health Infrastructure Alliance (AHIA), Sydney, NSW
- AHIA, 2018, AusHFG Part C: Design for Access, Mobility, Safety and Security, Australasian Health Facility Guidelines, Australasian Health Infrastructure Alliance (AHIA), Sydney, NSW
- AHIA, 2016, AusHFG Part D: Infection Prevention and Control, Australasian Health Facility Guidelines, Australasian Health Infrastructure Alliance (AHIA), Sydney, NSW
- ARPANSA Radiation Protection Series No. 14 Code of Practice for Radiation Protection in the Medical Applications of Ionizing Radiation (2008)
- Australian Dental Association, 2015, ADA Guidelines for Infection Control (Third Edition), Sydney
- Australian Dental Association (2007) Policy Statement 6.11 on Amalgam Waste Management – Best Practice Guide
- International Organisation for Standardization (2008) Dentistry – Amalgam Separators, ISO 11143:2008
- National Health & Medical Research Council (NHMRC), 1999, 'Dental Amalgam and Mercury in Dentistry' Report of an NHMRC Working Party
- NHMRC, 2019, Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019), Australian Government, Canberra
- Standards Australia, 2010, AS 1428 (Set) 2010 Design for access and mobility Set (SAI Global), Standards Australia, Sydney, NSW
- Standards Australia, 2006, AS/NZS 4815:2006 Office-based health care facilities - Reprocessing of reusable medical and surgical instruments and equipment, and maintenance of the associated environment
- Standards Australia / Standards New Zealand, 2014, AS/NZS 4187:2014 Reprocessing of reusable medical devices in health service organisations

5.4 FURTHER READING

- AS/NZS 2982.1:2010 Laboratory Design and Construction
- AS/NZS 2243.1:2005 Safety in Laboratories Part 1: Planning and Operational aspects
- AS/NZS 2243.10:2004 Safety in Laboratories Part 10: Storage of chemicals
- NSW Health, 2013 PD2013_024 Oral Health: Cleaning, Disinfecting and Sterilizing
- NSW Health, 2020 GL2020_015 Dental Amalgam Clinical Use and Disposal