

Part B – Health Facility Briefing & Design

205 Mobile Healthcare Unit



*i*HFG

International Health Facility Guidelines

Version 6.0, 17 January 2023

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205 Mobile Healthcare Unit

1 Introduction

A Mobile Healthcare Unit (MHU) is a specially designed mobile, transportable or re-locatable structure or vehicle which serves to provide dynamic healthcare options and services in response to communities immediate or longer-term healthcare demands.

Mobile Units are usually pre-manufactured and equipped with services and specialist equipment which are designed to be easily transported for the desired location of operation. The aim is to provide rapid mobility and to speed up services where and when required. This makes MHUs increasingly appealing as an innovative delivery method for certain aspects of healthcare, especially in remote areas or special events.

The MHU may provide an array of services which meet the healthcare demands of the community. Specific health services may include:

- Dental Healthcare
- Immunisation
- Asthma Screening
- Cancer Screening (Mammography, Colorectal, Prostate and Cervical)
- Obesity Management and Education
- Crisis Intervention
- Medical Imaging
- Primary Care
- First Aid

2 Functional & Planning Consideration

Operational Models

The type of service provision includes the context in which it is deployed and dictate by operational facility of the MHU.

Mobile Units may be transient, providing one off short-term services as they move from one location to the next. Alternatively, they may be utilised for longer periods of time in one location.

Often MHU's are used for the purpose of transitioning services. MHU's may complement services being provided by a hospital facility as part of an outreach program. This is considered ideal practice as it allows for referral and follow up for patients once the MHU leaves a community.

The types of services provided by a Mobile Unit may depend on the level of services being provided at other primary healthcare facilities and the service demands of the population being served. Mobile Units may be designed and operated to provide one service or they may be designed to be integrated as general multi-purpose facilities.

Some examples of Mobile Units, often implemented are:

- Mobile Vaccination/ Dispensary Unit
- Mobile Imaging Unit
- Mobile Breast Screening Unit
- Mobile Health Promotion/ Prevention Unit
- Mobile Units serving as Primary Care facilities
- Mobile Units parked to serve special open air entertainment events

In order implement MHU's applicants must also verify with the relevant authorities for the use of Mobile Units, such as:

- Police
- Municipality

- Licensing Departments
- Vehicle Registration

Operational Policies

Operational policies will largely depend on the related departments or the main healthcare facility that mobile unit is affiliated with. It is important that staff who are involved have input into its operations.

Hours of Operation

From the angle of healthcare, there are no restrictions on the hours of operation. However, typically MHU's operate during the working hours and days. In order to verify the permitted hours of operation, the relevant government authorities should be consulted.

3 Unit Planning Models

The Service Plan of a facility determines the specific planning requirements of a MHU that may be needed to support the services available.

Planning models applicable to the MHU include:

- A standalone Unit which does not need to utilise the services of a larger facility
- An integrated Unit which is located near a larger permanent facility in which the Unit shares support services
- A semi-permanent Unit which is utilised for an extended period of time as part of a larger MHU facility i.e. multiple MHUs collocated to form a larger facility
- Fully mobile facility which may be relatively self-sufficient

Models of Care

Models of Care outline the principles and directions that apply to the provision of healthcare services to deliver the right care, in the right place, at the right time by the right team. In particular, they focus on the systemic structures and strategies to improve service delivery.

All Models of Care must suit the specific range of services provided by the MHU.

4 Functional Relationships

A Functional Relationship can be defined as the correlation between various areas of activity which work together closely to promote the delivery of services that are efficient in terms of management, cost and human resources.

External Relationships

Location and Access

Access to and from the MHU should be given careful consideration so as to take into account staff and patients. The location of the MHU should preferably be in close proximity to key community transport locations, residential areas and significant community infrastructure such as existing shopping centres. Proper consideration needs to be given with respect to turning radius, manoeuvrability of the MHU, parking, delivery and service access.

The MHU must be located on a solid and levelled surface to prevent instability of the structure when in use. Access to the Unit should be located where it does not interfere with emergency exits of an adjacent building unless the exits are specifically permitted to serve both buildings.

For mobile MRI units, gauss fields of various strengths generated by the equipment shall be considered; both for the environmental and interference effects. Radio-frequency interference shall be considered when planning a site. MRI mobile units shall consider providing adequate access for cryogen-servicing of the magnet. Workstations with specific software for doctors and technicians shall also be considered to suit the required operational applications.

The location of the Mobile Unit should comply with relevant local environmental laws and regulations.

Parking and Drop-Off Zones

Sites shall provide hazard-free drop-off zones and adequate parking for patients. Wheelchair and stretcher access should be provided as far as possible, given the limitations of mobile vehicles.

Functional Areas

Entrance/ Reception

Protection from the elements during transport to and from the mobile unit shall be provided. This can be achieved by providing permanent or temporary patient/ staff walkways. The entrance to the Unit is to be well-lit and well sign-posted.

Waiting Areas

The facility shall provide waiting space for patients as close to the MHU Entrance/ Reception Area as possible. The patient/ staff toilets should be accessible in close proximity to the Unit if not provided internally. If necessary due to high volumes of patients and area demands, both the Reception and Waiting Areas may be set up immediately outside the MHU in temporary structures.

Clinical Areas

If the MHU is intended to support the functions of a permanent facility, the clinical areas should have easy access to the relevant departments and other critical resources required to provide the services.

The internal planning of the unit should provide patient and staff direct access to services located in the Mobile Unit. Patient access should adhere to disability, privacy and safety guidelines as far as possible. However, given the limitations of a narrow MHU vehicle, full compliance may not be possible or practical.

Adequate hand wash basins should be provided according to infection control guidelines.

5 Design Considerations

Environmental Considerations

Mobile units should adhere to relevant local environment laws and regulations as may apply. Natural light may be desirable in Patient Areas depending on the type of services being provided. Exhaust from mobile units should be directed away from Patient Areas.

Space Standards and Components

Stairs and landings to and from mobile units should comply with local construction codes. Ramps are required for disabled access and should comply with Disability guidelines. Depending on the planning of the Unit, handrails should be provided for patient safety and comfort.

The size of the Unit will determine the number of treatment spaces and consult rooms. All Patient Areas should consider patient and staff safety including bed/ chair clearances and space for resuscitation equipment.

Construction Standards

The design and construction of MHU's will be subject to approval and testing by the relevant authorities. The MHU will adhere to all patient/ staff safety regulations relating to fire safety, occupation health and safety and radiation protection.

Occupational Health & Safety (OH&S)

The MHU must carefully consider the risks that confined spaces and treatment areas may pose to patients and staff. The MHU shall be designed to reduce the risk of avoidable injury. Key areas which may pose as potential risks include shelving and storage units, door openings and entrance stairs.

Safety and Security

Due to the nature of the MHU, size constraints and potential high volumes of patients every aspect of the Unit design with regard to finishes, surfaces and fittings must be assessed to determine the potential for accidents or hazards to both patients and staff.

In particular the Unit design should consider:

- Slippery or wet floors
- Protrusions or sharp edges
- Stability and height of equipment or fittings
- Choice of floor covering

Security of the MHU must be paramount in the design process and the nature of the facility means it may be vulnerable to theft and damage. Security measures which should be considered include CCTV systems installed to cover main entrances and supply stores, security doors and windows in conjunction with appropriate locking systems and the use of impact resistant safety glass.

Fire Protection

Manual fire extinguishers shall be provided in accordance Life Safety Codes. Fire detection, alarm and communications capabilities shall be installed and connected to facility central alarm system on all new Units in accordance with relevant Life Safety Codes and local regulations.

Finishes

Interior finish materials should be fire retardant or non-combustible. Colours can be used to enhance patient experience. Fixtures and fittings that will be used for support and storage including grab rails, handrails and shelving units should be able to support the weight of a heavy person/items, including the concentrated load of a falling person.

Refer to Part C – Access, Mobility, OH&S of these guidelines for restrictions on use of specific colours for specific services.

Unit Services Requirements

This section identifies unit specific services briefing requirements only and must be read in conjunction with Part E - Engineering Services for the detailed parameters and standards applicable.

Electrical & Heating Ventilation Air Conditioning (HVAC)

Main switchboards and panels should be located in an accessible location for maintenance but away from high traffic areas. They should be located in dry ventilated areas, free from explosive flames and corrosive elements. Receptacles should be waterproof if they are located externally and should be sufficient for various tasks to be performed. Air-conditioning, heating, ventilating, ductwork, shall be installed in accordance with relevant codes, health standards and regulations.

The air conditioning and voltage regulation shall be provided by the MHU manufacturer.

Information and Communication Technology

In larger and more sophisticated Units, Information and Technology Systems may be utilised to improve efficiency but also as part of the referral process to larger regional facilities. In this instance MHU design should take into consideration the following:

- Hand-held tablets and other smart devices
- Data entry including scripts and investigation requests
- Data and communication outlets and servers
- Access of Wi-Fi
- Electronic Health Records (EHR) which may form part of the Health Information System (HIS)

Locations for terminating telecommunications and information system devices shall be located within easy access to authorised personnel.

A Duress Alarm system may be considered in the MHU design process to enhance the safety of staff.

Infection Control

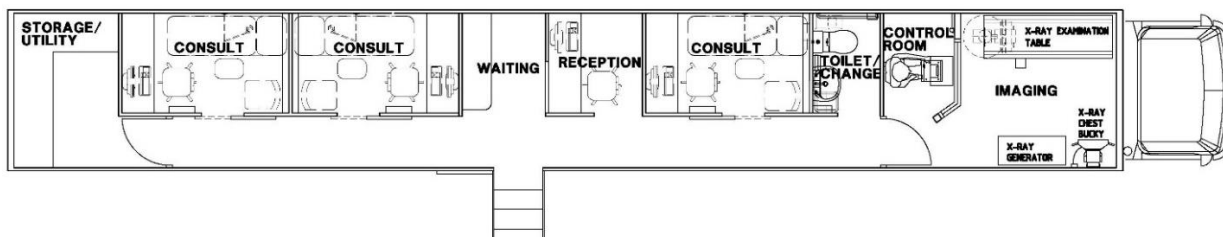
Standard precautions should be implemented in the MHU to prevent cross infection between potentially infectious patients. Handwashing facilities will be required in Treatment Areas and the

entry/ exit point of the facility. Handwashing facilities should be a combination of handbasins and antiseptic hand rubs.

For further details refer to Part D - Infection Control in these Guidelines.

6 Standard Components of the Unit

The standard components of the Unit will be dependent on the type of mobile services to be provided.



MOBILE CLINIC

The above example demonstrates inclusions in a MHU providing Consultation and General X-ray facilities with a small Reception and Waiting area.

7 Schedule of Accommodation – Mobile Unit

The Schedule of Accommodation for Mobile Unit will be determined by the type of mobile services to be provided. In general, the areas will include:

- Entrance, Reception & Waiting
- Clinical Areas which may include Procedure Room, Treatment Room, Imaging Room, Handwashing/ Scrub Stations, Patient Bays and Recovery Area
- Support Areas which may include Staff Station, Clean Utility/ Drugs Store, Sterile Store, Equipment/ General Store, Disposal Room, Change Rooms (Patient & Staff), Toilets (Patient & Staff) and Staff Areas

Each MHU is to be considered as a special case and approved on its merits by the MOH.

8 Further Reading

In addition to Sections referenced in this FPU, i.e. Part C- Access, Mobility, OH&S and Part D - Infection Control, and Part E - Engineering Services, readers may find the following helpful:

- International Health Facility Guideline (iHFG), Part B - Health Facility Briefing & Design, refer to website: www.healthdesign.com.au/iHFG
- The Facility Guidelines Institute (US), 2018 Edition. Guidelines for Design and Construction of Outpatient Facilities refer to website www.fgiguilines.org