حكومة دبي
GOVERNMENT OF DUBAI

هيئة الصحة بدبي
DUBAI HEALTH AUTHORITY

DHA Health Facility Guidelines 2019

Part B – Health Facility Briefing & Design

310 – Mobile Healthcare Unit

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Executive Summary

This Functional Planning Unit (FPU) covers the requirements of a Mobile Healthcare Unit (MHU). Mobile Healthcare Units, also known as Mobile Healthcare Clinics are commonly customised vehicles which are designed to reduce traditional barriers to healthcare access such as geographical isolation, transportation issues, time constraints and financial cost.

A MHU may be described as any mobile, transportable or re-locatable structure intended to provide medical services to a community on a semi-permanent or temporary basis. Mobile Units are usually pre-manufactured and equipped with resources for transportation to the desired location for operation.

Mobile Healthcare Units have the ability to provide community tailored healthcare to various populations dependent on their healthcare needs and demands. The primary purpose of MHUs is to improve whole population's access to healthcare and reduce healthcare inequalities and outcomes which may arise from geographical, socio economic or cultural barriers.

The size of the MHU may vary dependent on the service plan that considers the population served, and the demand for services, as well as design constraints. Design Considerations address a range of important issues including OH&S, Safety and Security, Finishes, Building Services Requirements and Infection Control.

Components of the MHU and the Schedule of Accommodation are dependent on the services to be provided.

Further reading material is suggested at the end of this FPU but none are mandatory.

Users who wish to propose minor deviations from these guidelines should use the **Non-Compliance Report** (**Appendix 4 in Part A**) to briefly describe and record their reasoning based on models of care and unique circumstances.

The details of this FPU follow overleaf.

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310. Mobile Healthcare Unit

1 Introduction

A Mobile Health Care Unit is a specially designed mobile, transportable or re-locatable structure 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's which are able to be easily transported to the desired location for operation. It is this ease of mobility and the speed in which services can be offered that makes MHUs and increasingly appealing innovative delivery of healthcare.

The Mobile Health Unit may provide an array of services which meet the healthcare demands of the community and population they are utilised. Specific health services may include:

- Dental Health Care
- Immunisations
- Asthma Screening
- Cancer Screening (Mammography, Colorectal, Prostate and Cervical)
- Obesity Management and Education
- Crisis Intervention
- A variety of outpatient services
  - Mobile Pharmacy
  - All Medical Imaging modalities

2 Functional and Planning Considerations

2.1 Operational Models

The type of service provision and the context in which it is deployed dictate operational hours of the MHU. Mobile Units may be transient, providing one off short-term services, as it moves from one location to the next, or they may be utilised for longer periods of time, commonly if being used for the purpose of transitioning services. Mobile Health Units may complement services already being provided by a hospital facility, 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 operate to provide one service, or they may be designed to be integrated, general facilities.

Some examples of Mobile Units are:

- Mobile Vaccination/ Dispensary Unit
- Mobile Imaging Unit
- Mobile Breast Screening Unit
- Mobile Health Promotion/ Prevention Unit
- Blood Donation Unit
- Mobile Optical

Verify with the relevant authorities for the use of parts of the City for the use of Mobile Units such as:

- Police

- Municipality
- RTA

2.2 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 services provided by the MHU, with multiple Models of Care being applicable and implemented at the one time.

Unit Planning Models

The Service Plan of a facility or zone 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 with which the Unit shares support services
- A semi- permanent Unit which is utilised for an extended period of time as part of a larger Mobile Healthcare facility i.e. multiple MHUs collocated to form a larger facility

3 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.

3.1 External Relationships

3.1.1 Location and Access

Access to and from the MHU for staff and patients should be given careful consideration. 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 hospitals, 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.

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

A permit from the Roads and Transport Authority (RDA) to park where larger than one space is required.

3.1.2 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.

3.2 Functional Zones

3.2.1 Entrance/ Reception

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

3.2.2 Waiting Areas

The facility shall provide waiting space for patients as close to the MHU Entrance/Reception Area as possible. The facility should ideally provide patient/staff toilets 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.

3.2.3 Clinical Areas

Clinical Areas should have easy access to the relevant departments and other critical resources required to provide the services. The internal planning of the MHU should provide patient and staff direct access to services located in the Mobile Unit. Patient access should follow disability, privacy and safety guidelines.

4 Design Considerations

4.1 Environmental Considerations

Mobile Units should adhere to relevant local environmental laws and regulations that may apply. Natural light may be desirable in-Patient Areas depending on the type of services being provided. Exhaust from MHUs should be directed away from Patient Areas.

4.2 Space Standards and Components

Stairs and landings to and from Mobile Units should comply with local construction codes. Ramps are required for handicapped 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 with consideration of bed/ chair clearances and space for resuscitation equipment.

4.2.1 Construction Standards

The design and construction of MHUs will be according to the applicable construction codes and subject to approval and testing by the relevant authority. The MHU will adhere to all patient/ staff safety regulations relating to fire safety, occupation health and safety and radiation protection.

4.3 OH&S

The MHU must be carefully consider the risks 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.

4.4 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.

4.4.1 Fire Protection

Manual fire extinguishers shall be provided in accordance Fire and 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 the UAE Fire & Life Safety Code.

4.5 Finishes

Interior finish materials should be fire retardant or non-combustible. 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.

4.6 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.

4.6.1 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
- Availability of Wi-Fi or 3G/ 4G
- Electronic Health Records (EHR) which may form part of the Health Information System

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

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

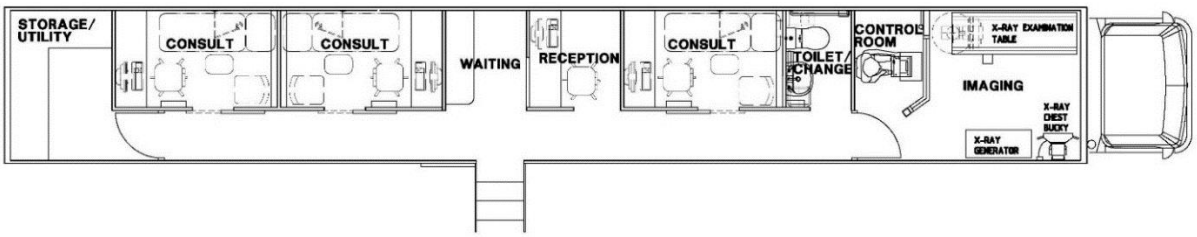
4.7 Infection Control

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.

5 Standard Components of the Unit

The components of the Unit are 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.

6 Schedule of Accommodation

The Schedule of Accommodation for a MHU is determined by the type of mobile services to be provided. In general, inclusions may consist of:

- 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

7 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
- Government of Dubai, Dubai Universal Design Code, 2017, refer to website: www.dha.gov.ae
- Government of Dubai, RTA, refer to website: https://www.rta.ae/wps/portal/rta/ae/home?lang=ar
- Ministry of Health – UAE, Unified Healthcare Professional Qualification Requirements, 2017, refer to website: https://www.haad.ae/haad/tabid/927/Default.aspx
- The Facility Guidelines Institute (US), 2018 Edition. Guidelines for Design and Construction of Outpatient Facilities refer to website: www.fgiguidelines.org