Observation Medicine Guidelines 2009

A Victorian Government initiative

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Observation Medicine Guidelines 2009

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Executive summary

Models of observation medicine were introduced into the Victorian health system in 2001–02. They continue to be expanded, with innovations tested to ensure this model of care meets the needs of the community and health system.

Observation medicine units deliver intensive short-term assessment, observation or therapy to selected emergency patients to optimise early treatment and discharge, and reduce length of hospital stay.

The development of observation medicine units was part of the Victorian Government's significant investment in the *Hospital demand management strategy* (HDMS). Since 2001–02, the HDMS has resulted in a range of initiatives to address demand pressures and improve access to emergency care. As well as increasing hospital capacity through emergency department (ED) upgrades, additional inpatient beds and construction of new hospitals, the HDMS has trialled new models of care that provide alternative service options for people who would otherwise be managed in traditional hospital inpatient beds or in the ED.

Mainstreaming best practice for new models of care, including observation medicine, is one of the ten priorities outlined in *Better faster emergency care*. Released in January 2007, *Better faster emergency care* is a five-year strategy to support continued reform of emergency care to meet community needs in the future. *Better faster emergency care* complements key Victorian Government health policy frameworks and promotes a 'whole-of-system approach' to addressing demand for emergency care. The strategy identifies ten key priority areas to improve access to emergency care in Victorian public hospitals and lists actions to be undertaken by the government. It focuses on the need for innovation to improve patient experiences, patient flow and outcomes for people accessing care in the ED.

These guidelines are to assist Victoria's health services establish and operate observation medicine units that deliver high quality care and meet expectations for service delivery. The guidelines outline planning, implementation and operational service parameters for observation medicine units and describe funding and service monitoring arrangements.

Introduction

In recent years, Victorian hospitals have implemented observation medicine as a model of care for specific groups of emergency patients. Models of observation medicine fall into two broad groups:

1. short stays for patients who require extended emergency care but not a multiday inpatient stay (that is, up to 24 hours of care)
2. assessment and planning for patients who require up to 48 hours of care by a specialty service (medical, paediatric, mental health) before inpatient, sub-acute or home-based care.

What are observation medicine units?

Observation medicine delivers intensive short-term assessment, observation or therapy to optimise the early treatment and discharge of selected emergency patients. The model is an alternative to extended stays in hospital EDs and/or the use of multiday inpatient beds for short-term care. The observation medicine unit is a ward-like setting usually located near an ED or specialty inpatient ward (for example medical, paediatric, psychiatric).

The purpose of observation medicine units is to:

- provide evidence-based, high-quality, intensive short-term observation and treatment
- reduce inappropriate admissions to inpatient beds and associated health care costs
- improve patient flow by providing timely assessments and treatment, thereby allowing patient discharge in the shortest, clinically appropriate time.

Depending on their exact role, observation medicine units are known locally as:

- short-stay (observation) units (SOU or SSU)[3-5]
- emergency medical units (EMU)[5, 6]
- clinical decision units[2, 7-9]
- medical assessment (and planning) units (MAU or MAPU)[6, 10, 11], medical short-stay units[2], short-term geriatric assessment units[12]
- chest pain evaluation units (CPEA or CPEU)[9, 13, 14]
- psychiatric assessment and planning units (PAPU) or psychiatric (observation) intensive care units[15]
- emergency department observation units (EOU)[3, 7]
- children's or paediatric observation (short stay) units.[2, 16-18]

Appendix 1 describes key types of observation medicine units in Victoria.

In Victoria, to be eligible for admission to an observation medicine unit, the patient must meet the Victorian Admitted Episodes Dataset (VAED) admission criteria as specified in the admission policy of the Department of Human Services (the department).[1]

What is the role of observation medicine in the health system?

Traditionally, patients in Victorian EDs who require assessment and/or treatment beyond an initial four or eight hour period either stayed in the ED or were admitted to a hospital inpatient ward for ongoing management. This may have contributed to problems of overcrowding in EDs, long waits for emergency care and increased length of hospital stay, and resulted in reduced access to inpatient beds, reduced quality of patient health outcomes and increased resource utilisation.

Since 2002, innovation supported by the *Hospital demand management strategy* (HDMS) has led to observation medicine units and associated models of care being tested and implemented in Victoria.[5]

Local and international experiences indicate observation medicine models of care can deliver many benefits to the Victorian health system.

Observation medicine can improve health outcomes by providing:

- early access to short-term specialist services (such as multidisciplinary, allied health, specialist advice and care) and experienced staff able to observe patients with diverse problems[7] and address the complex needs of patients[5]
- intensive or short-term care/frequent evaluation (assessment, observation and/or therapy) of a specific group of ED patients to rapidly diagnose conditions and expedite care[3, 19-21]
- evidence-based care pathways to facilitate assessment and treatment and reduce unnecessary variations in care delivery[9]
- a coordinated interdisciplinary team approach with early specialist intervention[3, 5, 18] and integration with broader hospital and community services[8]
- decreased length of stay[21] and decreased multiday hospital admission rates[2, 5, 6, 16, 18, 22-25] without increasing the rate of hospitalisation or readmission[9, 26, 27]
- an environment more comfortable for patients than the ED[3, 5, 20]
- avoidance of inappropriate departure from an ED[5, 13, 16, 27]
- greater continuity of care by reducing the number of transitions that can lead to errors, delay, duplication and lost information
- cost efficiency.[6, 28]

1. Emergency separation is a completed episode of hospital care (ie. admitted, transferred, discharged/died etc.) arising from an admission via the emergency department. See 'Criteria for Admission' at www.health.vic.gov.au/hdss/vaed/2007-08/manual/sect2.pdf. See also: 'Admission Type' at: www.health.vic.gov.au/hdss/vaed/2007-08/manual/sect3.pdf.

Observation medicine can improve patient flow by:

- providing a comprehensive care model specific for patients requiring short-term treatment or observation[24]
- streamlining the delivery of appropriate health services to ensure more timely care delivery and thus earlier discharge
- reducing avoidable admissions (for example older patients, chest pain)[10, 13, 14, 23]
- increasing capacity to manage high ED patient volume[3, 5, 16]
- actively seeking appropriate patients ('pull') from the ED early in their episode of care
- avoiding prolonged ED stays and/or the use of multiday inpatient beds for patients requiring less than 24-48 hours of care.

About the guidelines

These guidelines have been produced to assist Victoria's health services implement and operate observation medicine units that reflect 'good practice' models of care that suit the local context. This document is not about telling health services 'how to do' observation medicine; rather it is about assisting them to improve services and patient outcomes and reduce variations in practices. It provides direction and guidance that will assist Victoria's public health services implement and operate observation medicine units in a way that ensures the delivery of high quality clinical care and meets expectations for minimum standards for service delivery.

The goals of the guidelines are to:

- provide a consistent understanding of the purpose of observation medicine units
- offer guidance to observation medicine programs regarding patient selection and reporting activity
- set high-level operational measures that health services can use to benchmark performance
- assist health services identify and reduce variation in performance while improving service efficiency and quality.

The main sections of this guideline describe:

- the policy and service context for observation medicine units
- key principles for observation medicine
- guidelines for implementing and operating observation medicine units
- registration, funding and monitoring arrangements.

Who is this document for?

This document is for health service executives, managers and clinicians responsible for planning, setup, operation, monitoring and evaluation of observation medicine units and related models of care in their health service.

How were the guidelines developed?

The guidelines were developed by the department and informed by:

- best evidence derived from current literature
- two reviews of observation medicine units in Victoria (including literature reviews) commissioned by the Department of Human Services[5]
- visits to observation medicine units in metropolitan and regional Victoria
- consultation with stakeholders including the Emergency Access Reference Committee (EARC), hospital access managers, health service executives, managers and clinicians.

It is anticipated that the guidelines will be reviewed and revised over time to ensure that they continue to reflect current knowledge and appropriate policies.

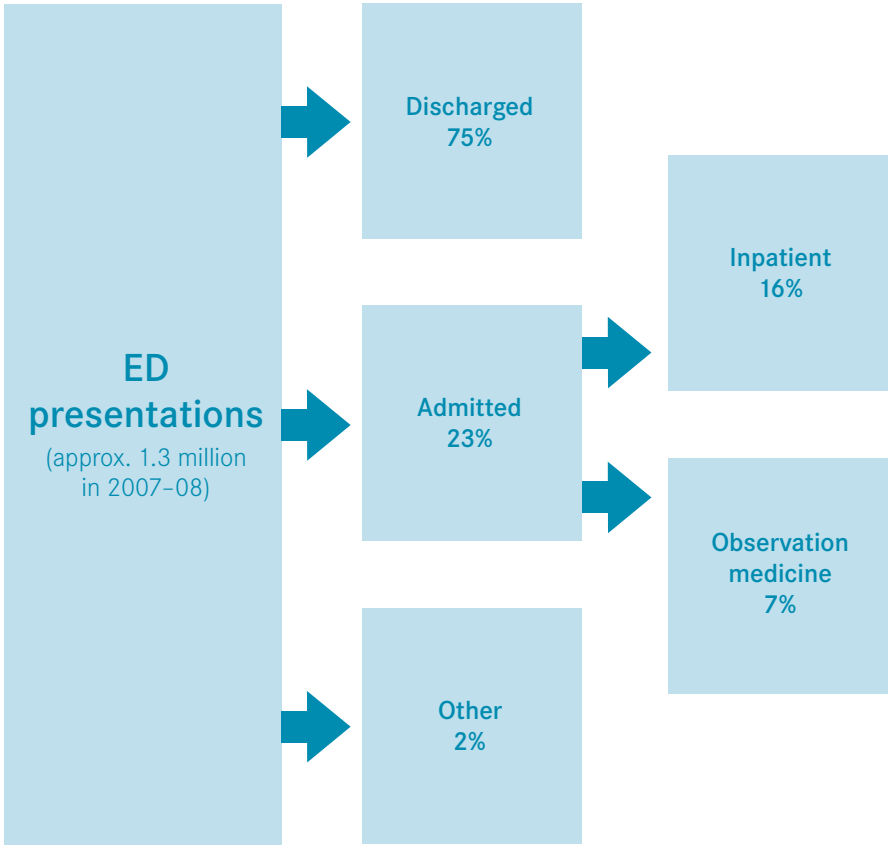
Context

Observation medicine units provide health services with a flexible short-term care option for emergency admissions. Observation medicine is one of a number of innovative models of care introduced into the Victorian health system since the *Hospital demand management strategy* commenced in 2001–02. A priority of the government's *Better faster emergency care* (2007)[2] strategy is to mainstream best practice for new models of care. In addition to observation medicine, these include:

- streaming of emergency care such as fast track and enhanced triage services
- care coordination
- medi-hotels
- day treatment centres
- after-hours co-located general practitioner clinics.

As shown in figure 1, 23 per cent of patients presenting to the major metropolitan hospital EDs in 2007–08 were admitted, with sixteen percent admitted to an inpatient bed and seven percent going to an observation medicine unit.

Figure 1: Patient flows to observation medicine units



2. See www.health.vic.gov.au/emergency/better-faster-report07.pdf

Key principles for observation medicine

Key principles for observation medicine are described below.

- **Patient centred care**–care is respectful of, and responsive to, individual patient preferences, needs and values, and provided in a comfortable environment.
- **Quality and safety**–systems and processes deliver quality outcomes and minimise risks.
- **Early access**–there is early access to diagnostics, specialist advice, observation and reassessment to inform rapid decision-making and treatment.
- **Evidence-based care**–pathways and protocols are in place to guide the delivery of care and reduce variation.
- **Substitution**–observation medicine units are used as an alternative to traditional ED and inpatient models of care for patients requiring an extension of ED services.
- **Collaboration**–observation medicine units are managed in a way that improves links within the organisation (for example, between multidisciplinary clinicians and specialists) and with external stakeholders (for example, general practitioner and community service providers).
- **Efficiency**–observation medicine units contribute to efficient use of resources by streamlining the care of selected patients and reducing service duplication and avoidable use of inpatient resources.

Guidelines for implementing and operating observation medicine units

Planning

Successful implementation and operation of observation medicine requires a clear vision shared among staff, well organised systems and processes for service delivery and appropriate evaluation of the unit.[5, 29]

Planning an observation medicine unit therefore requires development of operational and clinical protocols, a policy manual, well defined outcome measures to evaluate performance and a quality improvement program.

Leadership

In general, the medical responsibility for patients managed under observation medicine lies with the most appropriate clinical specialty.

The administration and clinical management of observation medicine units can differ depending on the health service and the model of care, for example, observation medicine units may be managed by:

- emergency medicine (for example, for short-stay units)
- general medicine (such as MAPUs)
- other specialist units (for example, paediatric, psychiatric).

Clinical leaders should be involved in strategic and operational issues and should be supported by hospital management.

Strong management and monitoring of operational policies is vital. In particular, procedures for discharge or transfer within specified timeframes (for example, 24 hours) must be adhered to in order to optimise the performance of the unit. Health services should develop local policies and practices to avoid functional or operational bottlenecks and maintain patient flow.

Basic service parameters

Size

The size of an observation medicine unit will differ depending on the:

- size of the hospital
- number and casemix of daily admissions
- specialist, physician and nursing availability
- specialty mix within the hospital
- activity and capacity of community based services
- number of inpatient and rehabilitation beds available.[6]

In 2008, the typical bed base for observation medicine units in Victoria ranged from eight to 24 beds. Additional benefits can be gained from flexible bed numbers and flexible staffing arrangements.

Hours of operation

In Victoria, observation medicine units usually provide a 24-hour, seven-day a week service. The length of stay for patients is time limited (for example, less than 24 or 48 hours).

Staffing

An observation medicine unit is characterised by frequent clinical and/or specialist reviews to deliver care and ascertain readiness for departure. Staffing levels should reflect the intensive nature of service delivery. In particular, there should be sufficient numbers of experienced staff with skills in rapid assessment and decision-making to determine a patient's need for admission or discharge. The presence of senior clinicians is important to support rapid decision making, accountability for unit processes and regular review of patients.[9, 30] Regular, at least once daily, consultant or senior medical staff led ward rounds should be carried out.

Facilities and equipment

Observation medicine beds are usually quarantined and located in a distinct geographic area of the health service.

The location of observation medicine units will differ depending on the nature of the unit. Observation medicine units are usually located near or within a discrete area of the ED (short stay units) or specialty unit (paediatric, psychiatric). Co-location of observation medicine beds into a single location can have benefits for maintaining a focus on intensive planning and intervention, the efficient and active involvement of the acute care team in patient care and close proximity and access to investigative facilities (pathology and radiology) and pharmacy services.[8]

Observation medicine is a form of admitted patient care and so the physical environment should have facilities and amenities similar to ward facilities for admitted patients. Key considerations include design, environment, activity, structure and provision of nursing care.

Patients' experiences, relatives and carers' views and staff experiences of the environment should be obtained as part of quality assurance processes (see page 11).

Models of care

The source of admission to an observation medicine unit is an emergency, arising from presentation at the ED or another emergency admission such as referral from a general practitioner (GP) or an outpatient department. Clear patient criteria are required to ensure appropriate admission to and discharge from observation models of care.[3] These should identify:

- inclusion and exclusion criteria for admission to the unit
- variables that predict patients who are less suitable for admission to an observation medicine unit and better suited to admission directly under a hospital team[3]
- discharge criteria (that is criteria-led discharge, as opposed to waiting for full clinical review).

The model of care for the observation medicine unit should also be based on a clear description of:

- admission and discharge processes
- procedures for the management of clinical conditions
- skill and resourcing requirements to ensure quality care for patients, including support required from inpatient specialties and diagnostics[8, 15] and from social services and community health services
- specific criteria and time limits for referrals, review and departures.[6]

Models for observation medicine should avoid:

- the potential to increase 'intra-hospital transfers' that can increase length of stay, duplication and reduce continuity of care[5]
- inappropriate admissions due to bed pressures elsewhere in a health service.[5]

Patient care pathway

Observation medicine units should use patient care pathways. These pathways should:

- commence early in the patient journey to reduce the time spent in the ED, for example from triage, or a 'flow nurse' to direct patients from the reception area to the most appropriate part of the ED
- streamline admission and departure processes
- be evidence-based and promote a safe environment and therapeutic care
- be supported by consultants and multidisciplinary professionals, including service level agreements between all specialties with acute care responsibilities to facilitate access to medical and surgical staff (specialities) and enable appropriate review or referral for secondary or tertiary care

- provide a clear statement of operational responsibility for the movement of patients to and from the observation medicine unit (that is from the ED and to inpatient wards).

Types of conditions managed in the observation medicine unit

High volume conditions that are easily stabilised, have a high probability of early discharge and a low risk of representation after discharge are ideal for observation medicine models of care.[5, 18] Examination of the literature has provided an extensive list of conditions that can be managed in an observation medicine unit, depending on the service parameters as described above. These are listed in Appendix 2.

Observation medicine is ideal for patients who require an extension of ED services such as:

- repeated diagnostic assessment (laboratory, radiology and other clinical investigative services)
- treatments not routinely provided in an ED
- patients with complex or undifferentiated conditions who may require lengthy evaluation, serial review or investigation or where the need for intervention is unclear
- rapid and comprehensive multidisciplinary assessment (for example, acute medical patients, aged care, community health and other clinical management resources)
- prolonged observation for conditions expected to resolve within 12 to 24 hours
- those likely to respond to a brief course of therapy, which then can be modified so that treatment can be continued at home or another community setting
- an early specialist review by a consultant and/or senior medical registrar, including that performed by subspecialty services.

Quality assurance

Monitoring the quality of care and service delivery is required to inform the development and implementation of 'best practice' models for observation medicine. Table 1 provides a list of indicators that can be used to monitor the quality of care and performance of an observation medicine unit. Outcome measures (or KPIs) can be used to monitor performance and examine changes over time (for example, before and after implementation).

Table 1: Potential indicators for monitoring observation medicine units

Operational	Quality	Timeliness of care	Financial
Percentage of all ED attendances admitted to observation medicine Patients requiring multiday admission Estimated multiday bed days substituted ED and admitted patient bed capacity Accuracy of assessment for detecting suitability for observation medicine Patient demographics Most common DRGs Appropriateness of admissions to observation medicine Final disposition/departure destination • patient departures home (within 24 hours)/same day departures • referred to HITH • admitted to inpatient ward (and clinical problem) (within 24 hours) • transferred to other/private hospitals • outliers in hospital wards Time sequences • LOS in ED prior to observation medicine admission • from referral to assessment • to allocation of bed • to arrival at unit • time to review by senior medical staff • time to review by allied health assessments pharmacy and laboratory utilisation staff overtime, absenteeism and turnover	Left before completing treatment or against medical advice Comparison of departure and admission diagnosis Incident reporting (near miss, adverse events, sentinel events) Frequency of variations from admission/departure criteria and clinical pathway Re-presentation and readmission rates to hospital/s in patients managed using clinical pathways Quality of documentation Patient and staff satisfaction and complaints Re-presentation to ED within 24 hours of departure Repeated admissions to observation medicine unit Readmissions within 28 days Mortality Appropriateness of follow-up, for example patients receiving formal departure summary at time of departure or transfer to other units	Four-hour targets for departure of non-admitted ED patients Percentage of ED patients admitted to ward in eight hours 12-hour and 24-hour waits in ED Anticipated LOS v actual LOS Patients exceeding time limit for LOS Length of stay • mean and median (in the unit and for entire episodes of care) • (LOS) for admitted medical patients • Average LOS v state average LOS • reasons documented for prolonged stay	WIES generated WIES v average LOS WIES v LOS for benchmarked 'admitted patients' WIES (targets v actuals) budget and HRM performance Co-payments

[2, 5, 6, 18]

Registration, funding and monitoring

Observation medicine units must be registered with the Department of Human Services. The department periodically reviews the requirements of registered observation medicine units. Registration is gained by meeting standards in two areas:

1. physical amenity
2. model of care.

Without registration, hospitals are not able to utilise the flags in the Victorian Admitted Episode Data (VAED) and Victorian Emergency Minimum Dataset (VEMD) that enable calculation of the co-payment. Current VAED and VEMD codes, and plans for amendments in 2009–10, are shown in box 1.

Registered observation medicine units are funded through casemix or the mental health bed day rate. Additional funding in the form of a co-payment is available per episode, to reflect the higher costs of delivering early intensive, short-term care for these patients. A co-payment is made per patient. The methods for calculating co-payment will be revised by the department in 2009-10.

Calculation of observation medicine co-payments

In 2008-09, the observation medicine co-payment is calculated using VEMD data for departure from the ED[3] into an observation medicine unit. The Discharge Status Field, which identifies departure destination from the ED is used to count the number of patients who are transferred to observation medicine units. Health services are encouraged to monitor and report episodes of admission to observation medicine units not captured via the VEMD (ie. admitted to observation medicine unit from a source other than the ED).

The maximum threshold for observation medicine co-payments in 2008-09 is 28 per cent of the health service's emergency separations. Where a health service operates an additional specialty observation medicine service (e.g. paediatric, mental health) the co-payment maximum threshold is increased to 32 per cent of emergency separations.

To be eligible for the co-payment, each patient must meet the VAED admission criteria as specified in the Department of Human Services' admission policy.[4] The co-payment is paid on a quarterly basis and the rate is indexed each year (see the example in box 2). In 2008–09 the co-payment amount is $110. The maximum threshold for observation medicine co-payments is set against health service-wide observation medicine activity. Where a health service has more than one campus operating an observation medicine unit, the activity cap can be spread across the health service.

3. See 'Criteria for Admission' at www.health.vic.gov.au/hdss/vaed/2007-08/manual/sect2.pdf. See also: 'Admission Type' at: www.health.vic.gov.au/hdss/vaed/2007-08/manual/sect3.pdf.
4. Emergency separation is a completed episode of hospital care (ie. admitted, transferred, discharged/died etc.) arising from an admission via the emergency department.

Box 1: Victorian dataset codes for observation medicine units

The Victorian Emergency Minimum Dataset contains four possible departure destination codes for patients who depart to an observation medicine unit. The Victorian Admitted Episode Dataset describes three admitted accommodation types where models of observation medicine are delivered. Current dataset codes, and plans for revision in 2009–10, are as follows:

Current VEMD (12th Edition) departure destinations for ED patients who transfer to an observation medicine unit are:

Short-stay observation unit (3)

Emergency medical unit (13)

Medical assessment and planning unit (14)

Mental health observation/assessment unit (25)

In 2009–2010:

Emergency medical unit (13) and mental health observation/assessment unit (25) will be removed from the VEMD

The following codes will be added to the VEMD departure destinations:

- *Specialist observation unit–mental health*
- *Specialist observation unit–paediatric*

Current VAED admitted patient accommodation types[1] where models of observation medicine are delivered:

Short-stay observation unit (code S)

An approved SOU may be in, adjacent to, or remote from the ED. SOU is a designated unit that is specifically staffed and equipped to provide observation care and treatment for emergency patients who have an expected length of stay between four and 24 hours. It includes general and specific short-stay observation units, for example chest pain units, paediatric units and psychiatric units. It excludes short-stay facilities designated specifically for elective surgical and radiological procedures (p. 3-7).

Medical assessment and planning unit admissions (code M)

MAPUs concentrate on admissions for general medical conditions in one geographical area to streamline the care planning processes. Planned length of stay may be up to 48 hours prior to transfer to another accommodation type (ward) or separation home (p. 3-7).

Emergency medical unit (code 8)

In 2009–2010:

Emergency medical unit (code 8) will be removed from the VAED accommodation types

The following codes will be added to the VAED accommodation types:

- *Specialist observation unit–mental health*
- *Specialist observation unit–paediatric*

Box 2: Sample calculation of observation medicine co-payment

Single-campus health service operating one observation medicine unit
The health service has 1000 emergency separations for quarter one

Maximum co-payment possible	= 1000 x 0.28
	= 280 x $110[#]
	= $30,800

Example uses co-payment rate for 2008-09 ($110 per episode of care)

Appendix 1: Types of observation medicine units

Short-stay units

These meet the care needs of a group of emergency patients who require extended emergency care and an expected hospital stay of less than 24 hours. Management responsibility usually lies with the ED.

Medical assessment and planning units

Models specific for elderly patients are particularly useful to facilitate departure home in a time much shorter than might be expected for an inpatient admission[14] thereby avoiding the multiple risks associated with hospitalisation of older people.

Medical assessment and planning units are specifically staffed and equipped to receive medical inpatients for intensive assessment, care and treatment for a designated period (usually 24–48 hours) prior to departure home or transfer to medical wards if appropriate.[6] Management responsibility lies with geriatric, general or specialist medicine units and focuses on multidisciplinary early assessment and decision making, proactive planning and intervention. These units concentrate on patient assessment and planning activities that streamline care processes, reduce length of stay and facilitate early discharge.

Specialist observation units

The two main types of specialist observation units are:

- Paediatric units, which may be stand-alone (ie. paediatrics only) or combined with adults as a hybrid unit. Management responsibility lies with a specialist paediatrician or emergency physician. Additional training and education is essential for observation medicine staff treating children, particularly nursing and ancillary personnel.[16]
- Mental health units, which provide close-observation areas with mental health trained staff. Planning considerations include being preferably located on the ground floor, the entrance away from the main ward, ample space to avoid the effects of crowding on aggressive behaviour and psychotic symptoms, and access to enclosed gardens.[15]

Appendix 2: Types of conditions most often managed in observation medicine units

Cardiac	chest pain/palpitations/AF/CCF
	congestive heart failure
	risk identification and management of patients with heart failure
Gastrointestinal	abdominal pain/vomiting
	gastroenteritis/constipation
	dehydration
Respiratory	shortness of breath
	exacerbation of asthma/COPD
	chest infection
Neurological	headache/post ictal/TIA/vertigo
	mild head injuries
	Convulsions
General	syncope/collapse/dizziness
	pain control such as back pain, limb pain
	allergic reaction
	general anaemia
	kidney problems/renal colic/urinary retention/urinary tract infection
	DVT
	diabetes mellitus and other endocrine diseases, such as hypoglycaemia, diabetic ketoacidosis/hyperglycaemia
	pharmacological overdose
	infections/antibiotic treatment
	psychosocial management
	review of older persons' functional and social needs
Procedural	post reduction sedation/wound complications
	blood transfusion
Specialist	Psychiatric, such as depression with suicidal ideation, mild acute exacerbation of chronic psychosis, behavioural disturbance
	febrile children
	Low-risk maternity patients, such as hyperemesis gravidarium

[3, 7, 8, 10, 15, 16, 18, 21, 31-34]

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