

# Funding for intensive care in Victorian public hospitals

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## Purpose

This document briefly outlines the funding arrangements that apply to intensive care units (ICU) in Victorian public hospitals and identifies sources of further information.

## Hospital funding

The Victorian Government funds health services for acute care using an activity-based casemix system. This system allocates funds according to the amount and type of clinical work undertaken (the 'mix' of work) plus other non-clinical costs such as training and development. Casemix is based on a patient episode that is weighted according to its diagnostic-related group (DRG) and length of stay. The unit of measurement by which casemix payments are made is called the weighted inlier equivalent separation (WIES).

Health services receive an annual budget consisting of WIES funding for a target level of activity plus funding for fixed costs. Health service management is responsible for allocating the annual budget, and determines the distribution of resources across different areas of the hospital (see [cited 2010 March] [www.health.vic.gov.au/pfg/downloads/hospitals/conditions\\_funding.pdf](http://www.health.vic.gov.au/pfg/downloads/hospitals/conditions_funding.pdf)).

While there are specialty units within a hospital, such as the ICU, separate designated recurrent funding is not provided except in some instances to recognise fixed costs and the need to have services available regardless of activity levels. ICUs are not directly funded according to their bed capacity – health services decide what resources they will apportion to support patient activity.

## WIES funding associated with ICU care

A patient episode of care – for example, from arrival via the emergency department through an ICU stay and on to care on a ward – is funded by a WIES payment based on a DRG cost-weight that factors all aspects of the episode of care 'averaged' across a range of levels of acuity. The funding rate is generally about 75–80 per cent of cost for a ward stay and 90–100 per cent of cost for an ICU stay. The ICU segment of care contributes to that overall cost-weight of the DRG, but cannot readily be separated out of the DRG, as the underlying calculation averages out all the possible variations of care for a patient episode of that DRG type.

Costing data submitted from the majority of metropolitan and large rural hospitals shows that, on average, patients whose hospital episode includes a stay in ICU attract funding at the high end of the range of costs required to care for those patients. Health services receive an even higher amount for patients who attract the mechanical ventilation co-payment (see below).

Many highly complex patients who do not receive mechanical ventilation are in specialist DRGs, such as extracorporeal membrane oxygenation (ECMO, DRG A40Z). This means that the high cost of care is addressed in the DRG cost.

The patient scenario shown below shows how the funding system works in practice for a typical patient admitted to an ICU as part of an episode of hospital care.

## ICU mechanical ventilation co-payment

An ICU mechanical ventilation (MV) co-payment (to acknowledge complexity and fixed costs, and to encourage throughput) is provided for two types of ICU patients:

- **type D** patients, who receive over six hours of continuous mechanical ventilation (this is the most common type)
- **type 4** patients, who receive over 96 hours of continuous mechanical ventilation (these are usually highly specialised patient types such as liver transplant recipients) where the variables recognised by the mechanical ventilation co-payment are built into the first four days of the DRG cost-weight.

The co-payment is made in two parts at two different rates:

- per day while ventilated (0.7729 WIES) – this may be regarded as a recognition of complexity for a range of ICU-related DRGs
- per episode (0.6980 WIES) – this may be regarded as support for throughput/availability.

The co-payment is bundled into the WIES payment generated by the patient and therefore contributes to a health service's WIES activity.

The co-payment is available only to patients mechanically ventilated in an eligible ICU, and not in any other treatment areas.

## Reporting ICU mechanical ventilation duration to the Victorian Admitted Episode Dataset (VAED)

- If the patient has more than one period of mechanical ventilation (MV) in ICU during this episode, the total duration of all such periods is reported.
- Where a patient is intubated and MV starts in an operating theatre, for the purposes of the 'Duration of MV' VAED field, the duration of MV is recorded from when the patient enters the ICU.
- Where MV starts in ICU, continues while the patient is in an operating theatre and on the patient's return to ICU, the count of duration should be suspended for the time the patient is out of the ICU.

(source: [www.health.vic.gov.au/hdss/vaed/2009-10/manual/sect3\\_2009.pdf](http://www.health.vic.gov.au/hdss/vaed/2009-10/manual/sect3_2009.pdf))

## Complex WIES

Each year a pool of funds is distributed to health services that qualify for 'complex' WIES payments based on identifying 'complex' patients within 'complex' DRGs. ICU patients by their nature often qualify as 'complex'. Patients are also classified as 'complex' if they have been transferred from one hospital to another hospital that has a higher complexity ranking (for example, from a metropolitan to a tertiary hospital).

A detailed explanation of Complex WIES and a table of distribution is provided in the *Policy and funding guidelines 2009–10*, (see part 2, *Policy and funding details - Technical guidelines*, Complexity Funding Formula, page 33).

## Medical emergency teams and ICU liaison

Since 2005–06, eligible health services have received an annual payment to support medical emergency teams and/or ICU liaison services. The decision about whether to support one or both services has been at the discretion of the health service.

In the 2009–10 State budget, additional funding was allocated to health services to further support ICU nurse liaison services following their successful implementation in 2008.

## Funding scenario: Patient with a tracheostomy and catastrophic complications

A patient presents via the emergency department with shortness of breath. The patient is admitted to a medical ward with pneumonia, develops septicaemia, and is transferred to the ICU for respiratory support (ie. mechanical ventilation). He deteriorates, and requires a tracheostomy as well as inotropes and haemofiltration. He is discharged back to the ward after 18 days in the ICU. His total length of stay in the hospital is 46 days.

### Funding calculation

Once the patient is separated from the hospital, a DRG, based on the most acute features of his stay, is determined. If the patient's hospital length of stay is within the average duration (within the 'low boundary' and 'high boundary'), the hospital will receive a WIES payment at the 'inlier' rate set for that DRG that also includes a mechanical ventilation co-payment calculated on a per day rate (WIES 0.7729) and a once-only episode rate (WIES 0.6980).

**DRG A06A** = Tracheostomy with ventilation > 95 hours W Catastrophic CC)  
 – low boundary 28 days, high boundary 64 days

#### Length of stay

= 46 days (inlier – therefore will receive inlier weight WIES)

Inlier weight = WIES (\$3,600\*) x 24.4998<sup>#</sup> = \$88,199.28 for episode of care

(\* \$3,600 = payment per WIES for public patients in major metropolitan hospitals)

(<sup>#</sup> see extract, below, from Victorian cost weights - WIES16)

#### Mechanical ventilation (MV) hours

MV hours = 433

(patient ventilated for a total of 433 hours during his ICU stay)

#### Mechanical ventilation days

= [(433 + 12) / 24] – 4 = 19 – 4 = 15\*

\*rounded to the nearest whole number.

NB: This patient's DRG is a type '4', therefore, the first four days are excluded from the MV day count.

#### WIES rate

= 24.4998 + 15 days x 0.7729 (per day rate) + 0.6980 (per episode payment)

= 36.7913

#### WIES payment

= WIES rate = 36.7913 x \$3600

**Total = \$132,448.68**

Table: Extract from Victorian cost weights

WIES16 Victorian cost weights

Victorian DRG 6.0		Mech Vent	Other	Inlier Boundary		Avg	Same/ One	Same	One	Multi-Day	Inlier	High	HITH
Code	Label	Co-pay ment	Co-pay ment	Low	High	Inlier Stay	Day	Day	Day	Low Outlier	Weight	Outlier	Outlier
							DRG	Weight	Weight	per Diem		per Diem	per Diem
A06A	Tracheostomy W Ventilation >95 hours W Catastrophic CC	4		28	64	41.9		1.9868	2.3961	0.7894	24.4998	0.3621	0.2897

## Useful resources and further information

The following documents provide further information about ICU funding in Victorian public hospitals:

*Victorian health services policy and funding guidelines 2009–10*, State Government of Victoria, Melbourne.

- Part 2: Policy and funding details - General conditions of funding  
[www.health.vic.gov.au/pfg/downloads/hospitals/conditions\\_funding.pdf](http://www.health.vic.gov.au/pfg/downloads/hospitals/conditions_funding.pdf)
- Part 2: Policy and funding details – Technical guidelines  
[www.health.vic.gov.au/pfg/downloads/hospitals/tech\\_guidelines3.pdf](http://www.health.vic.gov.au/pfg/downloads/hospitals/tech_guidelines3.pdf)

Victorian Admitted Episode Dataset (VAED)

[www.health.vic.gov.au/hdss/vaed/2009-10/manual/index.htm](http://www.health.vic.gov.au/hdss/vaed/2009-10/manual/index.htm)

If you require specific information about ICU funding at your hospital, contact your health service's Health Information Manager.

## Information about related issues

**Weaning ventilated patients:** see *Continuous ventilatory support (CVS) and Non-invasive ventilation (NIV)* – [www.health.vic.gov.au/hdss/icdcoding/features/cvs\\_niv\\_6thedition.pdf](http://www.health.vic.gov.au/hdss/icdcoding/features/cvs_niv_6thedition.pdf)

**Neonatal patients:** Funding for neonates is outside the scope of this document. See [www.health.vic.gov.au/pfg/downloads/hospitals/program\\_part2](http://www.health.vic.gov.au/pfg/downloads/hospitals/program_part2), for further information.