MELBOURNE HEALTH

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Passion for Caring - Achieving the Extraordinary

Melbourne Health Environmental Report

2013-14

Melbourne Health Environmental Report

Introduction

Melbourne Health is one of the highest performing Victorian health services in relation to environmental initiatives and achievements. Our commitment to promote environmental sustainability amongst staff, visitors and patients is led and fully supported by our Chief Executive Officer and Executive Committee.

Melbourne Health's 'Think Green' Strategy sets key environmental objectives and actions to minimise our impact on the environment and reduce the greenhouse gases we produce.

Our five strategic goals are:

- Drive a 'Think Green' culture
- Embed sustainability in business practices
- Improve resource efficiency, focusing on waste management
- Create synergies through strategic partnerships
- Where practical, create opportunities to achieve greener facilities

This report details our progress towards reaching our 'Think Green' goals.

Key Environmental Achievements during the year:

In 2013-14, Melbourne Health created a full time Environmental Sustainability Officer position to lead our 'Think Green' initiatives, engage staff and ensure dedicated support for our strategic goals.

We called out for Green Champions and had over 70 Green Champions sign up to promote and lead environmental initiatives in various departments across our sites. Melbourne Health's 'Think Green' committee was re-invigorated and now meets bi-monthly to implement, monitor and report on environmental initiatives occurring across Melbourne Health's operations, in accordance with our 'Think Green' Strategy.

We rebranded and updated our intranet site and regularly promote 'Think Green' initiatives through internal communication channels such as newsletters and posters.

'Think Green' Summary:

Our achievements throughout 2013/14	Our results	Why is it important?
Reduced clinical waste at The Royal Melbourne Hospital City Campus	31 tonnes less clinical waste than in the previous year – that's equal to (about) six elephants	Clinical waste has to be disinfected & shredded prior to going into landfill. This process is energy intensive. By better segregation we have removed plastics, glass and paper from clinical waste and recycle them instead, reducing GHG emissions
Increased recyclables at The Royal Melbourne Hospital City & Royal Park Campus	We recycled 146 tonnes more than last year at City Campus & recycling rates doubled	Recycling removes waste from landfill. Decomposing waste in landfill creates methane, a greenhouse gas 21 times more

	at Royal Park	potent than CO2.
Better segregation rates in our Intensive Care Unit & in Theatres	Audits showed correct segregation rates of 98% for clinical waste and 100% for recyclables	Best practice segregation quality for Health Care facilities is 90%, making our Theatre & Intensive Care Unit staff world's best practice
Introduced recycling of PVC, metals, e-waste & wooden pallets	1 tonne PVC 10 tonnes of Metal 12 tonnes of e-waste	All these recyclables are being kept out of landfill. The PVC is recycled into industrial hose by a local recycler in Dandenong. Ewaste, such as PCs, contains many toxic substances, which can leach into the soil and water when placed into landfill. They also contain many valuable and rare materials which can be recovered and re-used. For example, the mining of coltan used in mobile phones is threatening the survival of gorillas in West Africa.
Our greenhouse gas emissions decreased	1,071 tonnes less CO2e – that's equivalent to removing 250 cars off the road for a year	Greenhouse gas emissions contribute to climate change
Decreased energy consumption at The Royal Melbourne Hospital Royal Park Campus	5% decrease	Reducing energy consumption also reduces Greenhouse gas emissions

The tables below show our consumption data in detail for both The Royal Melbourne Hospital City and Royal Park campuses.

The Royal Melbourne Hospital – City Campus

Energy Consumption		
Total energy consumption by energy type (GJ)	**2012-13**	**2013-14**
Electricity (Grid)	42,032	34,929
Electricity (Cogenerated)	65,332	72,301
Natural gas and LPG	89	1,502
Other energy types (e.g. steam, diesel)	64,698	69,027
Total (gigajoules)	**172,151**	**177,759**
Normalised energy consumption	**2012-13**	**2013-14**
Energy per unit of floor space (GJ/m2)	1.51	1.55
Energy per bed-days (GJ)	0.71	0.78
Energy per separations (GJ)	1.93	2.23
Energy per patient treated(GJ)	0.37	0.39
Underground car park (26,800 m2) not included in floor space		

Greenhouse Gas Emissions

Total greenhouse gas emissions (tonnes CO2e)	2012-13	2013-14
Scope 1	3,319	3,612
Scope 2	25,436	24,142
Total	**28,755**	**27,754**
Normalised greenhouse gas emissions	**2012-13**	**2013-14**
Emissions per unit of floor space (kgCO2e/m2)	251	243
Emissions per bed-days (kgCO2e)	118	121
Emissions per separations (kgCO2e)	322	348
Emissions per patient treated (kgCO2e)	62	60

Water Consumption*

Total water consumption by type (kL)*	2012-13	2013-14
Potable water	188,042	152,798
Re-used / recycled water		
Total	**188,042**	**152,798**
Normalised water consumption	**2012-13**	**2013-14**
Water per unit of floor space (kL/m2)	1.64	1.34
Water per bed-days (kL)	0.77	0.67
Water per separations (kL)	2.10	1.92
Water per patient treated (kL)	0.41	0.33
Water re-use and recycling	**2012-13**	**2013-14**
Re-use / recycling rate (percentage)	N/A	N/A
No metering available for re-used/recycled water		

Waste Generation

Total waste generation by type (Tonnes)	2012-13	2013-14
Clinical waste	443	412
General waste	864	889
Recycled waste	431	577
Total	1,738	1,878
Normalised waste generation	**2012-13**	**2013-14**
Waste per bed-days (kg)	7.14	8.19
Waste per separations (kg)	19.45	23.56
Waste per patient treated (kg)	3.76	4.08
Waste recycling	**2012-13**	**2013-14**
Waste recycling rate (percentage)	25%	31%
Clinical waste does not include Sharps as sharps weight data is not available		

The Royal Melbourne Hospital – Royal Park Campus

Energy Consumption

Total energy consumption by energy type (GJ)	2012-13	2013-14
Electricity (Grid)	13,444	13,458
Natural gas and LPG	17,302	15,838
Other energy types (e.g. steam, diesel)	19	19
Total (gigajoules)	**30,765**	**29,315**
Normalised energy consumption	**2012-13**	**2013-14**
Energy per unit of floor space (GJ/m2)	1.21	1.15
Energy per bed-days / per patient treated (GJ)	0.59	0.57
Energy per separations (GJ)	9.95	10.75

Greenhouse Gas Emissions

Total greenhouse gas emissions (tonnes CO2e)	2012-13	2013-14
Scope 1	889	814
Scope 2	4,444	4,449
Total	**5,333**	**5,263**
Normalised greenhouse gas emissions	**2012-13**	**2013-14**
Emissions per unit of floor space (kgCO2e/m2)	210	207
Emissions per bed-days / per patient treated (kgCO2e)	102	103
Emissions per separations (kgCO2e)	1,725	1,929

Water Consumption*

Total water consumption by type (kL)*	2012-13	2013-14
Potable water	22,500	24,900
Re-used / recycled water		
Total	**22,500**	**24,900**
Normalised water consumption	**2012-13**	**2013-14**
Water per unit of floor space (kL/m2)	0.90	0.98
Water per bed-days /per patient treated (kL)	0.43	0.49
Water per separations (kL)	7.36	9.13
Water re-use and recycling	**2012-13**	**2013-14**
Re-use / recycling rate (percentage)	N/A	N/A
No metering available for re-used/recycled water		

Waste Generation

Total waste generation by type (Tonnes)	2012-13	2013-14
Clinical waste	18	15
General waste	210	208
Recycled waste	8	13
Total	236	236
Normalised waste generation	**2012-13**	**2013-14**
Waste per bed-days / per patient treated (kg)	4.51	4.62
Waste per separations (kg)	76.22	86.39

Waste recycling	2012-13	2013-14
Waste recycling rate (percentage)	3%	6%
Royal Park is a long-term residential/ aged care facility		
2012-13 recycled waste data incomplete due to multiple contractors		
Clinical waste does not include Sharps as sharps weight data is not available		

*Water consumption data is partially estimated and some discrepancies in data collection and normalisation have been discovered. The Department of Health and Human Services is implementing an Environmental Data Management System for all public health services to improve and standardise data collection. We expect to have more robust consumption data for next year's report.