Melbourne Health
Environmental Report
2018/19
Introduction

ABOUT MELBOURNE HEALTH

Melbourne Health is a leading public health service in Victoria, employing over 9000 staff and managing over 1,400 beds. We provide comprehensive acute, sub-acute, general, specialist medical and mental health services through both inpatient and community based facilities through the following services: The Royal Melbourne Hospital (RMH) City and Royal Park Campuses, NorthWestern Mental Health and The Doherty Institute for Infection and Immunity.

In 2018/19 our staff provided care to over 550,000 patients at RMH with over 79,000 emergency attendances and more than 207,000 outpatient appointments.

Melbourne Health has a long standing commitment to minimise its carbon footprint and continues to promote a culture of caring for the environment, which is supported by the actions and initiatives of both the organisation, our people, patients, consumers and visitors.

Melbourne Health committed to the following targets in our Statement of Priorities 2018-19:

- Aim to recycle 350 kilograms of single use steel instruments from our Theatres, ICU and Emergency Department
- Commitment to reaching an overall recycling rate of 30%
- Recruit 30 further Green Champions in 2018-19 to promote sustainability in their departments
- Report publically on our performance in the annual MH Environment Report available on our website

We met these targets by recycling 1 tonne of steel instruments, recruiting 44 new Green Champions and reaching a 30% recycling rate

HIGHLIGHTS 2018/19

- New 5 year Environmental Sustainability Strategy developed
- Further clinical waste reductions
- ED Nurses win an award for their recycling efforts
- 20,000 plastic bags removed from landfill
- Telehealth program continues to grow
Our Environmental Sustainability Strategy is due for renewal in 2020. In order to commence the planning process, a strategy workshop was held in February 2019 and was facilitated by MH Director Strategy and Planning. Participants included the Chief Executive and other Executive Committee members, representatives of Procurement, IT&T, Facilities Management, Pharmacy, Green Champions, Environment Committee members and external stakeholders including DHHS, HPV and Parkville Precinct partners.

The purpose of the workshop was to determine stakeholders’ views of proposed goals, to identify gaps and develop targets around five theme areas for the new MH Environmental Sustainability Strategy 2020-25. Post workshop, a 5 year action plan was developed with staff leads, implementation timeframes were established and responsibilities for agreed actions assigned.

The MH Environmental Sustainability Strategy 2020-25 was approved by the Executive Committee and the Board in October 2019.

Five theme areas:

- **Organisational commitment and leadership to implement environmental strategies**
- **Energy and utilities**
- **Sustainable procurement and waste management**
- **Paper usage and digital transformation**
- **Other:**
  - Sustainable transport
  - Medical gases
  - Pharmaceuticals
  - Refrigerants

First in Care, Research and Learning
Waste segregation

CLINICAL WASTE reductions

Our main site, the Royal Melbourne Hospital (RMH) City Campus provides general and specialist medical and surgical acute services to over 550,000 patients per year and provides one of the two adult major trauma services to the state of Victoria. Clinical or infectious waste is produced in hospitals especially in ICU, Theatres and the Emergency Department. Clinical waste has to be disposed of according to EPA guidelines, either by incineration or to prescribed landfill after a shredding and disinfecting process.

At RMH, we have reduced our clinical waste through better segregation and staff education, reducing both environmental impacts and costs from this waste stream. Our Sustainability Groups in ICU, Theatres and the Emergency Department have been instrumental in reducing our clinical waste by over 40% per patient treated since 2012-13.
Congratulations to our Emergency Department Nurses for winning second prize for their Research Study Poster about their recycling initiatives at the 16th International Conference for Emergency Nurses in October 2018.

Recycling in ED

Who stole the Sharps bin?
Reducing waste from the Emergency Department: A recycling process for contaminated and non-contaminated waste

Authors: Cherylynn McGurcan, Susan Harding, Elizabeth Bradbury
Emergency Department, Royal Melbourne Hospital, Melbourne Health, Victoria Australia

Introduction
- According to WWF (2023), climate change is the top global health threat.
- Healthcare produces ~7% of our carbon footprint.
- The Royal Melbourne Hospital (RMH) Libraries and Clinical Research Office (RCRO) is working towards developing environmentally sustainable practices that are cost-effective, practical, and widely adopted and maintained by our staff.

Aim
To identify and implement practices and sustainable strategies to reduce the carbon footprint and improve the health for our patients and staff at the same time.

Process:
- Identified the ED sharps bin site (infection control staff - where focus is to reduce the environmental impact of hospital-generated waste)
- Surveyed all ED staff to assess knowledge of what, where, and how to segregate waste products.
- Developed and implemented new protocols that are practical and sustainable.
- Conducted to allow roof gardens and waste reduction.

Background
- Two years ago, the RMH stopped using many commonly used items, e.g., plastic, paper, and glass items. This reduced a massive elimination of single-use items.
- Not sharps waste was disposed of in the yellow infectious waste bins.
- Medical instruments were disposed of at the "Sharps" bin at an excessive cost to the hospital and the environment. The instruments were then ground down, passed through all incinerators, and destroyed in incineration and/or landfill to reduce the environment.
- The RMH staff required a survey to assess their basic knowledge about waste segregation.
- The results identified a lack of non-experienced knowledge about waste segregation, and its impact on the environment.
- The ED Green team then set out to design a waste management program that would be sustainable to implement in the ED.
- An RMHC environmental sustainability officer was enlisted to assist with education and guidance around sustainable changes within the ED.

Outcome
The RMH ED supports participation in a number of waste reduction strategies, which include:
- Composting: Recycling of biodegradable waste, such as food waste, grass, and paper, are sent to VWS.

The RAP: Reduce, Reuse, and Recycle
Reduction:
- 2. The Less-Bake Treat Prep: Splays use less heat, less energy, and less waste by being baked and packaged.
- 3. Container-Elements: 100% recyclable containers. Antibacterial coatings were replaced by the fabric smooth surfaces which prevent incineration between in-six patients. This product has been replaced by one made by the company.

Re-Use:
- Implementation of paper savers in the treatment rooms significantly reduces paper use and is recycled by VWS.
- Paper saris and contaminated paper are recycled by VWS.

Recycling:
- Old medical instruments are collected and sent to Melbourne Zoo for recycling to help keep darkness natural environment.
- 4. Old Medical Instruments are collected and sent to Melbourne Zoo for recycling to help keep darkness natural environment.
- 7. Metal instruments are now placed into low-density buckets, which are then weighted and transported to CO2, disposable and recyclable items are removed. The metal is recycled for collection by a local metal recycler.

Recycling: "Recycling: A new paradigm for metal instruments"

Instruments ready for collection by metal recycler - weights, cages, and boxes.

References

Principles of Implementing and maintaining local environmental changes: Assess ownership of sustainable initiatives to maintain or groups to ensure they are implemented and sustained.
In an effort to reduce waste at Melbourne Health, the Blood Management Committee has introduced the use of reusable ‘Blood Baskets’ to transport blood and blood products from the Transfusion Laboratory to the wards and critical care areas, excluding theatre. Between January and July 2018 the Transfusion Laboratory released over 10,000 units of blood and blood products to the hospital which have been transported in single use plastic bags. To reduce and better manage plastic waste the Transfusion Laboratory trialed the removal of plastic bags and the use of reusable ‘Blood Baskets’ to transport blood and blood products. This has been a successful improvement project which ran for four months. The Blood Management Committee greatly appreciates everyone’s efforts and hard work. Staff on 5 West Day Medical Centre, 7B and Clinical Assistants have been instrumental in the change to “No Plastic Bags”. As of the 1st of January 2019 blood and blood products are no longer being released to Clinical Assistants from the Transfusion Laboratory if they do not have a reusable ‘Blood Basket’. This great initiative is now saving over 20,000 plastic bags per year from going into landfill.
In order to promote all types of sustainable transport at Melbourne Health we celebrated Green Commute Day on 17 October, coinciding with Ride2Work Day. Our two RMH Campuses are surrounded by walking and biking trails and are also easily accessible by public transport. Secure undercover bike cages are available at both sites.

Information on sustainable transport options including bike and walking routes, train, tram and bus network maps, bike and car share opportunities were made available on the think green intranet page.

To get the conversation started about how staff get to work on a daily basis, we asked staff to complete a travel survey. Results show that 64.5% of respondents already commute either on public transport or they walk or use a bicycle to come to work. Only 12% use their car all the time and an additional 18% drive to the nearest train station then take public transport. We commute greener than the average worker.

In Parkville on average 46% of people use their car to drive to work and in metropolitan Melbourne the average is 66% of trips to work by car.
Thinking Green

TELEHEALTH PROGRAM

The RMH Telehealth program enables patients to have video appointments with our specialists using their own computer, smartphone or tablet. Telehealth is available for all RMH clinics, either from the patient’s home or their GP’s office. The Telehealth project began in 2017, focussing on outpatient appointments across 6 specialities. Since then the Telehealth Team has coordinated and facilitated 2,500 telehealth outpatient appointments for rural and regional patients across 21 specialties and 86 clinics. Patients have saved 700,000 kms in travel and over 2 million tCO₂e.

In addition, the telehealth platform is often used for education, team meetings, case conferences, and video interpreting services, further reducing travel.

ONE PATIENT’S STORY

- Set alarm for 4:30 am
- Arrive at airport at 5:30 am
- Catch morning flight at 6:30 am
- Arrive in Melbourne at 7:50 am
- Taxi in peak hour to RMH by 9:00am
- Wait in Outpatients until seen by clinician for 20 minutes
- Fills in time until taxi back to airport for 15:45 pm flight
- Arrive Mildura at 16:55 pm
- Home approximately 17:30 pm

= 12+ hours for a 20 minute specialist consultation
= $500 in travel expenses
Consumption Data

NORMALISING FACTORS

Normalising factors refer to indicators that are used to compare environmental performance over time and to allow for any changes in service delivery. The factors below are used throughout this report.

Separations
The number of separations for the reporting period

Floor area
Metre squared of floor space, excluding car parks

Recycling Rate
The Recycling Rate is the total weight of recycled material divided by the total weight of general waste and recycled material

Source: Public Environmental Reporting Guidelines, Department of Health and Human Services, VIC, 2017

Bed days
The number of in-patient bed days for the reporting period

Patients treated
The number of in-patient bed days, the number of emergency presentations and the number of out-patients for the reporting period

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<tbody>
<tr>
<td>Bed days</td>
<td>243,259</td>
<td>229,307</td>
<td>238,591</td>
<td>239,213</td>
<td>245,489</td>
<td>254,824</td>
<td>267,803</td>
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<td>Separations</td>
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<td>79,714</td>
<td>83,781</td>
<td>89,306</td>
<td>95,022</td>
<td>98,303</td>
<td>101,254</td>
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<td>Patients treated</td>
<td>462,430</td>
<td>459,921</td>
<td>478,262</td>
<td>485,905</td>
<td>503,771</td>
<td>530,192</td>
<td>555,254</td>
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<td>Floor area m2</td>
<td>114,367</td>
<td>114,367</td>
<td>114,367</td>
<td>121,083</td>
<td>127,799</td>
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<td>Bed days</td>
<td>52,274</td>
<td>50,994</td>
<td>50,426</td>
<td>57,097</td>
<td>66,383</td>
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<td>2,728</td>
<td>2,633</td>
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<td>4,026</td>
<td>3,785</td>
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<td>Floor area m2</td>
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<td>25,395</td>
<td>25,395</td>
<td>25,395</td>
<td>25,395</td>
<td>29,112</td>
<td>27,563</td>
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Energy

RMH CITY CAMPUS

Energy use per patient treated at RMH City Campus increased slightly this year.

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<tr>
<td>Electricity (Grid)</td>
<td></td>
<td>42,032</td>
<td>34,929</td>
<td>40,613</td>
<td>37,920</td>
<td>35,727</td>
<td>30,749</td>
<td>34,390</td>
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<td>Electricity (Cogen)</td>
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<td>65,332</td>
<td>72,301</td>
<td>66,667</td>
<td>71,336</td>
<td>71,705</td>
<td>75,014</td>
<td>72,063</td>
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<td>Natural gas and LPG</td>
<td></td>
<td>89</td>
<td>1,502</td>
<td>718</td>
<td>10</td>
<td>12</td>
<td>11</td>
<td>10</td>
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<tr>
<td>Other (e.g. steam, diesel)</td>
<td></td>
<td>64,698</td>
<td>69,027</td>
<td>72,634</td>
<td>78,126</td>
<td>71,748</td>
<td>81,401</td>
<td>95,232</td>
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<tr>
<td>Total (GJ)</td>
<td></td>
<td>172,151</td>
<td>177,759</td>
<td>180,632</td>
<td>187,392</td>
<td>179,193</td>
<td>187,176</td>
<td>201,695</td>
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Normalised energy consumption

| Energy per floor area (GJ/m²) | 1.51 | 1.55 | 1.58 | 1.55 | 1.40 | 1.46 | 1.58 |
| Energy per bed-days (GJ)     | 0.71 | 0.78 | 0.76 | 0.78 | 0.73 | 0.73 | 0.75 |
| Energy per separations (GJ)  | 1.93 | 2.23 | 2.16 | 2.10 | 1.89 | 1.90 | 1.99 |
| Energy per patients treated (GJ) | 0.37 | 0.39 | 0.38 | 0.39 | 0.36 | 0.35 | 0.36 |
Energy

RMH CITY CAMPUS

RMH City Campus - Energy Usage (GJ)

RMH City Campus - Energy per Patient Treated
Energy

ROYAL PARK CAMPUS

Energy consumption at Royal Park Campus was lower than in previous years. Energy per patient treated is at an all time low since measurements started in 2012-13.

In February 2019, the old Parkville Orygen site closed. The new Orygen building is no longer under the operational control of Melbourne Health, reducing the size of our Royal Park Campus and our energy consumption.

<table>
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<tr>
<th>Energy consumption</th>
<th>RMH Royal Park Campus</th>
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<tr>
<td>Electricity (Grid)</td>
<td>13,444</td>
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<tr>
<td>Natural gas and LPG</td>
<td>17,302</td>
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<tr>
<td>Other (e.g. steam, diesel)</td>
<td>19</td>
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<tr>
<td>Total (gigajoules)</td>
<td>30,765</td>
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Normalised energy consumption

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<tbody>
<tr>
<td>Energy per floor area (GJ/m²)</td>
<td>1.21</td>
<td>1.15</td>
<td>1.27</td>
<td>1.62</td>
<td>1.08</td>
<td>1.06</td>
<td>1.08</td>
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<tr>
<td>Energy per bed-days</td>
<td>0.59</td>
<td>0.57</td>
<td>0.64</td>
<td>0.72</td>
<td>0.47</td>
<td>0.47</td>
<td>0.44</td>
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<tr>
<td>Energy per separations (GJ)</td>
<td>9.95</td>
<td>10.75</td>
<td>12.28</td>
<td>12.44</td>
<td>7.80</td>
<td>8.18</td>
<td>7.15</td>
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Energy

ROYAL PARK CAMPUS

RMH Royal Park Campus - Energy Usage (GJ)

- Natural gas and LPG
- Electricity
- Other energy types (e.g. steam, diesel)

RMH Royal Park Campus - Energy per Patient Treated

First in Care, Research and Learning
GHG Emissions

RMH CITY CAMPUS

Greenhouse gas emissions at RMH City Campus have increased slightly in 2018-19. This is due to an increase in patients and also due to an increase in the ratio of grid electricity versus co-generated energy consumption. Our Co-generation plant is gas fired, meaning co-generated electricity is less carbon intensive.

SCOPE 1 & 2 EMISSIONS

Scope 1 GHG emissions (direct emissions) are emissions released to the atmosphere as a direct result of an activity at a facility
Scope 2 GHG emissions (indirect emissions) are emissions released to the atmosphere from the consumption of energy produced by another facility

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<td>Scope 1</td>
<td>3,319</td>
<td>3,612</td>
<td>3,757</td>
<td>4,018</td>
<td>3,694</td>
<td>4,186</td>
<td>4,898</td>
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<td>Scope 2</td>
<td>25,436</td>
<td>24,142</td>
<td>25,553</td>
<td>25,120</td>
<td>24,442</td>
<td>21,831</td>
<td>22,795</td>
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<tr>
<td>Total (tonnes CO2e)</td>
<td>28,755</td>
<td>27,754</td>
<td>29,310</td>
<td>29,137</td>
<td>28,136</td>
<td>26,017</td>
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Normalised greenhouse gas emissions

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<tr>
<th>Emissions per floor area (kgCO2e/m²)</th>
<th>251</th>
<th>243</th>
<th>256</th>
<th>241</th>
<th>220</th>
<th>204</th>
<th>217</th>
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<tbody>
<tr>
<td>Emissions per bed-days (kgCO2e)</td>
<td>118</td>
<td>121</td>
<td>123</td>
<td>122</td>
<td>115</td>
<td>102</td>
<td>103</td>
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<tr>
<td>Emissions per separations (kgCO2e)</td>
<td>322</td>
<td>348</td>
<td>350</td>
<td>326</td>
<td>296</td>
<td>265</td>
<td>274</td>
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<tr>
<td>Emissions per patient treated (kgCO2e)</td>
<td>62</td>
<td>60</td>
<td>61</td>
<td>60</td>
<td>56</td>
<td>49</td>
<td>50</td>
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GHG Emissions

RMH CITY CAMPUS

RMH City Campus - Greenhouse Gas Emissions (tCO2e)

RMH City Campus - GHG Emissions per m²
GHG Emissions

ROYAL PARK CAMPUS

Greenhouse gas emissions at Royal Park have declined again over the previous year and are at the lowest level since we began measuring our emissions.

NATIONAL GREENHOUSE FACTORS

The National Greenhouse Accounts (NGA) Factors is prepared annually by the Department of the Environment and Energy for use by organisations to estimate their greenhouse gas emissions. The published emissions factors are used throughout this report.
Source: Department of the Environment and Energy, AU, 2017

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<tr>
<td>Scope 1</td>
<td>889</td>
<td>814</td>
<td>975</td>
<td>1,398</td>
<td>925</td>
<td>895</td>
<td>851</td>
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<td>Scope 2</td>
<td>4,444</td>
<td>4,449</td>
<td>4,372</td>
<td>4,416</td>
<td>4,076</td>
<td>4,081</td>
<td>3,723</td>
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<tr>
<td>Total (tonnes CO2e)</td>
<td>5,333</td>
<td>5,263</td>
<td>5,347</td>
<td>5,814</td>
<td>5,000</td>
<td>4,976</td>
<td>4,574</td>
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Normalised greenhouse gas emissions

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<thead>
<tr>
<th>Emissions per floor area (kgCO2e/m²)</th>
<th>210</th>
<th>207</th>
<th>211</th>
<th>289</th>
<th>172</th>
<th>171</th>
<th>166</th>
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<tbody>
<tr>
<td>Emissions per bed-days /patients treated (kgCO2e)</td>
<td>102</td>
<td>103</td>
<td>106</td>
<td>102</td>
<td>75</td>
<td>75</td>
<td>68</td>
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<tr>
<td>Emissions per separations (kgCO2e)</td>
<td>1,725</td>
<td>1,929</td>
<td>1,757</td>
<td>1,757</td>
<td>1,242</td>
<td>1,315</td>
<td>1,102</td>
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GHG Emissions

ROYAL PARK CAMPUS

RMH Royal Park Campus - Greenhouse Gas Emissions (tCO₂)

RMH Royal Park Campus - GHG Emissions per m²
Water

RMH CITY CAMPUS

In 2018/19 our water usage has increased at City Campus. Water consumption can fluctuate depending on weather conditions, hotter temperatures require more water for heat rejection in our cooling towers. Our cogeneration plant used more water for steam generation this year. Please note: Water consumption in 2015/16 was higher than usual due to construction of four new floors in the B Building and commissioning of new equipment.

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<td>Potable water</td>
<td>188,042</td>
<td>152,798</td>
<td>156,660</td>
<td>236,572</td>
<td>145,497</td>
<td>179,582</td>
<td>184,222</td>
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<tr>
<td>Reused/recycled water</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total (kilolitres)</td>
<td>188,042</td>
<td>152,798</td>
<td>156,660</td>
<td>236,572</td>
<td>145,497</td>
<td>179,582</td>
<td>184,222</td>
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Normalised water consumption

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<tbody>
<tr>
<td>Water per unit of floor space</td>
<td>1.64</td>
<td>1.34</td>
<td>1.37</td>
<td>1.95</td>
<td>1.14</td>
<td>1.41</td>
<td>1.44</td>
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<tr>
<td>(kL/m²)</td>
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<tr>
<td>Water per bed-days (kL)</td>
<td>0.77</td>
<td>0.67</td>
<td>0.66</td>
<td>0.99</td>
<td>0.59</td>
<td>0.70</td>
<td>0.69</td>
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<tr>
<td>Water per separations (kL)</td>
<td>2.10</td>
<td>1.92</td>
<td>1.87</td>
<td>2.65</td>
<td>1.53</td>
<td>1.83</td>
<td>1.82</td>
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<tr>
<td>Water per patient treated (kL)</td>
<td>0.41</td>
<td>0.33</td>
<td>0.33</td>
<td>0.49</td>
<td>0.29</td>
<td>0.34</td>
<td>0.33</td>
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Water

RMH CITY CAMPUS

RMH City Campus - Water Usage (kL)

RMH City Campus - Water Usage per Patient Treated (kL)
**Water**

**ROYAL PARK CAMPUS**

Royal Park Campus water consumption per patient treated has decreased further in 2018/19 and is at its lowest since 2012/13.

Please note:
The unusual rise in water consumption in 2015/16 was caused by a plant failure which was subsequently repaired.

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</tr>
</thead>
<tbody>
<tr>
<td>Potable water</td>
<td>22,500</td>
<td>29,220</td>
<td>24,971</td>
<td>33,383</td>
<td>28,378</td>
<td>26,445</td>
<td>28,842</td>
</tr>
<tr>
<td>Reused/recycled water</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total (kilolitres)</td>
<td>22,500</td>
<td>29,220</td>
<td>24,971</td>
<td>33,383</td>
<td>28,378</td>
<td>26,445</td>
<td>28,842</td>
</tr>
</tbody>
</table>

**Normalised water consumption**

<table>
<thead>
<tr>
<th>Water per unit of floor space (kL/m²)</th>
<th>0.90</th>
<th>1.15</th>
<th>0.98</th>
<th>1.31</th>
<th>0.97</th>
<th>0.91</th>
<th>1.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water per bed days/patients treated (kL)</td>
<td>0.43</td>
<td>0.57</td>
<td>0.50</td>
<td>0.58</td>
<td>0.43</td>
<td>0.40</td>
<td>0.43</td>
</tr>
<tr>
<td>Water per separations (kL)</td>
<td>7.36</td>
<td>10.71</td>
<td>9.48</td>
<td>10.09</td>
<td>7.05</td>
<td>6.99</td>
<td>6.95</td>
</tr>
</tbody>
</table>
Water

ROYAL PARK CAMPUS

RMH Royal Park Campus - Water Usage (kL)

Kilolitres


RMH Royal Park Campus - Water Usage per Patient Treated (kL)

Kilolitres

Waste

RMH CITY CAMPUS

At RMH City Campus we decreased our clinical waste generation over last year despite an increase in patient presentations. Waste per patient treated has decreased this year.

Our total waste generation is still increasing due to the continued increase in patients treated. Other contributing factors include the trend in healthcare towards the use of single use and/or disposable items due to better infection prevention and continued construction and opening of new wards/areas.

Waste generation RMH City Campus

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Clinical waste</td>
<td>443</td>
<td>412</td>
<td>376</td>
<td>355</td>
<td>289</td>
<td>340</td>
<td>305</td>
</tr>
<tr>
<td>General waste</td>
<td>864</td>
<td>889</td>
<td>928</td>
<td>923</td>
<td>1,094</td>
<td>1,058</td>
<td>1,166</td>
</tr>
<tr>
<td>Recycled waste</td>
<td>431</td>
<td>577</td>
<td>500</td>
<td>481</td>
<td>537</td>
<td>622</td>
<td>562</td>
</tr>
<tr>
<td>Total (tonnes)</td>
<td>1,738</td>
<td>1,878</td>
<td>1,804</td>
<td>1,759</td>
<td>1,920</td>
<td>2,019</td>
<td>2,033</td>
</tr>
</tbody>
</table>

Normalised waste generation

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Waste per bed-days (kg)</td>
<td>7.14</td>
<td>8.19</td>
<td>7.56</td>
<td>7.35</td>
<td>7.82</td>
<td>7.92</td>
<td>7.59</td>
</tr>
<tr>
<td>Waste per separations (kg)</td>
<td>19.45</td>
<td>23.56</td>
<td>21.53</td>
<td>19.70</td>
<td>20.21</td>
<td>20.54</td>
<td>20.08</td>
</tr>
<tr>
<td>Waste per patient treated (kg)</td>
<td>3.76</td>
<td>4.08</td>
<td>3.77</td>
<td>3.62</td>
<td>3.81</td>
<td>3.81</td>
<td>3.66</td>
</tr>
</tbody>
</table>

Waste recycling

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Waste recycling rate %</td>
<td>33</td>
<td>39</td>
<td>35</td>
<td>34</td>
<td>33</td>
<td>37</td>
<td>33</td>
</tr>
</tbody>
</table>
Waste

RMH CITY CAMPUS

RMH City Campus - Total Waste Generation (t)

- General waste
- Recycled waste
- Clinical waste

RMH City Campus - Waste per Patient Treated (kg)

- General waste
- Recycled waste
- Clinical waste
Waste

ROYAL PARK CAMPUS

At Royal Park Campus total waste per patient treated has decreased from last year, as has clinical waste.

Please note: Clinical waste reported for both campuses does not include sharps; as sharps weight data is not available from the contractor.

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</tr>
</thead>
<tbody>
<tr>
<td>Clinical waste</td>
<td>18</td>
<td>15</td>
<td>20</td>
<td>15</td>
<td>21</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>General waste</td>
<td>210</td>
<td>208</td>
<td>198</td>
<td>222</td>
<td>247</td>
<td>250</td>
<td>241</td>
</tr>
<tr>
<td>Recycled waste</td>
<td>8</td>
<td>13</td>
<td>22</td>
<td>35</td>
<td>50</td>
<td>58</td>
<td>55</td>
</tr>
<tr>
<td>Total (tonnes)</td>
<td>236</td>
<td>236</td>
<td>240</td>
<td>272</td>
<td>318</td>
<td>324</td>
<td>313</td>
</tr>
</tbody>
</table>

Normalised waste generation

| Waste per bed-days / patients treated (kg) | 4.51 | 4.62 | 4.75 | 4.76 | 4.79 | 6.20 | 4.66 |
| Waste per separations (kg)               | 76.22 | 86.39 | 91.02 | 82.10 | 78.99 | 85.60 | 75.22 |

Waste recycling

| Waste recycling rate % | 4    | 6    | 10   | 14   | 17   | 19   | 19   |
Waste

ROYAL PARK CAMPUS

RMH Royal Park Campus - Total Waste Generation (t)

- 2012-13
- 2013-14
- 2014-15
- 2015-16
- 2016-17
- 2017-18
- 2018-19

Tonnes

General waste  Recycled waste  Clinical waste

RMH Royal Park Campus - Waste per Patient Treated (kg)

- 2012-13
- 2013-14
- 2014-15
- 2015-16
- 2016-17
- 2017-18
- 2018-19

Kilograms

General waste  Recycled waste  Clinical waste
Glossary

REPORT BOUNDARIES

The consumption data in this report reflects environmental performance at the RMH City Campus and RMH Royal Park Campus.
A full set of accurate consumption data is not available for other Melbourne Health sites, as some sites are either co-located within other organisations or utility costs are charged as a flat rate under lease agreements and metering is unavailable.

ACKNOWLEDGEMENTS

Data presented in this report was provided by suppliers, contractors, utility invoices, sub-metering and the Victorian Department of Health and Human Services.