HEALTHY ENVIRONMENT, HEALTHY PEOPLE

As a major provider of tertiary health services, health professional education and research in the north-east of Melbourne, Austin Health has a responsibility to the inner and wider community.

Austin Health recognises the link between human health and the environment. With climate change leading to more frequent heat waves and extreme weather events, inpatient admissions and cases of serious illness may rise.

In Victoria, public hospitals consume 60 per cent of the total energy used by all State Government departments. At Austin Health, over 6.2 tonnes of waste is generated per day. With an expected increase in inpatient admissions, these figures are expected to rise. As a major consumer of resources, Austin Health takes its commitment to environmentally sustainable healthcare seriously through dedication, leadership and innovation.

FROM THE CEO

Austin Health’s commitment to sustainability is long-standing. The pursuit of environmentally sustainable healthcare is a natural extension of the care we give to our communities both locally and globally and we pride ourselves on our leadership in the sector.

The organisation has built a systematic, whole-of-business commitment to environmental sustainability over seven years and the achievements have been remarkable. This was reflected in Austin Health’s recognition as a finalist in the 2015 Premier’s Sustainability Awards.

While the past year has seen a 3 per cent increase in patients treated at Austin Health, we have continued our commitment to reduce our environmental impact through initiatives such as the installation of LED lighting and an increased number of recycling streams.

I am pleased to present the 2014-15 Sustainability Report which highlights our achievements and our ongoing progress to achieve a more environmentally, socially and financially sustainable future.

Dr. Brendan Murphy - Chief Executive Officer
WATER

Austin Health understands the necessity of water for service delivery. To help reduce our environmental impact, water consumption is reduced though installation of water efficient fixtures. In addition, in 2014-15 nearly 4,000 kilolitres of water was recycled for toilet flushing onsite. The increase in water consumption from 2013-14 to 2014-15 is partially due to infrastructure issues and rectification.

GREENHOUSE GAS EMISSIONS

Scope 1 emissions include all emissions produced onsite that are material (>90%) to the operations and services of Austin Health. These are transport fuel used in operation of Austin Health fleet, gas consumption for all sites and diesel consumption for generators (volumes estimated, not material). Scope 2 emissions from the generation of the electricity purchased and consumed by Austin Health are produced by the burning of fuels (coal) at the power station, namely peak and off-peak electricity consumption for all sites.

ENERGY

Heating, cooling, ventilation and lighting are basic requirements for delivering patient care in a hospital setting. In addition, sophisticated medical equipment often consumes large amounts of electricity. Austin Health continually monitors usage and maintains energy security to deliver health services. The increase in gas and electricity consumption from 2013-14 to 2014-15 is largely due to the opening and utilisation of the Olivia Newton-John Cancer and Wellness Centre (ONJCCWC).

BEYOND THE HOSPITAL

Austin Health recognises the value of partnering with other organisations to achieve better engagement. In 2014 we established a partnership initiative with Greenfleet which gives employees the opportunity to donate money to offset their individual carbon dioxide emissions. This program has resulted in 1,610 native trees being planted to date.

"Austin Health recognises that good environmental health supports better outcomes for our patients and our staff"
Dr Brendan Murphy, Chief Executive Officer

CHEMICALS

In 2014 mercury thermometers were removed from the purchasing products list and replaced with mercury free oral thermometers.

Austin Health is also working to reduce mercury from other sources. While older style manual sphygmomanometers containing mercury have been replaced with an aneroid model, some mercury sphygmomanometers are still in use and a process to remove these is in progress.

PHARMACEUTICALS

The pharmacy department continues to review processes and ordering practices to reduce pharmaceutical waste. Treating more complex patients that require specialist and more expensive medications over the last 12 months has resulted in a slight increase in waste.
**WASTE**

2014-15 total tonnes of waste generated

- General Waste (70%)
- Clinical Waste (13%)
- Recycling (17%)

Austin Health manages 20 different waste streams, all of which are separated at the source of generation by staff. Austin Health has made a 233 per cent increase in the diversion of waste from landfill since 2008-09, primarily through increased recycling efforts and introducing new recycling streams.

The amount of general waste (items that go to landfill) generated has remained around an average of 4.35 kilograms of waste per patient per day, over the last five years.

**CLINICAL WASTE**

Clinical waste is considered waste resulting from medical or veterinary research or treatment, contaminated with blood or body fluids, which has the potential to cause disease. It is managed to reduce occupational health and safety risks by treating with incineration or steam then disposed of in licensed landfills.

Cytotoxic waste increased from 2013-14 to 2014-15 due to an increase in patients receiving cytotoxic treatments, particularly since the opening and transition into the ONJCWC. Despite this, clinical waste per occupied bed day has decreased over the last 2 financial years.

**AVOID, REDUCE, REUSE**

Equipment and furniture items were added to the Stationery Reuse List in 2014, reducing waste sent to landfill.

The positive feedback from adding equipment to the list led to three staff giveaway events. 36 staff collected and reused items such as filing cabinets, chairs, storage racks, desks, cupboards and pin boards.

**& RECYCLE**

Polyvinyl chloride (PVC) was a new waste type diverted from landfill this financial year. A total of 2.3 tonnes have been collected separately to be recycled.

PVC waste consists of intravenous fluid bags, oxygen masks and oxygen tubing. The waste is re-manufactured into new products such as garden hose and vinyl flooring.

In addition to the common recycling items collected in 2015, Austin Health recycled:
- 21.7 tonnes of timber pallets
- 2.5 tonnes of sterile wrap
- 860 kilograms mercury-containing lamps
- 840 kilograms of batteries
Creating gardens to improve the therapeutic environment at Austin Health

1,150 new plants planted during 2014-15

**GREENING**

A number of therapeutic garden projects were completed in 2014-15 including:
- North East Community Health Service
- 2 West Paediatric courtyard garden
- Psychological Traumatic Recovery Service courtyard
- Bowen Centre staff garden
- Secure Extended Care Unit garden (SECU)

The SECU cares for patients with complex mental health issues. The unit wanted to create a garden space that fostered rest, relaxation and recovery. Previously unused, this garden now provides spaces for sitting quietly to meditate, some raised vegetable/herb beds, fragrant and flowering plants, a vine mural and words of inspiration or contemplation painted on the walls.

More than 750 people attended guest speaking events, garden tours and workshops through the year to learn more about the Gardens and Ground project. More than $51,000 was donated or accessed in grants to develop the gardens in 2014-15.

**PEOPLE**

Formal environmental sustainability education reached 6,906 employees online, 1,080 new employees in the induction program, 143 in voluntary sustainability in-services and 192 in voluntary waste management in-services.

Hundreds of employees have made sustainable change in their departments throughout the year. Wards in the Flanders Wing formed an environmental committee, Ward 8 South has improved recycling efforts, the Surgery and Endoscopy Centre removed foam cups and developed their own posters, and the Radiology department continue to ask with passion “what else can we recycle?”

**WE ASKED:**

**DO YOU WANT TO ACHIEVE GREATER SUSTAINABILITY IN THE WORKPLACE?**

Data from interviews with more than 30 Nurse Unit Managers, provided the Sustainability Unit with valuable insights to better understand clinical staff.

The survey found: most Nurse Unit Managers rated sustainability as moderately important, 97% want to achieve greater sustainability, the majority were familiar with sustainability initiatives, and education and infrastructure were rated as the biggest barriers to sustainability.

Survey results led to the development of a communication strategy to engage staff at a more local ward-by-ward level, understand their local needs and challenges better and responding to them more effectively.

**97% said yes**

**FOOD**

Providing healthy options and labelling of food at Austin Health food outlets fosters healthy eating habits for patients and staff. Audits in 2014-15 revealed the traffic light labelling system identified opportunities for improvement. This system provides customers with dietary information about the products they choose.

Ideally, food and drinks with the lowest health rating should account for no more than 20 per cent of all items on offer. The audit found considerably more than this percentage, and only 1 out of the 7 outlets assessed displayed the traffic light signage correctly.

Liaison with café owners has resulted in a commitment to introduce the traffic light system more widely across outlets including vending machines, and drinks in cafes have already been rearranged to make healthy choices more readily available. Further audit recommendations will be followed up in the next financial year.

129 kilograms of cigarette butts & litter were collected by 45 volunteers from our three main sites in line with Clean Up Australia Day. People from the Executive team, staff and the public volunteered to help communicate the hospital's No Smoking policy.
# ENVIRONMENTAL MANAGEMENT STRATEGY

Austin Health takes its environmental responsibility seriously, indicated by an Environmental Management Strategy (EMS) in place since 2009. The EMS guides Austin Health to improve its environmental performance under key categories that align with the Global Green Healthy Hospitals framework.

<table>
<thead>
<tr>
<th>Overall Goal</th>
<th>2014-15 Action</th>
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| **LEADERSHIP**  
Demonstrate leadership support for green and healthy hospitals               | Develop standardised sustainability education package                           |
| **CHEMICALS**  
Improve the health and safety of patients, staff, communities and the environment | Eliminate the use of mercury thermometers                                       |
| **WASTE**  
Protect public health by reducing the volume and toxicity of waste generated | Include environmental assessment criteria as part of the Clinical Products Evaluation Committee process |
| **ENERGY**  
Reduce fossil fuel energy consumption as a means to improve and protect public health and foster energy efficiency | Conduct external energy audit to develop energy profile.  
* A modified version of this action was completed due to changes that occurred since the development of the EMS |
| **WATER**  
Implement conservation, recycling and treatment measures to reduce hospital water consumption and wastewater pollution | Adopt Yarra Valley Water "Choose Tap" campaign                                 |
| **TRANSPORTATION**  
Develop transportation and service delivery strategies to reduce climate footprint and contribution to local pollution | Review travel policy in regard to public transport fare reimbursement           |
| **FOOD**  
Foster healthy eating habits in patients and staff and support access to locally and sustainably sourced food in the community | Ensure healthy options and traffic light system available at all Austin Health food outlets |
| **PHARMACEUTICALS**  
Reduce pharmaceutical pollution by reducing over-prescription practices and promoting manufacturer take-back | Include in prescribing policy/procedure minimal quantity practices              |
| **BUILDINGS & GARDENS**  
Incorporate green building principles and practices into design and construction of health services | Prioritise areas as per the Gardens and Grounds Master Plan and implement therapeutic garden spaces |
| **PURCHASING**  
Source sustainably produced supply chain materials from socially and environmentally responsible vendors | Integrate Health Purchasing Victoria sustainable procurement guidelines into purchasing policy  
*This action is due to be complete late 2015* |
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<tbody>
<tr>
<td><strong>Total greenhouse gas</strong></td>
<td></td>
<td></td>
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<tr>
<td>emissions (tCO2e)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Scope 1 (tCO2e)</td>
<td>15,418</td>
<td>13,762</td>
<td>14,995</td>
<td>12,558</td>
<td>15,685</td>
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<tr>
<td>Scope 2 (tCO2e)</td>
<td>47,930</td>
<td>50,998</td>
<td>52,870</td>
<td>54,048</td>
<td>63,446</td>
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<tr>
<td>Total (tCO2e)</td>
<td>63,347</td>
<td>64,750</td>
<td>67,865</td>
<td>66,606</td>
<td>79,131</td>
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<tr>
<td><strong>Total tCO2e per building square metre</strong></td>
<td>0.27</td>
<td>0.25</td>
<td>0.26</td>
<td>0.25</td>
<td>0.29</td>
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<tr>
<td><strong>Energy</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Electricity (GJ)</td>
<td>146,227</td>
<td>155,557</td>
<td>161,298</td>
<td>164,892</td>
<td>193,564</td>
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<tr>
<td>Electricity (GJ) per building square metre</td>
<td>0.62</td>
<td>0.60</td>
<td>0.62</td>
<td>0.61</td>
<td>0.72</td>
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<td>Natural Gas (GJ)</td>
<td>286,756</td>
<td>260,310</td>
<td>284,244</td>
<td>237,320</td>
<td>298,254</td>
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<td>Natural Gas (GJ) per building square metre</td>
<td>1.22</td>
<td>1.00</td>
<td>1.09</td>
<td>0.88</td>
<td>1.10</td>
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<td>Diesel (GJ)</td>
<td>1,679.22</td>
<td>38.60</td>
<td>231.60</td>
<td>436.20</td>
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<td>LPG (GJ)</td>
<td>249.42</td>
<td>46.88</td>
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<tr>
<td><strong>Water</strong></td>
<td></td>
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<tr>
<td>Potable water (kL)</td>
<td>229,426</td>
<td>213,276</td>
<td>241,862</td>
<td>246,443</td>
<td>281,572</td>
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<td>Potable water (kL) per building square metre</td>
<td>0.98</td>
<td>0.82</td>
<td>0.93</td>
<td>0.91</td>
<td>1.04</td>
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<td>Recycled water (kL)</td>
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<td>6,550</td>
<td>7,990</td>
<td>9,340</td>
<td>3,956</td>
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<td><strong>Waste</strong></td>
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<tr>
<td>General waste (t)</td>
<td>1,558</td>
<td>1,522</td>
<td>1,454</td>
<td>1,603</td>
<td>1,590</td>
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<tr>
<td>General waste (kg) per occupied bed day</td>
<td>4.37</td>
<td>4.28</td>
<td>4.13</td>
<td>4.54</td>
<td>4.38</td>
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<td>Clinical waste (t)</td>
<td>321</td>
<td>294</td>
<td>272</td>
<td>288</td>
<td>293</td>
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<td>Clinical waste (kg) per occupied bed day</td>
<td>0.90</td>
<td>0.83</td>
<td>0.77</td>
<td>0.82</td>
<td>0.81</td>
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<td>Recycling (t)</td>
<td>521</td>
<td>350</td>
<td>371</td>
<td>360</td>
<td>377</td>
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<tr>
<td>Recycling (kg) per occupied bed day</td>
<td>1.46</td>
<td>0.98</td>
<td>1.13</td>
<td>1.20</td>
<td>1.05</td>
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<tr>
<td>Total waste (t)</td>
<td>2,400</td>
<td>2,166</td>
<td>2,098</td>
<td>2,251</td>
<td>2,259</td>
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<tr>
<td>Total waste (kg) per occupied bed day</td>
<td>6.74</td>
<td>6.10</td>
<td>5.96</td>
<td>6.38</td>
<td>6.22</td>
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</table>

Scope 1 direct (or point-source) emissions include all emissions produced onsite that are material (>7%) to the operations and services of Austin Health; transport fuel used in operation of AH fleet; gas consumption for all sites; and diesel consumption for generators (volume estimated, not metered). Scope 2 (indirect) emissions include: emissions from the generation of the electricity purchased and consumed by Austin Health; and the burning of fuels (coal) at the power station, namely peak and off-peak electricity consumption for all sites.

Data has been sourced from energy retailers/suppliers (electricity and gas), fuel receipts (diesel for generators) and fuel cards (transport fuel). Fuel types have been converted to GHG emissions by using the listed emissions factors from the National Greenhouse Accounts (NGA) Factors publication July 2012.

All data presented in this report was obtained from resource suppliers, contractors, internal sub-metering, audits, and the Victorian Department of Health.

This report has been prepared with the assistance of many Austin Health departments. We thank all involved for their contribution.