

a healthier environment for healthier people

Austin Health Service Overview

Austin Health is the major provider of tertiary health services and health professional education and research in the northeast of Melbourne. Austin Health operates 980 beds across acute, sub-acute and mental health with a 2013-14 annual operating budget of more than \$700 million.

We are an internationally recognised leader in clinical teaching and training, affiliated with eight universities. In addition, we are the largest Victorian provider of training for specialist physicians and surgeons.

Austin Health employs over 8,000 people across Austin Hospital, Heidelberg Repatriation Hospital (HRH), Royal Talbot Rehabilitation Centre (RTRC) and satellite services.

Austin Health is renowned for its specialist work in cancer, liver transplantation, spinal cord injuries, neurology, endocrinology, mental health and rehabilitation including a number of state-wide services.

In 2013-14 our staff treated 352,878 inpatient and 246,381 outpatient attendances.

Environmental Management Strategy

At Austin Health we recognise the link between human health and the environment. We are committed to improving environmental sustainability and the health and wellbeing of our staff and local communities through our Environmental Management Strategy (EMS). We have integrated the Global Green Healthy Hospital (GGHHN) international framework into our EMS. We have developed an action for each of the 10 principles to be implemented over a four year period.

Austin Health has joined a worldwide movement of improved environmental practice within healthcare as we embark on our journey to work toward a healthier environment for healthier people.

Our Year 1 Actions have largely been completed with challenges in the

energy, waste and water sectors. As with other health services, one of the challenges we face is growth. It is expected that within the Austin Health catchment area the population will increase by seven percent during the life of this EMS and to accommodate population growth comes the expansion of the health service. An increase in water consumption has occurred with the construction and occupancy of new buildings. Waste volumes have increased through treating more patients and the transition from reusable to disposable medical consumables. This transition was driven by instrument maintenance, management and cost.

The 2013-14 environmental sustainability initiatives are not limited to the year one actions. They also include events and quality improvement programs designed to promote awareness and participation in the delivery of sustainable healthcare.

CEO'S MESSAGE

At Austin Health we are driven by a sense of purpose about the services we deliver to our community. The services we deliver are multifaceted, broad-ranging and reach a large number of people within our community. To deliver such services, we must inevitably consume significant amounts of energy, water, food, pharmaceuticals, cleaning products and all manner of medical consumables, much of which is accompanied by a substantial environmental footprint.

Our heightened awareness of our environmental impact has brought about a number positive changes across the entire organisation, from the way we order and consume to the way we manage our waste streams. We continue to look for opportunities to maintain momentum by encouraging and promoting involvement from staff at all levels.

We are proud of our achievements to date and continue to look for innovative ways to improve efficiencies. Going forward, we will continue to ensure that environmental sustainability stays at the forefront of long-term decision making, through the implementation of our Environmental Management Strategy by embedding sustainability across the organisation.

The 2013-14 Sustainability Report highlights a range of improvements and challenges that demonstrate Austin Health's commitment to protecting our environment as we deliver our core health services.

2013-2017 Environmental Management Strategy - working towards a healthier environment for healthier people



As a major provider of tertiary health services, health professional education and research in the northeast of Melbourne, Austin Health has the responsibility to adopt more sustainable practices to help create a healthier hospital environment. Each day our activities require the use of energy and water. Those activities also generate waste, which not only has the potential to affect our environment but can impact our patients, staff and the community.

| | Leadership | Chemicals | Waste | Energy | Water | Transportation | Food | Pharmaceuticals | Buildings & Gardens | Purchasing |
|---|---|---|--|--|--|--|--|--|---|---|
| Goal (from Global Green Healthy Hospitals Network) | Demonstrate leadership support for green and healthy hospitals | Improve the health and safety of patients, staff, communities and the environment | Protect public health by reducing the volume and toxicity of waste generated | Reduce fossil fuel energy consumption as a means to improve and protect public health and foster energy efficiency | Implement conservation, recycling and treatment measures to reduce hospital water consumption and wastewater pollution | Develop transportation and service delivery strategies to reduce climate footprint and contribution to local pollution | Foster healthy eating habits in patients and staff and support access to locally and sustainably sourced food in the community | Reduce pharmaceutical pollution by reducing over-prescription practices and promoting manufacturer take-back | Incorporate green building principles and practices into design and construction of health facilities | Source sustainably produced supply chain materials from socially and environmentally responsible vendors |
| Year 4 Action 2016-17 | Implement mandatory sustainability education program | Develop and implement chemical reduction program to reduce volume of chemicals stored on-site | Explore the feasibility of an RFID waste tracking system | Conduct annual internal energy auditing program | Conduct water audit to develop water profile | Investigate feasibility of expanding EV fleet | Establish partnerships with local community to promote healthy and sustainable food choices | Conduct a review of current pharmaceutical ordering process to avoid excess stock | Facilitate and complete doctoral research project in conjunction with Deakin University – “Exploring the health and wellbeing experiences in accessing gardens and nature within a health care setting” | Increase the availability of environmentally sustainable products |
| Year 3 Action 2015-16 | Integrate environmental action for each department in annual Business Improvement Plan | Develop Lead/Cadmium Smelting Policy | Conduct detailed waste audit to develop waste profile | Document in policy requirement to retrofit using energy efficient alternatives. | Document in policy requirement to retrofit using water efficient alternatives | Investigate Metro Trains "commuter club" public transport fare program | Identify and assess feasibility of local and organic suppliers | | Develop and implement ONJCWC garden volunteer program | |
| Year 2 Action 2014-15 | Develop standardised sustainability education package | Eliminate the use of mercury thermometers | Include environmental assessment criteria as part of the Clinical Products Evaluation Committee process. | Conduct external energy audit to develop energy profile. | Adopt Yarra Valley Water "Choose Tap" campaign | Review travel policy in regard to public transport fare reimbursement | Ensure healthy options and traffic light system available at all Austin Health food outlets | Include in prescribing policy/procedure minimal quantity practices | Prioritise areas as per the Gardens and Grounds Master Plan and implement therapeutic garden spaces | Integrate HPV sustainable procurement guidelines into purchasing policy |
| Year 1 Action 2013-14 | Develop 2013-2017 EMS in line with GGHHN framework and DoH requirements | Include check point in <i>New Chemical/Hazardous Substance - Pre Purchase Check List</i> to ensure item not on Hazardous Chemical Restricted List | Reduce clinical waste and increase recycling rate by 3.3% annually or 10% over the life of the 3 year waste contract | Review energy target annually. Implement efficiency strategies for continual approval | Review water target annually. Implement efficiency strategies for continual approval | Implement Department of Transport EV trial | Brand all vending machines with "water branding" and remove soft drink branding | | Incorporate environmentally sustainable design principles and concepts into new builds | Strengthen the environmental & energy considerations in the Austin Health RFT Document and alter scoring to influence outcome |
| Austin Health Values | Integrity - we exercise honesty, candour and sincerity. Respect - we treat others with dignity, consideration, equality and value. | | | | | Accountability - we are transparent, responsible and answerable. Excellence - we continually strive for excellence. | | | | |

LEADERSHIP

Year 1 Goal: Develop 2013-2017 EMS in line with GGHHN framework

The Austin Health Environment Committee developed the 2013-2017 EMS in line with GGHHN framework. The key objectives for the EMS include:

- Identify and prioritise action for each year of the plan
- Set targets for energy and water consumption. Set targets for waste reduction and review data regularly
- Commence implementation of the strategy through action allocation and regular feedback

The environmental benefit of the strategy is varied. The EMS provides a framework for Austin Health to work toward improving environmental management across the organisation.

Sustainability Newsletter

Our bimonthly Sustainability Newsletter commenced late 2012 and has been recognized as a success. The newsletter reports on sustainability initiatives occurring within Austin Health and highlights upcoming internal events and those within the wider community. It is a simple and effective communication portal within Austin Health. To date, 249 people are subscribed to the newsletter.

Austin Health Clean Up!

Clean up events were held at the Austin Hospital and HRH sites to help promote our smoke free policy and a litter free environment. A total of 43 staff and volunteers equipped with gloves, garbage bags and pick-up sticks divided into teams to target high litter areas. A total of 60 kilograms of waste was collected from both sites, including approximately 49,000 cigarette butts.

The joint venture between the Workforce Health, Safety and Wellness Department, Veteran Liaison Office,

Cleaning and Support Services and Sustainability Unit is planned to be an annual event.

Sustainability Photo Competition

We asked staff to reveal their creative nature with our annual Sustainability Photo Competition which aims to increased awareness of sustainability within the health service. The winner was the director of the Austin Health Child Care Centre with a picture of children planting a magnolia tree on World Environment Day. See front cover for the winning photo collage.

The judge of the competition stated "In truth, I believe educating the next generation on environmental sustainability is pivotal to achieving long term change and sustainable benefits to our environment. The fact that the staff at the childcare centre spent some time teaching the children about the significance of World Environment Day and followed it up with a tree planting is a fabulous investment in our future and a worthy recipient of the prize." *Jo-Anne Moorfoot, Chair, Austin Health Environment Committee.* This is a sentiment supported throughout Austin Health

UpLift Bra Recycling

Austin Health is participating in the [UpLift](#) project by recycling unwanted bras. To date over 760 bras have been collected by staff and sent to disadvantaged women and communities around the world. Launched in November 2013 with National Recycling Week, the initiative has been a huge success with many departments still actively supporting this process.



Executive staff participating in Clean Up!



Example of waste collected during Clean Up!



Staff donating to the Up Lift program

CHEMICALS

Year 1 Goal: Include check point in New Chemical/Hazardous Substance - Pre Purchase Check List

Austin Health is committed to providing and maintaining a healthy and safe working environment for our employees, patients, contractor visitors and the community through responsible dangerous goods and hazardous goods management. When a new chemical or hazardous substance is required, a pre purchase checklist must be completed to ensure safety and compliance.

A check point in the new *Chemical/Hazardous Substances Pre Purchase Check List* has been included to ensure the substance is not on the Hazardous Chemical Restricted List

Chemical Management

While including a check point is a simple administrative process, chemical management at Austin Health is considered a priority. The Chemical Safety Committee provides a consultative forum to effectively address health and safety matters that may arise and drive continuous improvement in the development and introduction of safe work practices associated with the use, storage and handling of chemicals across all sites.

By its very nature Austin Health has complex laboratory environments providing research, microbiology and pathology services. We are affiliated with Melbourne University and the Ludwig Institute for Cancer Research for which we provide laboratory research space for these institutions. Within these spaces a variety of chemicals are required to perform operational research tasks. At Austin Health we have a robust structure and ensure safety is optimised for chemical management and waste disposal.

Chemical Recycling

Wherever possible, hazardous chemicals and substances are recycled. Chemicals are collected by a licensed waste transporter and taken to a resource recovery facility where the energy content of the chemical is extracted. The majority of waste chemicals collected from Austin Health undergo a process called energy recovery. This is a process whereby waste chemicals like paint, solvents, fuel, oil and the like are mixed together to make a fuel that is used in a cement kiln. This fuel is used as a replacement for fossil fuels. Plastic containers are washed and reused where possible. Metal containers are crushed and recycled.

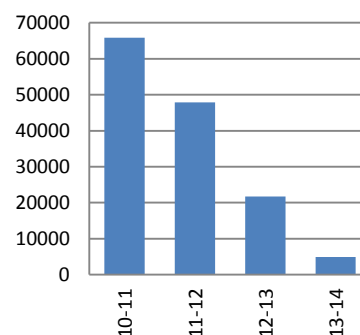
For the 2013-14 year Austin Health has recycled 3,085 litres of chemicals, paints, oils and mercury. Where a substance cannot be recycled it is rendered safe and disposed of according to legislative requirements.

Mercury

Austin Health continues to purchase 4,500 mercury thermometers each year, contributing to an estimated 300ml of mercury into the environment annually. Mercury thermometers are being phased out globally due to the environmental impacts resulting from their disposal. Mercury is considered a hazardous waste which is toxic to both human and animals and responsible disposal is essential to health and safety. Austin Health has a system in place to manage and recycle mercury waste.

By choosing alternative thermometers such as temporal artery or tympanic thermometers mercury has been reduced as a waste stream at Austin Health. Mercury sphygmomanometers have been also replaced by an aneroid (mechanical with a dial) model. Over the coming 2014-15 year Austin Health will eliminate thermometer mercury as a waste stream.

Mercury thermometers purchased



Mercury free thermometer alternative

WASTE

Year 1 Goal: reduce clinical waste and increase recycling rate by 3.3% annually or 10% over the life of the 3 year waste contract.

In 2010-11 the cost of disposing of Victorian public healthcare services waste was approximately \$17 million. With an expected increase in generated waste of approximately 24% by 2021-22, waste reduction strategies are an essential part of Austin Health's sustainable future.ⁱ

Despite significant effort we have not been able to meet our Year 1 goal this year. This is likely due to service expansion and the increase in disposable medical consumables.

What we have seen is an increase in clinical waste and decrease in recyclable waste generated per patient per day. To further divert waste from landfill over the past 12 months Austin Health has initiated:

- PVC recycling
- Sterile wrap recycling
- Construction and building waste sent to materials recovery facility

Mandatory environmental training

Austin Health's education program includes sustainability training at staff induction, and waste management training upon request. Sustainability training was recently incorporated into our mandatory e-Learning modules. The training focuses on waste management and resource efficiency. This is an exciting breakthrough in our objective to maximise staff education.

Waste Reduction Activities

Sterile Wrap Recycling

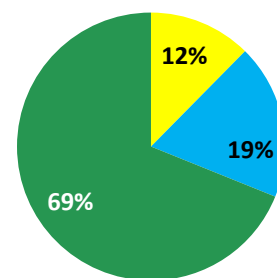
Austin Health commenced the collection of sterile wrap and disposable curtains in August 2013. Clean, uncontaminated wrap is collected separately from other recyclables; the woven plastic is able to be recycled to create new plastic products. The Operating Suite, Surgery Centre, Radiology and Central Sterilizing Services departments are the primary collectors of the materials.

To raise awareness for the initiative during National Recycling Week a KimGuard fashion parade was held. Our very resourceful and skilled staff designed some highly creative outfits, complete with accessories!

Paper Usage

Paper consumption has increased at Austin Health since the previous financial year. This may be attributed to the transition to online payslips, from bulk printing externally to employees printing individual payslips as desired. Education on paper saving techniques has continued through online information.

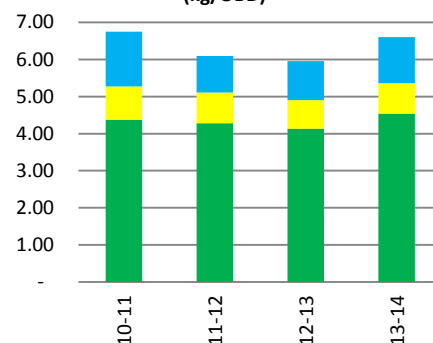
2013-2014 waste type*



- General waste is disposed of in landfill.
- Clinical waste, depending on its type, is typically shredded and sterilised to be disposed of in a landfill or incinerated.
- Commingled recycling is sorted at a materials recovery facility, sent to a recycler for further processing and made into new products.

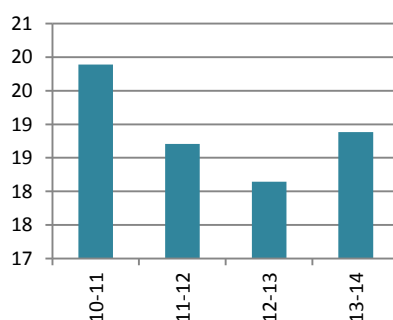
*This graph represents the total weight of solid waste generated at all Austin Health sites during 2013-14

Waste generated per patient per day (kg/OBD)



- General waste includes all solid general waste
- Clinical waste includes all medical waste
- Recyclable waste includes all solid recyclables

Annual paper usage (million sheets)



■ Number of sheets of paper



Dress made from KimGuard sterile wrap

ENERGY

Year 1 Goal: Review energy target annually. Implement efficiency strategies for continual improvement

In 2012-13 Victorian public healthcare services consumed 4.5 petajoules* of stationary energy and generated approximately 0.7 megatonnes** of greenhouse gas emissions. While hospital activity and floor area have increased, energy use has been stable, indicating an increase in energy efficiency.ⁱⁱ

Austin Health's multiple infrastructure projects under construction and future plans accommodate the needs of our growing community. It is expected that occupied building space and occupied bed days will increase as the health service expands. Data is reviewed regularly to provide annual targets.

Energy consumption targets are developed through calculating the percentage increase that occurred for electricity and gas from the baseline to the Year 1 target. The respective growth rates for electricity and gas are applied to obtain yearly targets for each utility type. These figures depend on actual implementation of capital works projects. The extent of infrastructure change and the resultant impact is not entirely clear at this stage. Hence, the target figures are high level estimations and will be reviewed annually with targets adjusted accordingly.

*petajoule – joule is a unit of energy, petajoule is equivalent of one quadrillion joules

**megatonne – tonne is metric unit of weight (1000kg), megatonne is equivalent to one million tonnes.

Efficiency Projects and Activities

LED lighting

The LED lighting exchange program throughout the Austin Tower building corridors at the Austin Hospital is nearly completed. It is expected that this type of lighting can reduce energy consumption by up to 70 per cent from

existing lighting. When replaced, the existing fluorescent tubes are sent to a recycling facility.

VSD's

The variable speed drives of the ventilation system in the Harold Stokes and Lance Townsend Buildings at Austin Hospital have been upgraded. These enable energy delivery to equal demand rather than over delivery, resulting in energy wastage.

ONJCWC

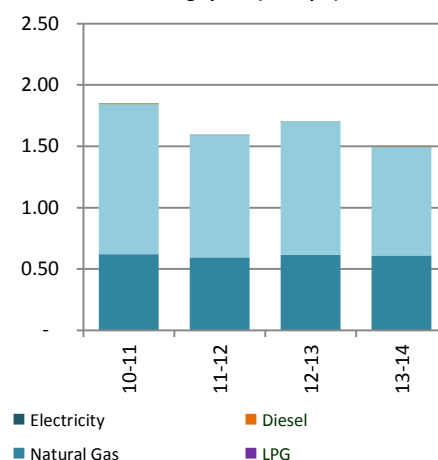
The Olivia Newton-John Cancer & Wellness Centre (ONJCWC) achieved the first certified Green Star Healthcare Design project in Victoria from the Green Building Council of Australia this year.

Energy performance

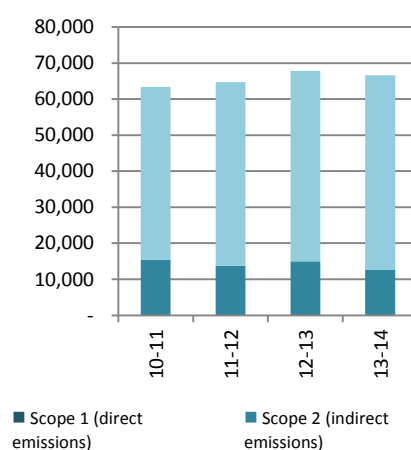
- Lighting: LED has been installed including sensor lighting in areas that do not require continual occupancy
- Chilled beam technology: provides more efficient localised cooling.
- Glazing: double glazing has been fitted throughout the building further reducing energy consumption

Austin Health is satisfied that the building is delivering on its expected energy efficiencies.

Stationary energy per square metre of building space (GJ/SqM)



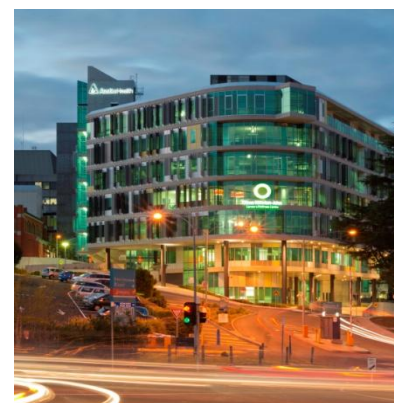
Greenhouse gas emissions (tCo2-e)



Greenhouse gas emission sources include electricity, natural gas, LPG, diesel and petrol.



Austin Hospital at night



Olivia Newton John Cancer & Wellness Centre

WATER

Year 1 Goal: Review water target annually. Implement efficiency strategies for continual improvement

Between 2006-07 and 2010-11 water consumption in Victorian public hospitals reduced by 15.7 per cent. Despite this, hospitals are consuming 3,800 megalitres of water each year, leaving further room for improvement. ⁱⁱⁱ

Efficiency Projects and Activities

As part of Austin Health's Year 1 goal, an Energy and Water Working Party has been established. Its role is to provide technical advice on energy and water efficiency opportunities in existing buildings.

Water saving features in new and redeveloped buildings

A 5000 litre underground water tank has been installed in the new Mellor Ward at the Royal Talbot Rehabilitation Centre for garden watering. A 2500 litre water tank was also installed in the Childcare Centre at the Austin Hospital for vegetable and landscaped garden watering during the dryer months as well as for toilet flushing.

In all new and redeveloped buildings water efficient fixtures of the highest rating are installed where possible.

Be Smart Choose Tap campaign

Austin Health focused on the promotion of tap water for drinking to reduce plastic waste and encourage healthy hydration. In February our [Be Smart Choose Tap campaign](#) was successfully launched in conjunction with Yarra Valley Water. [Yarra Valley Water](#) donated reusable water bottles and two water refill stations which have been installed at the Austin Hospital and HRH sites. The launch was a very popular event with approximately 900 employees attending.

Waterless scrubs trial

The Austin Operating Suite staff led a successful Waterless Scrubs trial in late 2013. The trial originated from awareness that patient infection risk had increased due to intermittent compliance of surgical scrub time. The trial has markedly reduced infection risk, water consumption, waste production and financial costs. Potential financial savings are estimated at \$6,000 annually. Environmental benefits include daily savings of over 4,500 litres of water, 30 hand towels and 30 scrub brushes.

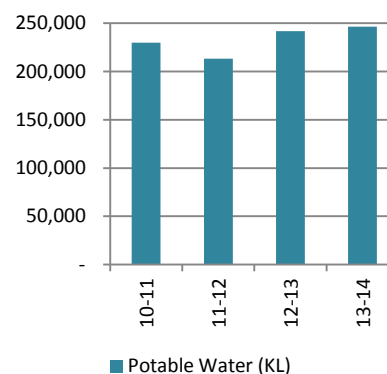


Water refill station

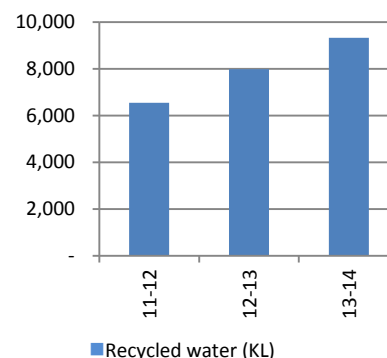
Recycled Water

Over the past three years, Austin Health has been recycling reject waste water from the reverse osmosis dialysis plants at the Austin Hospital and HRH sites, which is used for toilet flushing. Reverse osmosis laboratory system waste water and rainwater are used for toilet flushing and garden irrigation in the ONJCWC building. Reusing water reduces reliance on potable water.

Total water consumption (kL)



Recycled water - revers osmosis plants (KL)



Staff performing a surgical scrub

TRANSPORT

Year 1 Goal: Implement Department of Transport electric vehicle trial

With transport contributing to 14 per cent of Australia's CO₂ emissions, Austin Health understands the importance of reducing its greenhouse gas emissions in the transport sector.^{iv}

Electric Vehicle Trial

Road transport contributes to approximately 85 percent of transport CO₂ emissions.^{iv} Austin Health is committed to reducing its transport CO₂ emissions and has continued its participation in the Victorian [Department of Transport](#) trial until December 2013. Electric Vehicles (EV) contribute to less greenhouse gas emissions than conventional vehicles, release no tailpipe emissions, produce near zero noise pollution and require lower operational costs than conventional vehicles.^v

In general, hospital staff travelling for work perform many short trips which are suited to an EV. In addition, approximately 35 percent of current vehicles are small cars. They are therefore suitable for replacement with an EV in the future.

For the trial, [Mitsubishi](#) supplied the [i-MiEV model](#) and a charging unit based at the HRH site was installed. Showcase events were held at the three main Austin Health sites and staff education sessions were conducted. The EV was added to the fleet pool and staff given an opportunity to use the vehicle for their usual operational requirements.

Greenfleet Workplace Giving Program

Our 2012 transport survey revealed that 73 percent of staff are the sole occupant of vehicles driving to and from work each day. To reduce our personal travel related CO₂ emissions

Austin Health partnered with [Greenfleet](#) to introduce a Workplace Giving program.

Greenfleet is a not-for-profit organisation dedicated to helping the community reduce the environmental impact of travel, business and lifestyle choices by adopting low-carbon alternatives. Greenfleet offsets greenhouse gas emissions by planting forests that absorb carbon dioxide from the atmosphere as they grow.^{vi}

Staff were given the opportunity to sign up to the program by offsetting their personal travel related CO₂ emissions. A pre-tax benefit simplified the donation process. We are working toward achieving our target of 1000 trees planted through the Austin Health program.

Austin Health has also offset its entire vehicle fleet through Greenfleet, removing 388 tonnes of CO₂ from the atmosphere by planting 1450 trees.

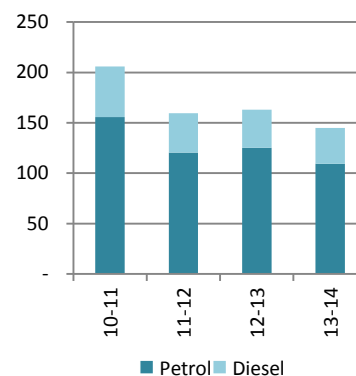
Fleet Management

Continual improvements have been made within fleet management. Through leasing fuel efficient vehicles, decreasing fleet size and ensuring regular tyre maintenance a reduction in fuel consumed has been achieved. As part of a regular tyre rotation program, Austin Health has reduced tyre waste which has both financial and environmental benefits. Tyres that are replaced are recycled and remanufactured for road surfacing, brake pads, flooring and used as an alternative energy source. Our tyre service provider is also a member of the [Tyre Stewardship Australia](#) Scheme.

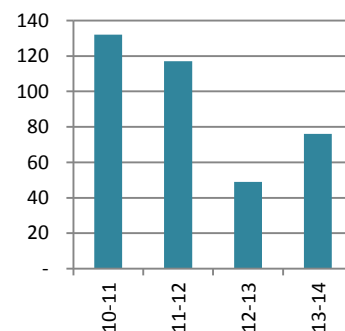


Launch event - offset of vehicle fleet with Dr Brendan Murphy, CEO Austin Health & Wayne Wescott, CEO Greenfleet

Fleet fuel consumption (kL)



Number of fleet tyre changes



Launch event - of Greenfleet Workplace Giving Program

FOOD

Year 1 Goal: Remove soft drink branding from vending machines

The Department of Health, Victoria has released [Healthy Choices - food and drink guidelines for Victorian public hospitals](#). The guidelines use a traffic light system to promote healthy food and beverage choices in retail outlets and vending machines.^{vii}

- **Green - best choice**
- **Amber - choose carefully**
- **Red - limit choice**

As a healthcare facility, Austin Health has a responsibility to provide healthy food and beverage choices to our patients, staff and visitors.

Vending machine audit

All vending machines located at the Austin Hospital and HRH sites were audited. Vending machine branding and content was assessed and evaluated. Results are available in the table below. Recommendations were made based on audit results and in line with Healthy Choices guidelines.

Vending machine branding audit – Compliance with guidelines

| | Austin Hospital | Heidelberg Repatriation Hospital |
|---------------------------|-----------------|----------------------------------|
| Food Vending Machine | 100% | 100% |
| Beverage Vending Machines | 90% | 100% |

The vending machine audit revealed that most vending machines were compliant with branding; only two machines were non-compliant. Austin Health has negotiated with the vendor that the branding of the non-compliant machines will be altered to reflect the healthier choice of water branding.

The Food Services department has been working on a variety of quality improvement projects over the years and responding to consumer feedback.

Recently the jam supplier has changed with the introduction of a locally sourced product from the Yarra Valley. It may seem a simple project but it has been well received by our aged care residents – *“it is like the old fashion home made marmalade”*.

The previous supplier used the double cooked method which involved boiling a low grade product to increase the setting point. The jam from the Yarra Valley is single cooked and packed to ensure quality and taste is preserved. There has been a slight increase in cost however serving sizes have increased. The change in product has resulted in some happy jam eaters – *“the flavours are more authentic and generous in portion size so if you want to have a thick spread you can or you can spread all the way to the edges of the bread!”*

Another quality improvement project has been product development of the soup line. The aim of the project was to ensure the soup available matched the description of the menu item, was full of flavour, cost comparable and enhanced the customer’s experience while meeting all nutritional requirements. The process was conducted over several months and included stakeholder engagement with consumers and the Nutrition and Dietetics and Speech Therapy departments.

The Food Services staff are extremely proud of being involved in the soup product development process which has lead to very satisfied customers. Reviewing the soup line has been the catalyst for a range of menu, process and product Innovations planned for the future.



Water branded ending machines



Product development and testing



Food Services staff involved in product development



Food services staff preparing meals

PHARMACEUTICALS

Year 1 Goal: Include in dispensing policy/procedure minimal quantity practices

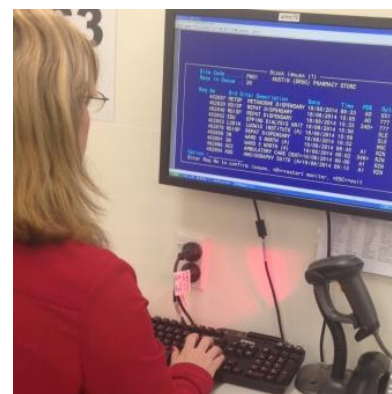
In 2011 an audit commissioned by the Victorian Auditor General Office identified 19 per cent of the annual spend on goods and services in public health is related to procurement of pharmaceuticals [viii](#). The National Health Services in the United Kingdom report 65 per cent of the healthcare carbon footprint is due to procurement and of that, 22 per cent is related to pharmaceuticals [ix](#). An opportunity exists to monitor Austin Health's pharmaceutical prescribing and dispensing practices to ensure carbon impact is minimised.

To assist in achieving this objective the Pharmacy department has ensured the following steps are taken into consideration when dispensing pharmaceuticals:

- Default prescribing quantities are entered into PharmNet software to ensure appropriate supply of the pharmaceutical
- Stock rotation practices are in place to ensure close to expiration date stock is re-deployed to areas where appropriate
- Par levels are set - minimum and maximum quantities to avoid over/under supply of standard stock items

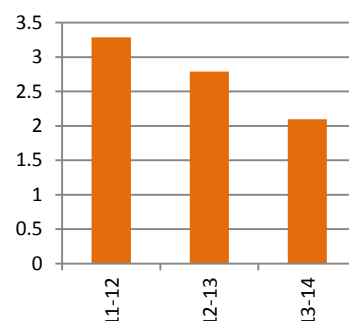
In order to redeploy short-dated pharmaceutical stock with the aim of reducing waste a specific position was created. The economic and environmental benefits of this new position are evident in the marked reduction in cost of expired pharmaceutical waste from 2009-2010 to 2010-2011. The fluctuations over the following years have been due to increased number of treated patients and thus prescribed medication increase and the increasing requirements of high cost drugs for patients with complex medical conditions.

A quality improvement project for the Pharmacy Department was the implementation of a 5S project to streamline stock management processes and increase efficiency. A supplier take back program has commenced with the return of some pharmaceutical packaging. While the logistics of this initiative are currently being confirmed the suppliers are signatories to the [Australian Packaging Covenant](#). The packaging covenant is a program that aims to reduce packaging sent to landfill through improved recycling rates and promotion of sustainable packaging design. We look forward to reporting on the take-back project in the future.

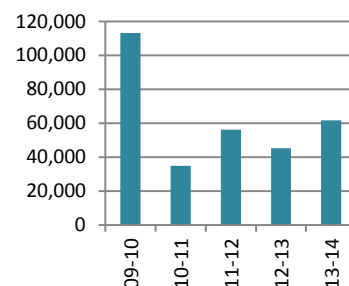


Entering of default prescribing quantities into PharmNet

Pharmaceutical waste (T)



Cost of expired pharmaceuticals (\$)



Pharmacy technician completing stock order

BUILDINGS AND GARDENS

Year 1 Goal: Incorporate environmentally sustainable design principles and concepts into new buildings.

Our commitment to minimise the organisation's environmental impact is to ensure that environmentally sustainable design (ESD) initiatives are incorporated into all new construction work where feasible and cost effective.

ESD initiatives will continue to be requested in all project briefs where practicable. Specific ESD criteria include:

- Identification of opportunities to minimise consumption of natural resources
- Separate monitoring of utilities to evaluate performance
- Where practicable obsolete infrastructure is replaced with efficient alternatives
- Post occupancy review to evaluate performance of ESD initiatives
- Major projects include considering passive design principles through site orientation, maximising natural light, reducing fenestration to east/west facades and locating shade devices to reduce high summer sun while maximising low winter sunlight.

Gardens and Grounds

With two significant new projects implemented over the last year and ongoing work with previously established garden projects due to staff driven garden expansion, the Garden and Ground Project is highly successful.

The collaborative doctoral research project continues between Austin Health and Deakin University, exploring the health and wellbeing experiences of patients, visitors and staff in accessing gardens and nature within a health care setting. Preliminary data highlights the positive impacts that accessing garden spaces can provide for patients, visitors and staff. Ongoing partnerships with [Amgrow](#), [Neutrog Fertilisers](#) and

[Takasho](#) continue to support the gardens through in-kind donations.

Community engagement opportunities of print and radio media, guided garden tours and guest speaking at garden clubs and conferences provide the opportunity to share the vision and the many projects undertaken.

Jessie Mary Vasey Labyrinth

Funded through a generous donation and named after the founder of the War Widows Guild of Australia, the labyrinth involved collaboration from Chaplains, the War Widows Guild, Veteran Liaison Officer, designer (artist and landscaper), mural artist and Gardens Project Officer. Located at the HRH, construction commenced in May 2012 and was opened in November 2013. The seating mosaics represent the seven seasons of the Wurundjeri people. Students from Alphington Primary School worked with the artist to make the mosaic seats. Indigenous plantings surround the labyrinth to complement this theme.

Nature Based Play Space

The Austin Child Care Centre located at the Austin Hospital recently celebrated the opening of the first stage of a project that aims to establish nature-based play spaces. The new spaces are intended to inspire the children to be creative and inventive, to explore and to connect with the outdoor environment.

The new space includes an array of coloured and textured plants providing the children with a wonderful source of interest and places to hide beneath large leafy canopies. The incorporation of different surfaces such as large flat rocks, sand and bark also stimulates the children's senses and fosters curiosity and inquiry. The sandpit, cubby house, and decking areas (with clever inbuilt storage) are other popular and functional aspects of the design.



Nature based play space



Jessie Mary Vasey Labyrinth



Jessie Mary Vasey Labyrinth

PURCHASING

Year 1 Goal: Strengthen the environmental and energy considerations in the Austin Health request for tender document

Environmental sustainability criteria is present within the Austin Health Request for Tender (RFT) document however, an opportunity exists to strengthen this criteria to further minimise environmental impacts of products and services

Potential vendors are required to provide evidence in support of the sustainable provision of products and services. Vendors are to submit:

- Policies or statements on environmental practices
- Identification and minimisation of the environmental impacts of relevant products/services
- The scope of environmental management systems including The outline of environmental/sustainability targets, objectives, auditing regimes and progress towards meeting/implementing these goals and systems
- Capability framework to provide environmentally sustainable products
- The range of products that are manufactured from recycled material
- The estimated percentage figure of the average recycled content of the products
- The end of life plan for product take-back, reprocessing or remanufacturing
- Materials with minimal packaging where appropriate and take-back packaging arrangements
- Annual report of Company's sustainability performance.

Supply Department Economic & Environmental Sustainability

Our Clinical Products Advisor and the Buying Team within the Supply

Department have been the drivers of initiatives that have saved Austin Health approximately \$98,000 since June 2013. Initiatives include:

- Reduction in the number of glove suppliers
- Reduction in the number of undercast padding suppliers
- 25 per cent reduction in the number of deliveries of resuscitation equipment by increasing stock volume ordered and holding stock in a storage room.

These initiatives have not only improved economic efficiencies but also reduced travel-related environmental impacts. Packaging waste has also been reduced. The Supply Department now reuse up to 50 boxes per day for delivery of items to wards and departments across Austin Health sites. Supply orders are issued in bulk wherever there are sufficient volumes to do so, rather than breaking down supplier deliveries and repacking when orders are picked from warehouse shelving. This has resulted in the reduction of purchased packaging leading to annual savings of \$60,000.

Warehousing

Over recent years the Supply Department has focused on streamlining all warehouse, stock ordering and control processes. This has resulted in greater efficiencies and consolidated ordering. Delivery requirements have reduced and thus decreased truck movements on site. This has both economic and environmental impacts.



Warehouse at the Heidelberg Repatriation Hospital site



Loading dock at Austin Hospital

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- Austin Health Child Care Centre
- Capital Works
- Corporate Communications
- Facility Maintenance
- Fleet Management
- Food Services
- Pharmacy Department
- Supply Department
- Workforce Health Safety & Wellness

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Photography

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Sustainability Photo Competition finalists: Donna Cosentino, Shannon Gleeson and Vanessa Wong.

REFERENCES

- i
<http://www.health.vic.gov.au/sustainability/waste/index.htm>
- ii
<http://www.health.vic.gov.au/sustainability/energy/use.htm>
- iii
<http://www.health.vic.gov.au/sustainability/water/index.htm>
- iv
<http://www.climatechange.gov.au/reducing-carbon/reducing-australias-emissions/australias-emissions-projections/transport-emissions-projections>
- v
http://www.transport.vic.gov.au/data/assets/pdf_file/0011/92666/Electric-Vehicle-trial-mid-term-report.pdf
- vi
<http://www.greenfleet.com.au/AboutGreenfleet.aspx>
- vii
<http://www.health.vic.gov.au/healthychoices/>
- viii
<http://www.audit.vic.gov.au/publications/20111026-Health-Procurement/20111026-Health-Procurement.html>
- ix
http://www.sduhealth.org.uk/documents/Pharma_footprint_NHS_reduced_Sep_2013.pdf