

# case study

"The cost savings that can be made by separating clinical and general waste are enormous"



Christian Pattison, Zonal Waste Coordinator for Queensland Health

## waste management

With an annual spend of \$600,000 a year, the waste management system at the Royal Brisbane Women's Hospital Health Service District was a significant expense that warranted cost analysis. Potentially, the health, safety and environmental costs of not accurately segregating clinical waste went beyond dollars.

The Royal Brisbane Women's Hospital Health Service District is the largest tertiary referral hospital in the southern hemisphere and provides services to patients throughout Queensland, northern New South Wales, the Northern Territory and neighbouring countries in the southwest Pacific. The hospital fulfils a significant teaching and research role with links to Queensland's major tertiary institutions.

With a broad range of waste management needs across several locations, it was decided to conduct a waste audit to measure the tangible and intangible costs of existing disposal systems. This process began in 1999 and drew on a diverse range of resources from within the hospital and beyond.

Leading this audit was Christian Pattison, Zonal Waste Coordinator for Queensland Health. "The cost savings that can be made by separating clinical and general waste are enormous", he says.

According to Christian, one of the key factors in streamlining the waste management system was introducing segregation at point of disposal, which also assisted in addressing OHS issues. "We tendered for a dual bin system awarded to KDL who met the specific

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requirements using a SULO bin – the bins had to be durable, capable of having the lid foot-pedal operated, and meet legislative colour-coding", he said.

Since installing over four thousand of the bins, not only have these requirements been met, but hundreds of thousands of dollars were saved. "For the 1999-2000 financial year our waste disposal cost was \$620,000. For the 2003-2004 financial year it was \$430,000 – these results speak for themselves."

One of the ways these savings were measured was a comparison of the cost per kilogram of disposing general waste and clinical waste (via contracted service providers). This comparison showed that clinical waste disposal costs about 30 times more than general waste. "The difference can be even greater outside metropolitan areas where the cost of clinical waste disposal increases disproportionately", said Christian. "The audit also revealed a 50% non-compliance rate – what this means is that general waste and recyclables were being included in clinical waste, costing thousands in unnecessary disposal costs", he said. "By segregating waste at point of disposal we eliminated this problem too."

Another major benefit to emerge as a result of the new system is that the frequency of waste-product related injuries has been dramatically reduced. "We used to average at least two needle-stick injuries a year, where disposal and operations staff were injured by syringes. Since we implemented the new system, there have been no incidents reported", he says.

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According to Christian, the initiative has resulted in other benefits.

"We were awarded an "O.A." (rating of Outstanding Achievement) for waste management from the Australian Council on Healthcare Standards (ACHS) which recognised our commitment to managing clinical waste responsibly and ethically with our staff, patients' and suppliers' best interests in mind.

"We have also become the largest cardboard and paper recycler on the east coast, recycling over 30 tonnes of cardboard and nearly 8 tonnes of white paper a month – so a lot of positives have come out of the new system."

Christian described the project as flexible and solution-driven. "We used a combination of audit data, benchmarking, education and promotion tools, waste processes, and bin products to meet our specific needs and customised a solution to a complex set of problems."

Based on his experience with the project, Christian feels that it is a solution that could be easily duplicated by hospitals of a similar size, through to mid-size health centres, day surgeries and smaller family practices.

"We have demonstrated how an improved waste separation system can dramatically improve safety for staff and create a healthier environment and bottom line for any medical business."