



Case Study

Healthy Hospitals: A Journey to ISO 14001 Certification

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With many health researchers now focusing on determinants of health we have seen a wide range of initiatives that go beyond “traditional” healthcare – things such as breakfast programs for children, literacy programs, and after-school activities. Inspired by our hospital’s vision of being “an excellent community hospital that contributes to making our community as healthy as possible,” we were ready to take on a non-traditional area of healthcare – the environment. The first steps in achieving our vision started directly inside the organization; we knew we had to get our own house in order. Thus, through the development of a comprehensive Environmental Management System (EMS), Cambridge Memorial Hospital (CMH) did just that and, as a by-product, became the first hospital in North America to be certified as ISO 14001 compliant.

Approximately 100 km west of Toronto, CMH is the only hospital in Cambridge and has a reputation for delivering high-quality, patient-focused care to the residents of Cambridge and North Dumfries. The 277-bed hospital serves a community of approximately 120,000 people, with services including acute, ambulatory and long-term care. The hospital underwent a significant re-engineering process in 1995/96, resulting in

an exceptionally flat organizational structure based on a program management model. Over recent years the Board of Directors led an important shift for the hospital in its vision, moving from a model of “curing the sick” to one focused on improving the health of the community. This vision embraced improving health and wellness of the local environment.

THE JOURNEY TO ISO 14001 CERTIFICATION

Environmentally, the hospital was not a proud icon of waste management and recycling in the early 1990s. With an active biomedical waste incinerator and very limited recycling of materials, its environmental footprint was big, smelly and expensive. By 1997, we had begun our new journey in environmental awareness. The first step was approval of an environmental stewardship policy by the Board of Directors. Environmental legislation places the liability for contravention squarely on the shoulders of the members of the board and of the management of a hospital, so a clear environmental policy would demonstrate due diligence on the part of the board. After approving the environmental policy in June 1998 the hospital hired an experienced Environmental Coordinator to work part-time on the development of its Environmental Management

WHAT IS AN EMS?

Modelled after the ISO 14001 standards, the Environmental Management System (EMS), in its very tangible form, is a series of policies, procedures and guidelines that direct the management of the hospital’s environment. In fact, going through the development of the EMS is quite similar to going through the traditional hospital accreditation process. The policies in the EMS include:

- planning and organization
- tracking of legal and regulatory requirements
- environmental action planning
- structure and responsibility
- training, awareness and competence
- communication
- document control
- operational control
- emergency preparedness and response
- monitoring and continuous improvement
- environmental record-keeping
- management review

THE TIME IT TOOK...

1990-1993	Limited recycling initiatives, but no formal environmental management policy
1993	First waste-management project completed (Waste Stream Analysis)
1993-1995	Implemented new waste-management programs including IV bag recycling
1995-1996	Hospital re-engineered, new CEO joins CMH in July 1995
1996-1997	Initiatives to increase diversion of waste into recycling stream
1998 (Jan.)	Creation of the "Green Team"
1998 (Spring)	Shutdown of 25-year-old biomedical waste incinerator
1998 (June)	Approval of Environmental Policy by Board of Directors
1998 (Fall)	Hired Environmental Specialist to develop Environmental Management System (EMS)
1999	Implementation of the EMS
2000	Continued implementation of the EMS
2000 (Summer)	Internal EMS audit in preparation for ISO auditors
2000 (Fall)	EMS audit by a third party registrar
Dec. 19, 2000	Awarded ISO 14001 registration
2001 (Feb.)	ISO 14001 ceremony for all staff and external stakeholders
2001	Continued monitoring of EMS in preparation for surveillance audit in Fall 2001

System. The board and senior management recognized that not only was the EMS consistent with its new vision, it also made sense from a business perspective. By reducing the total amount of waste generated, significant savings could be achieved. For example, by shutting down the on-site biomedical waste incinerator in 1998 and subsequently reducing the amount of biomedical waste, the hospital was able to save \$5,000 per year in disposal costs and reduce annual total energy use by 5%.

Drastic reductions in waste generation do not happen overnight, and they do not happen with the support of only a few individuals. In order to develop its environmental plans, communicate them and implement them, the hospital created a team of primarily front-line staff, the "Green Team." This group of energetic, environmentally conscious individuals meets on a regular basis to discuss trends in environmental issues, make recommendations to improve environmental performance and provide environmental leadership to the hospital. The team was instrumental in achieving the ISO 14001 designation and continues to support staff in achieving the environmental goals for the hospital.

While many people may have noticed ISO certification signs on the side of manufacturing plants and other private businesses, they may not have thought of a hospital going through this rigorous process, but with an EMS modelled on the ISO standards it was a natural progression for CMH. Just like being recognized by the Canadian Council on Health Services Accreditation, the ISO certification was important in showing our commitment to achieving the best for our community. Some of the less tangible benefits associated with an improved waste-minimization program and a result of a comprehensive environmental management program include:

- *Increased community goodwill.* A good system assures the community of the hospital's commitment to demonstrable environmental management.
- *Improved risk-management profile.* A proper EMS minimizes the possibility of environmental problems and is important in demonstrating due diligence.

hospital waste incinerator was permanently shutdown in 1998, and biomedical waste is treated off-site. The air quality for our surrounding neighbours is improved by negating the release of materials such as dioxins and nitrous oxides from the burning of plastic and other materials.

- *Employee awareness to the environment.* Employees have adopted the policy and work very hard to maintain the EMS for the health of the environment.

BATTLES FOUGHT AND CHALLENGES FACED

Getting to the point where a facility can undergo the necessary audit to become ISO certified involves more than just a pile of binders with policies in them; it is only possible with the commitment and hard work on the part of many people in the organization. One of the key success factors for Cambridge Memorial was having a Board of Directors and Senior Management Team that were absolutely committed to achieving and maintaining the designation. While most people want to do the best they can for the environment, it was important to make the business case for the Board of Directors, to actually show them what the end result would be, the savings that would be achieved, and the positive public relations aspects of going forward.

- *Recognition as a leader in the healthcare sector.* Proactive measures on environmental issues fit the sustainable development strategy adopted by CMH. CMH demonstrates leadership in healthcare as the first hospital in North America to attain ISO 14001 certification.
- *Self-regulation.* An EMS minimizes the need for regulatory intervention and facilitates a cooperative approach by regulatory agencies. The assurance of compliance prevents the negative publicity and adverse effect on public confidence in CMH services, which may result from a regulatory violation. Compliance with the law is key to self-regulation.
- *Control.* Examining practices associated with waste management, discharges and resource consumption can identify inefficiencies, leading to cost reductions.
- *Decrease in the release of airborne contaminants.* The 25-year-old

The formation of the Green Team was another key factor in the success of this project; by choosing membership that included front-line staff from areas that were the greatest waste generators, and by having senior management representation at the table, this group was able to get the message out and keep up the enthusiasm for all environmental projects. This group was responsible for the most important part of achieving the designation – education. By using as many forums as possible, including electronic documentation, hard-copy documentation, hospital-wide in-services and orientation training, this group made sure that when the auditors asked any front-line employee what ISO 14001 was, they knew the answer. The communication tools needed to be varied and innovative in order to maintain a sustainable system that remained vibrant once the auditors left.

The next most important step in successful certification was follow-up. This meant checking back with each area in the hospital to ensure that all staff were following protocols and continued to be knowledgeable about the Environmental Management System. Again, maintaining the message to staff was extremely important in keeping the project front and centre.

Another lesson learned in our implementation process relates to documentation. It was important that all documentation was kept centrally, yet distributed widely. Not only is the central control and broad distribution important, but what is actually documented also counts. We were also careful to select measurable deliverables and keep accurate records of our accomplishments that clearly demonstrated how far we had come and where we needed to go in the future.

Finally, celebrate! The official celebration entailed a formal presentation ceremony and reception, inviting all staff and various external agencies to share in our accomplishment. By fully celebrating this achievement, further enthusiasm was generated to ensure the ongoing success of the Environmental Management System and to clearly acknowledge those who had played pivotal roles in making it all happen. We also continue to celebrate and publicize the continuing success of the Green Team and our environmental program.

HOW THINGS LOOK IN 2001

Achieving ISO 14001 certification was a great accomplishment for the hospital, and we continue to receive recognition for our environmental achievements. The Recycling Council of Ontario has acknowledged CMH as an Outstanding Institution two years in a row, and the hospital was complimented in 2000 with the prestigious Chairman's Award. Recognition from the Regional Municipality of Waterloo and

THE GREEN TEAM

The following areas were represented on the Green Team:

- Infection Control
- Housekeeping
- Environmental Coordinator
- Management Team
- Occupational Health and Safety
- Surgical Services
- Purchasing
- Laboratory
- Linen Service

the Ministry of the Environment also added to CMH's environmental portfolio. While these awards are symbols of the accomplishments achieved, there are real data that show how far we have come; in 2000, 60 tonnes of white paper and 40 tonnes of corrugated cardboard were diverted from disposal, there was a 284% increase in recycling from the year before, and a 20% reduction in the amount of biomedical waste compared to 1998. There are also many spin-off projects, such as

intravenous bags recycled into automotive mudguards, nickel-cadmium battery and fluorescent lamp recycling and a pledge to create a mercury-free workplace. Not only has the hospital itself made changes to the way it operates environmentally, it has inspired other organizations in the community to also make changes; for example, after the hospital stopped using pesticides on its grounds, it negotiated with the City of Cambridge to put an end to pesticide use on the adjoining property and to make plans for further reductions in pesticide use throughout the municipality.

In the end, it was the commitment of all those involved, from managers to front-line staff to board members, that made this certification process a success. It is important to note, however, that it is not the actual certificate on the wall that counts, but the genuine commitment to our community and the impact that we as a hospital have on that community. By changing the way we do things within our organization, we can now begin advocating for change outside our walls. Ultimately, we know that by making our environment healthier, we will make our community healthier, thus achieving our hospital's vision. **KQ**

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