

Reducing the Environmental Impact of the Operating Theatre Environment

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Introduction:

The effects of human activity on the environment are well known and increasingly well understood¹. In keeping with the GMC's Duties of a Doctor² (protect and promote the health of patients and the public) and the tenet, "Primum non nocere", it is beholden upon us, as physicians and leaders in society, to practice and promote reduction of environmental impact from our behaviours.

Methods:

I used a PDSA³ approach to reduce the environmental impact of a two theatre operating department, specifically reducing the waste going to landfill and the electricity usage. It was important that any changes made to practice must not:

- Detriment patient care
- Cost any more money
- Create significant extra work for the staff

Having spoken to, and gained support from the theatre teams, theatre management, surgical directorate and hospital senior management, small changes were made to standard practices.

Because the staff were involved in, believed in, and informed about the project at all stages, they took ownership of many elements and collaborated in ways which otherwise would have been very difficult.

A system for ongoing continual audit and improvement similar to ISO 14001/BS 8555 has been established. This commits the department to annual environmental audits and year-on-year improvement.



Conclusion:

We have a responsibility to reduce the footprint of our lifestyle and this includes our working environment. I have shown that with little more than time and enthusiasm it is possible to reduce the environmental impact of the operating theatre environment, save money and improve working relationships.

References:

1. Intergovernmental Panel on Climate Change. <http://www.ipcc.ch/index.htm>
2. General Medical Council (UK). Good Medical Practice. The duties of a Doctor registered with the General Medical Council. 2006
3. IHI.org [http://www.ihl.org/IHI/Topics/Improvement/ImprovementMethods/Tools/Plan-Do-Study-Act+\(PDSA\)+Worksheet.htm](http://www.ihl.org/IHI/Topics/Improvement/ImprovementMethods/Tools/Plan-Do-Study-Act+(PDSA)+Worksheet.htm)

Measurable Results:

- Introduction of recycling for cardboard, cans, batteries and confidential paper
- Reduction of virgin paper usage by printing proformas on recycled paper
- Changing to PVC-free face masks (saving approx. £5000 (US\$8000) p.a. and sending 560kg less PVC to landfill)
- Reduced wastage of stationery
- Reduced frivolous use of disposables
- Reduced electricity usage due to staff turning off lights/TV's/computers and fitting timer switches on all cupboard/changing room lights
- Reduced hot and cold water usage by fixing dripping taps (faucets) and turning taps off
- 'Think before you print' email footers may have reduced print paper usage

Non-measurable results:

- Improvements in team spirit
- Enhanced departmental pride and morale, leading to improved job satisfaction and potentially fewer errors
- Increased goodwill in the workplace
- Exportation of eco-principles to staff homes

Future Plans:

- In-theatre paper and plastic recycling (up to 500kg of each per year)
- Change to recycled office paper
- Change to recycled paper hand-towels
- Removal of disposable plastic cups
- Expansion to whole hospital/health service