

NURSES ROLE IN CREATING GREEN HEALTH IN HEALTH CARE UNIT.

Rajathi A., Principal,
KMC College of Nursing, Trichy.



“Environmental pollution is an incurable disease,
it can only be prevented.”

- Barry commone



Introduction

Green, the color of nature, has become the latest and emerging trend. The definition of going green involves waste reduction, energy and resource conservation. Hospitals generate one of the most diverse solid and bio-hazard waste products in large quantities, comparing to any other commercial office buildings.

Presently in India, about 960 million tons of solid waste is being generated annually as byproducts during industrial, mining, municipal, agricultural and other processes. Of this 350 million tons are organic wastes from agricultural sources; 290 million tons are an inorganic waste of industrial and mining sectors and 4.5 million tons are hazardous in nature.

The Indian Green Building Council (IGBC) and Green Rating for Integrated Habitat Assessment (GRIHA) are the green building rating systems help to review the requirements and aid in setting up goals for green projects by targeting elements of sustainability.

Benefits' of going eco-friendly in Health care units

- **Lower cost:** It is true that purchasing an eco-friendly product will cost you less than purchasing a normal one. In this way you will be using your money in an effective manner.
- **Healthier lifestyle:** Eco-friendly products for that matter guarantee you with a promise

of healthier lifestyle. It will even improve the environment and in return will provide you with ample of benefits.

- **Sustainability:** The main aspect of going eco-friendly is about sustainability. Since the world is corrupted with pollution and toxic amount of materials, making it sustainable can be a good call.
- **Quality of life:** Going eco-friendly also improves your quality of life in terms of mortality, age, diseases etc. You might have a better shot at living a quality life with health if you chose to go eco-friendly.
- **Development:** If we as individuals take the initiative of Going Green for a change, there will be better drive for development in the areas which are related to green energies. Recycling is also a wonderful activity through which we cannot waste the used material and use it over and over again, which in term means that we are using our resources efficiently and smartly.

Implementation of green health care

Components of Green Healthcare System.

- (1) Leadership.
- (2) Substitute harmful chemicals with safer alternatives.
- (3) Reduce, treat, and safe disposal of health care waste.

- (4) Implement energy efficiency and clean, renewable energy generation.
- (5) Reduce hospital water consumption and supply potable water.
- (6) Improve transportation strategies for patients and staff.
- (7) Food.
- (8) Pharmaceutical Pollution and Safer Pharmaceutical.
- (9) Green Building.
- (10) Purchasing.

Top 5 Green Building Strategies for Health care

- (1) Establish energy efficiency.
- (2) Process water efficiently.
- (3) Utilize sustainable flooring.
- (4) Improve indoor air quality.
- (5) Establish lighting efficiency.

Nursing strategies for reducing energy use in hospital settings

- Upgrading insulation as part of other projects (e.g., new construction or re roofing).
- Checking insulation for condensation and water penetration.
- Insulating attics.
- Draft-proofing windows and doors.
- Installing double or triple glazed windows, preferably with low-emissivity glass.
- Installing automatic doors in locations where external doors are frequently left open.
- Installing plastic curtains inside delivery doors.

Strategies for reducing medical waste incineration

The CCME (2001) has identified several strategies for reducing incineration of medical waste:

- Waste segregation initiatives to identify materials that will emit dioxins, furans and other air pollutants and to divert them for recycling or other non-incineration disposal options.

- Combustion control strategies to improve the performance of existing incinerators.
- Use of alternative disposal or treatment technologies (e.g., anaerobic digestion of wastes, with recovery of materials and combustion of biogas).

Nursing strategies for reducing waste

Nurses can be very influential in:

- Introducing recycling programs for hospital waste, 45% of which may be paper (Hancock, 2001).
- Supporting the purchase of reusable linens in hospital and clinic settings and reducing the use of disposable linens.
- Asking suppliers to reduce packaging.
- Ensuring that only material needing incineration goes to the medical incinerator by educating staff and making waste receptacles available and accessible.
- Working with other members of the hospital staff to purchase health-care products that do not contain toxic substances such as mercury, so they do not end up in the waste stream.

Mercury free in health-care products

In hospitals and other health-care settings, mercury is used in batteries, fluorescent light bulbs and equipment such as thermometers, blood pressure cuffs and manometers on laboratory and patient care equipment. If a mercury spill results from breakage of such equipment, any mercury that is not properly disposed of evaporates and can be inhaled, exposing health-care personnel and patients.

Make a commitment to becoming mercury-free. Get the support of senior management and staff to eliminate mercury from your institution. Assign someone to lead the initiative, and form a mercury-free team with staff from across the hospital.

- Conduct an audit to identify all sources and uses of mercury in the health-care setting. Mark medical products containing mercury with a sticker to alert staff that they require special disposal and should be kept out of the general waste stream.

- Identify alternative mercury-free products, and develop a plan, including a budget, categorizing these items as immediately or gradually replaceable. Identify appropriate disposal procedures for the replaced items.
- Implement a mercury-free purchasing policy so that new products will not contain mercury. The policy should include reagents and other “background” uses of mercury. The cost of these items is dropping as more health-care facilities request them.
- Review mercury spill procedures with all staff as part of orientation and continuing education activities, so they can protect themselves in the event of equipment breakage.
- Discuss the impact of mercury on environmental health as part of these learning sessions, to stress the importance of appropriate disposal of products containing mercury.
- Participate in municipal recycling programs for products containing mercury, such as fluorescent bulbs and batteries.
- Hold a mercury thermometer disposal day for staff and residents of the surrounding community, and ensure proper disposal of the thermometers that are collected.
- When teaching new parents how to care for newborns, recommend use of non-mercury thermometers as a way of avoiding mercury spills in the home.

Nursing strategies for reducing the use of toxic cleaning products

Identifying the cleaning products being used in different parts of the hospital and determining whether they have been certified by the Ecology program.

- Considering the microfiber cleaning system, which uses far less cleaning product and water than conventional methods?
- Identifying the appropriate cleaning products for cleaning and disinfecting each area of the hospital and developing a plan, including a

budget, to replace existing cleaning products with less toxic products.

The Medical Procedures of greatest concern (i.e., causing highest exposure in the most susceptible subgroups), include:

- Volume exchange transfusion in newborns and infants.
- Extracorporeal membrane oxygenation in newborns and infants.
- Cardiac surgery in newborns and infants.
- Administration of total parental nutrition solutions containing lipids to newborns and infants.
- Enteral nutrition in newborns and infants.
- Various intensive care procedures for sick newborns.
- Intravenous infusion containing surfactants to infants and children.

Eight tips to create an eco-friendly health care facility.

- Conserve water. Using water efficient toilets, showers, and sinks can save on a lot of water in a year for an average family.
- Eat locally.
- Clean green.
- Repurpose items.
- Energy.
- Paperless.
- Disposal.
- Low smoke.

Nurses and Green Teams

Nurses are influential contributors to building design, institutional procedures and purchasing decisions. They can be key members of team created within health-care facilities that work to reduce their environmental footprint. Several hospitals across the World have established green teams which consists of staff members from departments across the institution. The teams focus on promoting energy

efficiency, product longevity, non-toxicity and attractiveness of the environment.

Conclusion

This paper has reviewed the Nurses role in health-care facilities which can minimize their environmental shadow by reducing their use of energy and toxic substances as well as their waste production. Other steps in creating sustainable hospitals include exploring the potential for major renovations that will further increase energy efficiency. The comfort and design of the physical setting in which health care is provided are important to healing. Appropriate lighting, clear signage, use of colour, reduction of clutter and access to nature all promote the health and well-being of patients and staff.

References

- Wilburn, S. (2007) Overview and summary: environmental health: important choices for

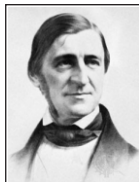
a greener world. *Online J Issues Nurse.*;12(2).

- Sattler, B., Hall, K. (2007) Healthy choices: transforming our hospitals into environmentally healthy and safe places. *Online J Issues Nurs.*;12(2).
- Laustsen, G. (2007) Reduce-recycle-reuse: guidelines for promoting perioperative waste management. *AORN J.*;85(4):717-728.
- Association of Perioperative Registered Nurses. (2005) *AORN Position Statement: Environmental Responsibility* [monograph online]. Denver, Co.
- Nightingale, F. (2005) *Notes on Nursing: What It Is, and What It Is Not*. Ann Arbor: University of Michigan Library Scholarly Publishing Office.

Social stress tied to lower bone density after menopause

Older women who are under a lot of social strain may be more likely to develop brittle, fracture-prone bones after menopause than their counterparts with worry-free lives, suggests a recent study published in the *Journal of Epidemiology & Community Health*. Each one-point increase in social strain scores was associated with 0.082% greater loss of BMD in the neck, 0.108% greater loss of BMD at the hip, and 0.069% greater loss of BMD in the lower spine, the study found.

(eMediNexus, 06 August 2019.)



“Do not go where the path may lead,
go instead where there is no path
and leave a trail.”

- Ralph Waldo Emerson