

LIFE □ Environment

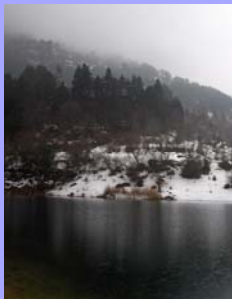


EMAS and Information Technology in
Hospitals



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Message from the Ministry of Health and Social Solidarity



Protection of the Environment in the field of Public Health

The values of environmental quality and protection are closely related to quality of life and human health and therefore to human dignity. The impacts of air and soil pollution, water contamination, chemicals and other factors (such as radiation) on human health are well known.

According to WHO's findings, the prevalence of diseases caused by low quality of the environment in urban areas has increased. Especially, the prevalence of asthma has increased, as a result of air pollution.

For this reason the European Union adopted in 2003 its Strategy for Environment and Health, which aims mostly at reducing diseases caused by environmental factors.

The Greek Ministry of Health and Social Solidarity is responsible for the harmonization of Greek legislation on health and the environment according to EU requirements.

At present, a two-year (2005 - 2007) pilot project funded under LIFE-Environment is implemented in two hospitals (one private and one public), regarding the development of an Environmental Management System according to the Regulation's 761/2001 on EMAS requirements.

The purpose of the project "e - Hospital EMAS" is to create a system for the management of all environmental issues in the hospitals and in particular recycling, hazardous waste disposal, energy saving, "green purchasing" etc. It is a leading project at European level, financed directly by DG Environment. The project's results will be disseminated with the cooperation of WHO to a significant number of European hospitals.

In conclusion, environmental pollution is a problem that can be resolved only through an integrated approach. Measures regarding health issues have already been taken by the Greek Ministry of Health and Social Solidarity which also deal with certain aspects of the environmental problem. However, health and the impact of environmental factors on human health are a high priority for us. We recognize the importance of our collaboration with other Ministries therefore we advocate an integrated approach.

Mr. Meletis Tzaferis

General Secretary of Public Health
Ministry of Health and Social
Solidarity

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Environment and Human Health

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Health is the most important value of life as well as the most called upon wish! More and more we are troubled by health problems caused by environmental factors (e.g. avian flu).

The problem itself however is not new, as the phenomenon of environmental impacts on health was the main cause for the creation of the environmental movement half a century ago. The pioneer of the environmental revolution Rachel Carson, author of the book "Silent Spring" which describes the impacts of chemicals on environment and human health, she herself was diagnosed and died from cancer caused by chemical substances...

The European Union (E.U.) in cooperation with the World Health Organization (W.H.O.) are examining with great emphasis the issue of environmental impacts on health and have published a series of studies and reports¹. As a result the E.U., recognizing the importance of this issue, has adopted in 2003 the European Strategy on Environment and Health². Its main goal is to minimize diseases caused by environmental factors, while its main axes are:

- Integrated approach: implementation of an integrated monitoring and response system on environmental health
- Integration of environmental strategies (specifically the policies regarding chemical substances, noise, atmospheric pollution, water pollution, radiation, indoor air quality, natural disasters and industrial accidents) and health strategies (specifically the policies regarding smoking minimization, food safety, pesticide use, electromagnetic fields and chemical products)
- Focus on children's health and occupational health and safety
- The transfrontier implementation and cooperation with E.U. acceding and neighbouring countries.

In order to evaluate the progress on these issues, 14 categories of indicators³ have been developed, which are monitored by W.H.O. in cooperation with the E.U. and the member states. One of them shows that the asthma cases in citizens (especially children) living in metropolitan cities has risen significantly over the last decades, due to atmospheric pollution.

All these issues were extensively analyzed at the 4th Ministerial Conference⁴ on Environment and Health, held on 23-25 June 2004. The theme of the conference was "The Future for our Children" and it was organised by WHO. The E.U. Action Plan for the period 2004 - 2013 was developed as a follow up of the European Strategy on Environment and Health and served as the European Commission's contribution to the 4th Ministerial Conference. This plan promotes an integrated approach to the individual policies on environment and health and includes actions on the following sectors:

- water and sanitation
- accidents and injuries
- air quality
- chemicals, noise, other physical agents and occupational health and safety.

Each E.U. member state has to develop a National Environmental Health Action Plan⁵ in order to implement the commitments they made in Budapest. For example in the new member countries the national action plans focus on combating water - related diseases, while in Greece they focus on minimizing impacts from air pollution. Full implementation of E.U. directives related to environment will result to significant improvements in health, since according to estimations approximately 43,000-180,000 of asthma cases as well as 15,000 deaths caused by air pollution on a European level could have been avoided. In Greece all these issues were presented in 2003 at the "Environment and Health" Conference organised by the Biomedical Research Foundation.

Recently (January 2005) E.U. published the report on Environmental Health¹ containing significant findings on a European level:

- 20 million Europeans suffer from respiratory problems due to air pollution
- 100,000 citizens living in European cities died in 2004 due to cardiovascular and cardiopulmonary diseases
- there was an average loss of 9 months in life expectancy for EU citizens due to premature deaths in 2000, caused by air pollution
- more than 20,000 Europeans die annually due to the reduction in the ozone levels ("ozone hole" phenomenon)
- cancer (and specifically leukemia and brain tumor) is the main cause of death in children younger than 15 years of age that live in industrial areas
- 7% of European children aged up to 10 suffer from asthma. The societal cost of asthma was estimated at 3 billion € annually
- despite the intensive research, scientists have not yet reached a conclusive result as to whether the use of mobile telephones increases the risk of cancer
- the presence of lead in the human body has been significantly reduced due to the application of the ban on the use of leaded petrol in vehicles
- impacts in biodiversity (wildlife) can be used as indicators of upcoming environmental impacts to human health
- 35,000 Europeans died due to extreme heat during the heat wave that stoke Europe in 2003
- a connection between environmental factors (endocrine disruptors) and fertility problems in men as well as increased risk of breast cancer in women has not been scientifically established
- the impact on health from chemicals used in cosmetics, pharmaceuticals and other synthetic chemicals has not yet been confirmed
- noise is the main environmental factor affecting the health of most Europeans.

Based on all the above findings it is clear that the environment does not affect just flora and fauna but seriously affects human health. Thus a better quality of environment equals a better quality of life.

Sources:

1. Reports on environmental health:

Report on environmental impacts to children health (2002):

http://reports.eea.eu.int/environmental_issue_report_2002_29/en/tab_content_RLR

Report on environmental health (2005):

http://reports.eea.eu.int/eea_report_2005_10/en/tab_content_RLR

2. Website of the E.U. on environmental health issues and relevant documents (policy and action plan):

http://europa.eu.int/comm/environment/health/strat_en.htm

3. Indicators and facts on environmental health:

<http://data.euro.who.int/hfadbf/>

4. Fourth pan European ministerial conference on environmental health:

<http://www.euro.who.int/budapest2004>

5. Progress of each country in environmental health issues:

<http://www.euro.who.int/eehc/ctryinfo/ctryinfo>

eHospitalEMAS News



The core of "eHospitalsEMAS" programme is EMAS accreditation of the hospitals, sustainable waste management and energy saving, including "green purchasing".

eHOSPITAL EMAS

Actions taken by the hospitals to implement EMAS regulations are:

1 Eco-Management and Audit Scheme (EMAS)

- The first step towards the implementation of an Environmental Management System, the Environmental Review has been completed
- Hospital Environmental issues acknowledgement and their impact assessment have been completed
- The procedures and guidelines for the implementation of Environmental Management are being developed
- Training seminars for the hospital personnel are under preparation

2 Sustainable Waste Management

- The reports on current waste management practices are completed

3 Energy Saving and "Green Purchasing"

- The research on best practices on energy efficient measures in hospitals in other EU countries has been developed.
- A list of energy efficient best practices in hospitals has been created.
- Innovative methodologies for "green purchasing" have been recorded

In the near future and based on the tasks already completed, the hospitals will proceed to the implementation of energy saving measures and incorporation of "green purchasing" methodology in their tender documents.

BEST PRACTICE EXAMPLE FROM EUROPE

Knappschaft Hospital in Recklinghausen, Germany



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Knappschaft hospital was founded in 1906 by a German insurance organization. Today, the hospital operates in facilities built in 1984 with a capacity of 459 beds. Its departments include Internal Medicine, Surgery (OR), Anaesthesiology, Neuroscience, Gynaecology, Neurosurgery, Dermatology, Ear, Nose and Throat, Radiology and Endoscopy, Physiotherapy, Intensive Care Unit. It employs approximately 1.000 people and totals 100.000 patient visits annually (40.000 out-patient and 17.000 in - patient visits).

The information provided in this text is translated from the hospital's Environmental Statement

(<http://www.kk-recklinghausen.de/umwelterklaerung.pdf>).

In 2002 the hospital management decided on implementing an Environmental Management System according to EMAS (Environmental Management and Audit Scheme) regulations, which was incorporated in the Total Quality Management System, taking into consideration the following parameters:

- The importance of a healthy hospital environment and its contribution to patient recovery and rehabilitation
- The impact that the operation of a hospital has on the environment: the operation of medical and biochemical departments, the high medical standards and the number of patients in every hospital result to the production of large quantities of waste and gas emissions. In addition, there is significant energy consumption.

It is stated that the hospital will put emphasis on the following issues:

- gas emission
- waste
- litter
- operational waste
- hazardous waste

As part of the Environmental Management System, the impacts of every department's operation on the environment have been categorized according to the following criteria: energy and water consumption, waste and litter production, gas emissions.

It was decided that Environmental Management would become a core component of Quality Management and Quality Improvement. In this context, an Environmental Management Committee responsible for creating and implementing the Environmental Policy was created.

The core principles of the Environmental Policy are:

- *The protection of the environment is an important element of the management and is to be taken into consideration in all hospital functions and levels. It is incorporated in the hospital management system through specific behavioral rules and goals.*
- *The compliance with environmental protection standards and its continuous improvement within the hospital's financial capability is considered an obligation.*
- *Knowledge enforces responsibility: the personnel are informed on a regular basis on the impacts that the hospital's operation has on the environment, in order to promote a sense of responsibility.*
- *Precautionary measures: measures are taken prospectively on the technical and managerial procedures to ensure that their environmental impact will be minimized.*
- *Conscious behavior: there is rational and efficient consumption of resources (such as water and energy) and recycling.*
- *Working together for the environment: cooperation with other organizations and authorities*
- *Dissemination: informing patients and personnel on the hospitals' environmental performance. Raising public awareness.*
- *Creating standards: cooperation preferably with suppliers that implement the same environmental management standards.*

The Environmental Policy goals are:

- Continuous efforts on improving environmental protection
- Each person's responsibilities on environmental protection should be clearly stated in writing.
- Analysis, planning and recording of all procedures that have an impact on the environment.

All these procedures are included in the Environmental Management Handbook. Important EMAS tools are the following:

- The Environmental Management Organization Chart and Responsibilities Matrix
- Internal circulation of documents
- Inspection and minimisation of environmental impacts.
- Attainment of certain level of knowledge regarding environmental protection, work safety etc.
- Waste reduction and separation
- Safe contact with hazardous substances
- Consideration about water, energy and other consumables consumption
- Green purchasing
- Environmental impacts appraisal of new services and procedures before their implementation
- Personnel training on environmental protection and work safety
- Informing patients, visitors and other related authorities
- Hospital accreditation

The Environmental Management Organization Chart demonstrates the groups / departments involved in Environmental Management and the interactions between them. The hospital's management and the Environmental Management Committee (10 members from various departments) are on the top of the Organization Chart. The Manager and the people responsible for the Environmental Management overlook the personnel whose duties include waste, hazardous waste and biological waste disposal from various departments such as technical department, financial department, nuclear medicine department, OR, cleaning, security etc.

Finally, the Environmental Statement includes the short term and long term goals of the Environmental Policy, which are clearly defined, quantified and allocated between the departments.

The hospital was accredited in 2005.



eHOSPITALEMAS



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