

Green Purchasing in Health Care

Public procurement represents 16% of EU GDP - that's over €1,000 billion! If that amount of money was put into environmentally preferable products, public procurement would end up making a significant contribution to a cleaner environment and better human health.

What is EPP?

EPP stands for Environmentally Preferable Purchasing. It aims to reduce harm to human health and the environment by integrating environmental considerations into all stages of the purchasing process.

EPP is just one term among many that are used for the same idea. EPP is also known as sustainable procurement, green procurement, eco-procurement, green purchasing and environmentally friendly purchasing.

The understanding behind EPP is that human health and the environment go hand-in-hand; improvement in one entails improvement in the other. Buying green is not simply about reducing the damage we do to the environment, but also about improving human health. For example, using cleaner public transport improves local air quality, and reducing the use of toxic chemicals in cleaning products leads to a healthier working environment.

Environmentally preferable products are generally:

- Less toxic
- Minimally polluting
- More energy efficient
- Safer and healthier for patients, workers and the environment
- Easier to repair
- Easier to recycle
- Incorporate less packaging
- More durable (have a longer life-time)
- Locally produced (travel short transport distances)

EPP in health care

The link between a clean environment and human health should make EPP a natural choice for healthcare institutions. EPP can be seen as part of the philosophy of the Hippocratic Oath to, "First, do no harm". The main task of hospitals is to prevent and cure illness; where possible the objective should be to cure without doing harm - whether to patients, employees or the public in general.

Public procurement is important to hospitals because they are typically large institutions which consume large quantities of products and services while producing a lot of waste. By implementing EPP as a gradual and ongoing process, hospitals can continually develop their use of products and services that are healthier, safer and more environmentally friendly.

Hospitals which implement EPP programs also set an example to others and influence the market. As they demand more sustainable products, the price for developing and producing these products will normally decrease. Through adopting green procurement practices, the healthcare sector provides industry with incentives for developing green technologies and stands out as a good example for businesses and people to follow.

What are the benefits of EPP?

EPP can save money for public authorities. Sustainable procurement does not mean extra costs. Although

it is true that greener products can have a higher purchase price, once whole life-cycle costs are considered, including use and disposal costs, savings may often be obtained.

- Choosing products with a minimum amount of packaging can result in a large decrease in quantity of waste produced, especially when thousands of units are purchased per year (such as sharps and intravenous products - IV bags)
- Purchasing greener Information Technology equipment can save money through reduced electricity consumption and lengthened life-time. By containing less toxic material and being easier to recycle at the end of its life greener IT equipment lowers waste disposal costs.
- Substituting mercury thermometers with digital alternatives rewards investment by eliminating the hazardous waste disposal costs that come with throwing out mercury.

There are a number of other ways EPP helps keep costs down, such as by encouraging careful consideration of whether a product is really needed at all, and introducing changes in routines and ways in which the product is used.

On top of this, environmentally friendly products lower costs because they generate healthier environments for patients and employees. By reducing patient and employee exposure to solvents, paints and hazardous materials, greener products can reduce the number of bed days or sickness absences.

The EU and EPP

Sustainable procurement is not a new concept. Many pioneering public authorities have years of experience of integrating environmental concerns with public purchasing, although this has yet to find its way

into mainstream implementation. What is new is that the European legal framework is now much clearer and more supportive of EPP implementation.¹

The Public Procurement Directive

In March 2004, the Council and the European Parliament adopted new Public Procurement Directives. All member states must comply with the new Directives. The EU has developed several tools in order to support green public procurement. Information on legal framework, guidelines and links can be found on the Europa website.² There you can find *Buying Green*, the EU handbook on green public procurement, information on the EU eco-label and an environmental database, amongst other things.³

The *Buying Green* handbook is designed to help public authorities launch green purchasing policies. The handbook follows through the structure of a procurement procedure, explaining the European Community law in a practical way, and looks at simple and effective solutions for implementing the procedures. It also gives many practical examples of green purchasing by public authorities across the EU. It should help suppliers, service providers and contractors - particularly smaller companies - to understand and meet the new EU environmental purchasing requirements. This factsheet explores the opportunities and limitations of green procurement in more detail below.

The environmental database on the Europa website provides corporate and public purchasers with background information on which criteria are relevant to particular products. The database contains environmental information on 100 product or service groups and gives basic

information such as whether or not the product has an eco-label, its main environmental properties, and what could be included in purchaser specifications. It is aimed at both corporate and public purchasers.

How to implement EPP

There are several important elements in the implementation of EPP. Key amongst these is that hospital management supports the idea.

In principle, it should be fairly easy for health care managers to take the decision to buy green because of the clear relationship between the environment and human health. A clear and simple policy statement on EPP from top managers shows that senior management is committed and provides a framework indicating which of the EPP goals the institution wants to achieve.

Since environmental properties are one among the many qualities of products and services, it is easy to introduce EPP into general purchasing policy. EPP, because it adds to the many product specifications, is not just an 'add on' activity but an integrated part of the purchasing process.

However, policy on its own does not secure the implementation of EPP. In order to make sure the policy is a living document and not just words on paper it is crucial that the purchasing team not only understands the integration of environmental issues into the purchasing process, but is made up from people with a passion for the ecological and health benefits of EPP.

EPP implementation is described in detail with examples in *Buying Green*. What follows is a presentation of some of the recommendations from the handbook.

1. Establishment of a multidisciplinary team

Purchasing departments are the central control point for almost every product or service procured by a hospital. This is where money is transferred from hospital to vendor and where contracts are developed. It is here that leverage can best be applied to the vendors, making it an effective place to implement actions that reduce environmental impact.

The purchasing team should include:

- someone with management responsibility and authority
- someone confident about and responsible for the purchasing process - for example a purchasing manager or person responsible for central purchasing
- representatives from departments relevant to the product or service purchased
- people with competences in environment, hygiene, health and safety or other competences that are important in meeting the institutional goals for the products and services purchased

If relevant departments and professionals are part of the process, there will be broader buy-in to changes in practices and products. The diverse perspectives of members from various departments helps to challenge current practices and promote innovative solutions.

2. Defining the approach, level and goals for EPP

EPP may be as simple as buying recycled paper or as complex as considering the environmental impact of a product at each stage of its life, from when it is manufactured to when it is disposed of.

When starting out it is better to be selective rather than to attempt to tackle all environmental issues. In order to encourage further implementation of EPP, it helps at the outset to choose a few environmentally preferable purchasing goals that are specific, measurable, and achievable.

The following goals are good examples:

- Reduce packaging waste by 20% in 12 months.
- Reduce energy or water use by 10% in two years.
- Reduce the purchase of products containing PVC by 15% over the next three years
- Stop purchasing devices and products containing mercury in 2 years

Continuous evaluation of the EPP should be carried out in order to improve the program over time. This should help produce more ambitious EPP goals and guidelines for product groups and services.

3. Integrating EPP into the purchasing process

The general structure of a public procurement procedure is essentially no different from a private one. They both follow roughly the same stages

- Defining the subject matter of the contract
- Drawing up the requirements of the contract (technical specification and other criteria)
- Selecting the supplier (exclusion criteria)
- Awarding the contract (award criteria)

Each of the stages is described in detail in *Buying Green*.

Practical examples of successful incorporation of environmental issues into the procurement

procedure can be a very useful tool when arguing against people who believe EPP is impossible!

4. Defining the subject-matter of the contract

The subject-matter of a contract is the product, service or work you want to procure. In principle the purchaser is free to define the subject of the contract in any way that meets his needs. Public procurement legislation is not so much concerned with what contracting authorities buy, but mainly with how they buy it. The restrictions lie in the market principles of equal treatment and non-discrimination. In practice this means that all competitors should have an equal opportunity to compete for the contract, and that the technical specifications within the contract should not be defined in a discriminatory way.

To support the process of determining what to buy and defining non-discriminatory criteria, it is essential to have some knowledge of the market - it is very difficult to develop a concept for a product, service or work without knowing what is available.

Buying Green recommends conducting a market analysis to collect essential information about the environmental options available and about general commercial rates and conditions. The market analysis can reveal large differences in terms of energy consumption, harmful impact of materials and the amount of materials that can be recycled - terms that can help specify the product or service wanted.

5. Technical and environmental specifications in the bidding process

Once the subject of the contract is defined, the next step is to translate the definition into measurable technical specifications that can be directly applied in a public procurement procedure. The technical specifications constitute a minimum set of criteria and thus provide measurable requirements against which tenders can be evaluated. If they are not clear and correct, they will inevitably lead to unsuitable offers. Offers not complying with the technical specifications have to be rejected.

It can happen that, even after conducting a market analysis, it is still not clear whether green alternatives to the products or services are available, how good they are, or what they cost. If this happens, potential bidders should be encouraged to submit greener variants in addition to their original neutral bid. Then, a minimal set of common technical specifications will exist for both products, the neutral offer and its green variant, except that for the latter an environmental dimension will also have been added. This bidding system makes it possible to compare all the offers (the neutral ones and the green ones) on the basis of common basic technical requirements.

If you want to take advantage of this system, it is important to remember that you have to state in advance of the tender that variants will be acceptable and that all bids have to meet certain minimum environmental specifications.

In practice, it can be difficult for purchasers to specify the environmental specifications. In order to help purchasers identify relevant

environmental standards, different environmental labels have been developed, such as the eco-label, various single-issue labels and private labels.

6. Labelling standards and criteria

Eco-label criteria are based on studies that analyse the environmental impact of a product or service throughout its life cycle - the so-called "cradle to grave" approach. The best known eco-labels are the European label ("the flower"), the Scandinavian label ("the Nordic swan") and national labels (such as the German "Blue angel").

as the Flower, there are also many single-criteria labels which relate to one particular environmental issue such as energy use or emission levels. The EU energy label is an example of a single-issue label. It grades household goods according to their energy efficiency, with A* as the most efficient and G as the least efficient. Single-issue labels can be very useful if you are following a step-by-step approach to greening procurement because they allow for incremented improvement.

In addition to the major public labels there are a number of private labels, run by NGOs, industry groups or combinations of stakeholders. These include labels on forestry certification



Figure 1. Examples of Eco-labels

The EU eco-label is called the "Flower". It is an official label managed by the European Commission and certifies that a product or service reaches a certain environmental standard and has a guaranteed technical performance. The Flower is awarded by an independent third party to products that meet a set of strict environmental and performance criteria which take into account the full life cycle of the product. The criteria are set with full stakeholder participation and cover roughly twenty product groups including textiles, paints, paper products, detergents and household appliances. Several other new product groups are undergoing assessment. All-in-all more than 2,500 articles meet the criteria and have obtained the Flower. Besides multi-criteria labels such

schemes such as the FSC (Forest Stewardship Council) or PEFC (Pan European Forest Certification Council), organic labels such as the IFOAM scheme, or multiple-criteria labels such as the Swedish label "*Bra miljöval*".

You can use the standards indicated by the different types of labels to help you draw up your technical specifications and understand the characteristics of the supplies or services you are purchasing. The information can be used as the standard for assessing offers at the award stage.

It is important to note that contracting authorities are not allowed to specify that the products and services they are purchasing bear an eco-label. This is because a label only states

that the product meets a certain standard - so long as a product meets that standard, it has to be considered, whether or not it bears any particular label.

Technical specifications can include a range of materials you consider preferable or alternatively specify that no materials or chemical substances in the product should be detrimental to the environment. A common approach to green procurement of cleaning products involves the contracting authority supplying a list of hazardous substances harmful to the environment or public health (determined on the basis of an objective risk assessment) which it does not wish to be present in the product.

You may also make requirements for production methods in specifications for green procurement. However, all technical specifications need to be linked to the subject matter of the contract. Therefore you may only make specifications in relation to the manufacturing of the product and which contribute to the product's characteristics. For example, you can ask for electricity produced from renewable energy sources, even though green electricity is not physically different from the electricity produced from conventional energy sources. What you may not do, for example, is require that a furniture manufacturer from whom you are purchasing use recycled paper in their office.

7. Selecting the supplier

Selection criteria focus on a company's ability to fulfil the contract for which they are tendering. Selection criteria fit broadly into two types: exclusion criteria and technical capacity criteria.

Exclusion criteria: You are entitled to exclude companies that have acted against environmental legislation or regulations.

Technical capacity criteria: You may ask bidders to demonstrate their technical capacity and the professional qualifications of its personnel in requirements set in the contract. Contracts where environmental technical competence might be particularly relevant include waste management contracts, construction, building maintenance and renovation, and transport services.

Environmental management systems, such as EMAS, can serve (if relevant) as a way for companies to demonstrate their technical capacity for achieving environmental management measures. However, as in the case of eco-labels, the contracting authorities should also recognise equivalent certificates as well as other means of evidence provided by the company when giving evidence of their technical capacity.

8. Awarding the contract

Awarding the contract is the last stage in the procurement procedure. At this stage, the contracting authority evaluates the quality of the tenders (the offers) and compares prices.

When you award the contract, you can either compare offers on the basis of lowest price alone, or award the contract to the economically

most advantageous tender, in which you take into account award criteria besides the basic initial price of services.

At first glance, the cheapest product often appears the most attractive. However, in the long run it could prove to be more expensive and possibly detrimental to the environment. For example, if a cheaper product has a shorter life than a more expensive product, the extra replacements can result in higher overall costs, extra energy consumption and more waste.

Taking down-the-road costs like these into account is known as the 'life-cycle costing' approach. It involves including in the purchasing decision all the costs that will be incurred during the lifetime of the product or service. In short, value for money is not necessarily about buying the cheapest product but getting the best deal within the defined parameters, including environmental considerations.

Award criteria must always be specific, quantifiable and linked to the subject matter of the contract. Although there must be a link between the requirements in the technical specifications and the award criteria which translates all technical specifications into award criteria, it is later possible to award

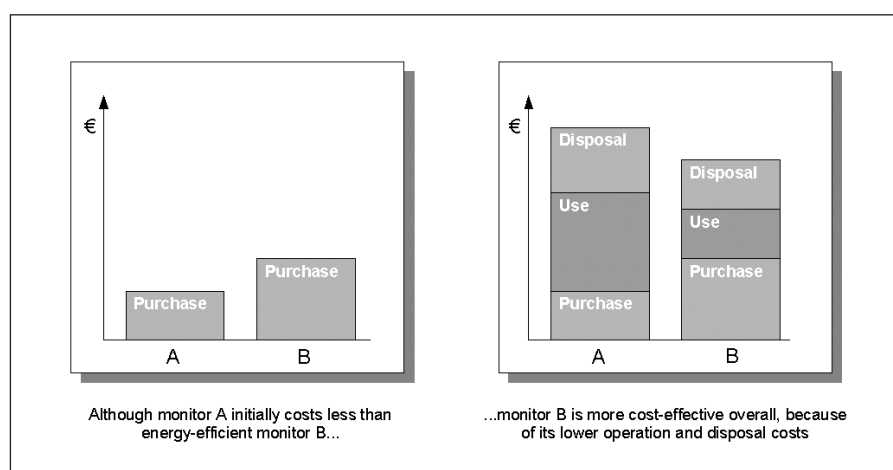


Figure 2. Hidden-cost comparison of two monitors, A and B, across their life cycles.

points for performing better than the minimum level. These can be distributed at the award stage to determine the winner of the contract.

When awarding contracts, it is the responsibility of contracting authorities to specify and publish the criteria for awarding the contract and the relative weighting given to each of those criteria in sufficient time for potential vendors to be aware of them when preparing their tenders.

9. Make EPP visible

The success of EPP is not exclusively based on the environmental criteria which the products or services meet, but also to the extent the purchasing department is able to demonstrate the improved environmental performance to managers and politicians as well as the local purchasers and employees.

It is crucial for successful promotion of environmentally friendly products and services that local purchasers and employees get the message that the environment as well as the health and safety of the employees and patients are taken seriously and incorporated when purchasing products and services. If there are several products or services to choose from, the environmental and health qualities of a product or service should be explicitly mentioned or shown in the purchasing system.

At the same time the visibility of EPP towards managers and politicians will help promote further EPP and create a good public image.

Topics in EPP

In relation to hospitals, environmental issues such as PVC and phthalates, mercury, flame retardants, waste,

energy and healthy and sustainable food have been given special attention. On the Health Care Without Harm website www.noharm.org the topics are described in more detail and there are numerous documents and fact sheets to help the purchaser to promote EPP and to choose more environmentally friendly products.

PVC and phthalates

Because of the processes by which it is manufactured and the chemicals with which it is treated, PVC (polyvinyl chloride) plastic - the most widely-used plastic in medical devices - can be harmful to patients, the environment and public health. Two key problems associated with PVC include

- Formation of carcinogenic dioxins during the manufacture of PVC and during the incineration or burning of PVC products.
- Leaching of DEHP, a phthalate commonly used to soften PVC plastic, from PVC medical devices into patients. DEHP has been linked to reproductive birth defects and other illnesses.⁴

Alternatives to PVC plastic medical devices are widely available on the market. HCWH has published lists of currently available alternatives to PVC medical devices, office supplies and building materials, all available on HCWH website.

Mercury

Mercury is a highly toxic metal, causing damage to the nervous system even at low levels of exposure. It accumulates in human and animal bodies and can be concentrated through the food chain, especially in certain types of fish. Once released into the environment, mercury has no respect for national or regional boundaries, travelling long distances through the atmosphere and contaminating global food supplies

at levels which pose a significant risk to human health. Mercury is found in thermometers, sphygmomanometers, laboratory preparations, cleaners and other products used in healthcare. Fortunately, there are safe, cost-effective alternatives for nearly all uses of mercury in healthcare.⁵

Flame retardants

The widespread use of plastics and other synthetic materials in electrical appliances, textiles, upholstery and construction materials has increased the flammability of these products, making it necessary to modify them to meet fire safety standards. Flame retardants are added to many products to meet these standards. Unfortunately many of these flame retardants do not remain fixed in the product, instead slowly leaking into the air, dust, water, and environment and eventually entering our food and bodies.⁶

Of greatest concern are brominated flame retardants (BFRs). In light of mounting evidence that some halogenated flame retardants are toxic, persistent in the environment and bioaccumulative in wildlife and humans, phasing out their use would be a sensible precaution. Current fire safety standards can often be met while using safer chemical substitutes for BFRs. Alternatively, products can be redesigned. In some cases, rethinking product design can bypass the need for chemical flame retardants.⁷

Waste

Healthcare establishments produce a range of various wastes, which according to European regulations belong to five basic groups: municipal, medical, infectious medical, hazardous and low level radioactive waste. In order to negate the threat these wastes pose to human health

and the environment, they have to be properly identified, segregated and disposed of.

Introducing EPP procedures is key to reducing the amount and toxicity of waste.

It should be remembered that all purchased products can eventually become burdensome and costly wastes. One of the simplest but most efficient criteria for selection is product weight. Another criterion, if possible from a hygiene and sanitation point of view, is to replace disposable products with washable alternatives. Even though reusable products require cleaning, as a rule the total spending on their purchase and application comes out lower than for single-use products.

Energy

More than 80% of the energy we use comes from non-renewable sources such as coal, oil and gas.⁸ Fossil fuel reserves are becoming limited and their use creates pollution and contributes to global warming. Improving energy efficiency and increasing the amount of energy produced from renewable resources is a vital part of reducing air pollution and global warming.

Food

Local, fair-trade and organic produce are environmentally preferable. Organic farming differs from other farming systems in a number of ways. It favours renewable resources and recycling, returning to the soil the nutrients found in waste products. Meat and poultry production is regulated with particular concern for animal welfare and emphasises use of natural foodstuffs. Organic farming also avoids using synthetic pesticides, herbicides, chemical fertilisers, growth hormones, antibiotics and gene manipulation. Instead, organic farmers use a range of techniques and natural

ecological systems for controlling pests and disease in raising crops and livestock, which help sustain ecosystems and reduce pollution.⁹

Real examples of EPP

Many hospitals have already worked with EPP. On the HCWH web site there is a special section on green purchasing in Europe.¹⁰

Other good examples can be found in the Greening Health Care XChange database. The database contains case studies describing a variety of good environmental practices in hospitals, highlighting economic benefits.¹¹

Stockholm County Council PVC Elimination Policy

Stockholm County Council (SCC) passed a resolution to phase out PVC in 1997. PVC was identified as a priority to be avoided in the procurement of new products as part of a sustainable purchasing policy. The program prohibits the use of PVC unless a very strong, written explanation for its necessity is provided as part of the purchasing process.

PVC has been virtually phased out from many disposable medical products, including IV bags and tubing, drainage and urine bags, catheters and feeding tubes. Although there are no legal restrictions on the use of DEHP, SCC hospitals make efforts to avoid DEHP-softened tubing for use with small children. For example, at 32 neonatology units in the country, feeding tubes used for the long-term treatment of babies are made of non-PVC materials.

If there are no PVC-free alternatives that fulfil all the criteria, Karolinska Hospital (one of the hospitals under SCC jurisdiction) purchases DEHP-

free devices in the interim period before safer and affordable PVC-free alternatives reaches the market. This was the case in a contract for gloves, where the entire hospital is now supplied with phthalates-free gloves.¹²

Ecologically friendly detergents within the Vienna Hospital Association

Hospitals use large quantities of detergents, which has considerable consequences for waste water quality. By developing a criteria catalogue which is attached to new tender offers, the ecological quality of the detergents used within the Vienna Hospital Association (KAV) was considerably improved. At the same time the quantity of detergents used was reduced by 23% and in consequence costs were reduced by 10%.¹³

Reduction of energy consumption

Gentofte County Hospital in Denmark has an electricity bill of around 1 million Euros per year, using 9 million kWh of electricity. Following media reports that "stand-by" use (where machines are turned on but not in use) could comprise 10% to 30% of household energy consumption, the hospital conducted a campaign to turn off electrical equipment when not in use. This measure alone has reduced the hospital's consumption of electricity by 60,000 kWh per year - equivalent to the amount of electricity used by 14 households.¹⁴

Waste Reduction in the Polish Health Service Sector

Since 1999, the Waste Prevention Association (WPA) and HCWH have been running a long-term "3Rs" project.

The idea is to Reduce, Re-use and Recycle wastes generated in the health care sector, with an objective of reducing overall quantity and toxicity of wastes. As part of the project, the WPA provides two cycles of trainings in seven regions throughout Central and Eastern Europe. Participants include 210 hospitals, 18 SANEPID Sanitary and Epidemiological Institutions and seven others.¹⁵

As a result, over 57 hospitals have now introduced advanced waste management programmes. In 14 of the participating hospitals the amounts of infectious waste was reduced by 120 tonnes with an annual saving on disposal costs of around €87,000 during the first implementation year. These first-year savings alone are nearly twice as high as the total costs of training which amounted to €46,000. 18 other hospitals have started a programme for mercury thermometer elimination, and 19 have introduced environmentally preferably purchasing criteria.

Purchase of Local and/or Organic Foods for Patients and Cafeterias

Hospitals are major purchasers and providers of food, through on-site cafeterias and restaurants, vending machines and direct delivery to patients' beds. Healthcare leaders are increasingly seeking to alter their food purchasing practices in order to provide healthier foods to patients and staff. The Hospital Food Project has recently completed a two-year program through which four London National Health Service (NHS) hospitals worked with local partners to increase their purchase of local and/or organic food. Its goals were to have local and/or organic food purchases equal 10% of their routine food purchases, and help develop a model that can be used by other hospitals to achieve the same.¹⁶

The programme is now being expanded to include other hospitals.

Resources

¹ European Council (2002) Recommendation of the Council on Improving the Environmental Performance of Public Procurement Ref. 23 January 2002 - C(2002)3. There is a copy of the document available at [http://www.oilis.oecd.org/horizontal/oecdacts.nsf/linkto/C\(2002\)3](http://www.oilis.oecd.org/horizontal/oecdacts.nsf/linkto/C(2002)3)

² There is a full description of the policy background, strategies and action plans on the EU website, at <http://europa.eu.int/comm/environment/gpp/background.htm>

³ An electronic copy of the Buying Green handbook is available on the EU website at <http://europa.eu.int/comm/environment/gpp/guidelines.htm#handbook>

⁴ A number of reports have been published on the harmful effects of dioxins and DEHP. For a guide to some of these resources, go to <http://www.noharm.org/us/pvcDehp/resources>

⁵ For more information on the health risks associated with mercury and the availability of mercury-free equipment, see <http://www.noharm.org/us/mercury/resources>

⁶ Jansson, S. (2005) Brominated Flame Retardants: Rising Levels of Concern. Health Care Without Harm

⁷ A variety of resources on the health risks of BFRs and their accumulation in the environment are available at <http://www.noharm.org/us/bfr/issue>

⁸ United Nations Development Programme - UNDP (1998) Human Development Report p.2 . The report is available at <http://hdr.undp.org/reports/global/1998/en/>

⁹ The EU website offers a guide to current understanding and status of organic farming at http://europa.eu.int/comm/agriculture/qual/organic/def/index_en.htm

¹⁰ See <http://www.noharm.org/us/greenpurchasing/europe>.

¹¹ The Greening Health Care Xchange database is at <http://www.greeninghealthcare.de/index.php?module=XchangeDb&meid=33>

¹² Vesterberg, A. Hedenmark, M. Vass, A. (2005) PVC in Medical Devices Karolinska University Hospital, Stockholm

¹³ This case study is in the Greening Health Care XChange database (see link above, #11)

¹⁴ These findings come from a project carried out at Gentofte County Hospital, Denmark.

¹⁵ Data from the Waste Prevention Association 3R Program of 2004. For more information, see <http://www.otzo.most.org.pl/en/>

¹⁶ Hockridge, E. Longfield, J. (2006) Getting more sustainable food into London's hospitals. Sustain, London. Note: This is an interim report from the Hospital Food Project, website http://www.sustainweb.org/hospital_index.asp



Without Harm

HCWH Europe
Chlumova 17
130 00 Praha 3
Czech Republic
Phone: +420 222 781 471
www.noharm.org
europe@hcwh.org

You can find more information and resources about the green procurement issue at www.noharm.org/europe/greenPurchasing/issue.

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