

# THE HOSPITAL ENVIRONMENT & WASTE MANAGER



EU-HCWM Newsletter

Issue No.3 March 2015



## Project Update

Welcome to the March 2015 edition of the HE&WM newsletter, the newsletter of the EU-HCWM project. 2015 is a big year in the project lifespan with a number of key milestones due for completion in the first half of this year. In addition the partners will all undertake national workshops in the first half of 2015 to promote the first of the project outputs. The first of the major outputs from the project is the development of the qualification framework for the award of Healthcare Waste Management & Treatment. This is the subject of an article later in the newsletter.

The next step is to develop a series of National Occupational Standards and then an associated set of award units and this process is now well underway. Once completed the project attention will turn to the development of a series of Power Point based training units to complement the new award.

The project member states contributions to the comparison reports are all completed and the overall comparison report of which there will be four are being finalised now and will be published in week 1 of April.

The project web site has had an increase in traffic flow and the project team are putting more effort into the linked in group to try and encourage more membership there. The next project co-ordination meeting is in April and is being hosted by Club EMAS in Barcelona.

The project is coming toward the halfway point and a major focus of the next meeting will be the administrative and financial aspects of the interim project report.



The beautiful city of Barcelona will host the next project co-ordination meeting in April

### In this issue:

- Project Co-ordination Meeting— Barcelona
- Ebola— WHO Guideline
- Project Web Site/LinkedIn/Knowledge Base
- Partner Profiles—REC FYROM & ET Log
- Latest Industry News
- HCWM Best Practice — Italy
- EUHCWM — Qualification Framework
- WHO—Training Modules for HCWM



## INTERNATIONAL SOLID WASTE MANAGEMENT CONFERENCE – TINOS 2015

Our colleagues at SIGMA Consultants are presenting a paper on the EUHCWM project at this years Tinos conference.

The Conference aims to address the significant issue of sustainable solid waste management through the promotion of safe practices & effective technologies. The Conference focuses mainly on modern solid waste technologies. It aims to stimulate the interest of scientists and citizens and inform them about the latest developments in the field of municipal solid waste management.

Separation at source, Biological Treatment, the treatment at central facilities, waste prevention & separation at source with emphasis on biowaste, integrated waste management in islands and generally isolated areas also constitute priority subjects. Special attention will be drawn on the challenges of the Waste Framework Directive & the products produced of solid waste, such as: biofuels, compost, materials, etc.

The Conference will provide an opportunity to bring together scientists & professionals from government departments, Municipalities, private institutions, research & education institutions, being a forum for the exchange of the most recent ideas, techniques & experiences in all areas of solid waste management. EU-HCWM project will be presented in the Conference, with a special emphasis on the Comparison Reports and the foreseen actions regarding the training model.

For more information please visit: <http://www.tinos2015.uest.gr>



A series of training modules on good practices in health-care waste management have been created as part of the *Global Health-care Waste Project* jointly sponsored by UNDP, the Global Environment Facility, WHO, Health-care Without Harm and the University of Illinois School of Public Health. Link here to the individual modules covering all aspects of waste management activities from identification and classification of wastes to considerations guiding their safe disposal using both non-incineration or incineration strategies. Modules 9 and 10 on the classification and segregation of health-care waste also have instructor and student guides.

[http://www.who.int/water\\_sanitation\\_health/healthcare\\_waste /  
training\\_modules\\_waste\\_management/en/](http://www.who.int/water_sanitation_health/healthcare_waste/training_modules_waste_management/en/)

### Project Partners

1. International Centre for the Environment, Resource Management & Sustainability Ltd (ICERMS)
2. SINERGIE Societa Consortile a responsabilita limitata (SINERGIE)
3. Institute of Environmental Protection – National Research Institute (IEP-NRI)
4. SIGMA Consultants Limited (SIGMA)
5. ET Log Health Envirotech & Logistics GmbH (ET Log)
6. Regional Environment Centre for Central & Eastern Europe – Country Office Macedonia (REC FYROM)
7. Associacio d'organitzacions registrades EMAS a Catalunya (Club EMAS)
8. National Centre for Continuing Education (QKEV)
9. Regional Environment Centre for Central & Eastern Europe – Country Office Slovenia (REC SLO)
10. The NHS Confederation (NHS - Confed)
11. European Union of Private Hospitals (UEHP)
12. International Solid Waste Association (ISWA)

## EU-HCWM Knowledge Base

April will see the launch of the project Knowledge Base which will be a web based resource which will in effect become an online reference library for matters relevant to healthcare waste management and the environment in an EU context.

Partners will be encouraged to submit reference documents to the Knowledge Base and in their own language.

This will result in member state specific documentation being submitted in the languages of the partner member states with any documentation relevant to a Pan European agenda being provided in all languages.

It is hoped that the Knowledge Base will evolve into a digital reference library which will be constantly updated to reference best practice, technology and legal developments in real time.

Anyone wishing to contribute articles or reference documents to the Knowledge Base can do so by sending the documentation to the following email address.

E: [scott@icerms.com](mailto:scott@icerms.com)

## Good News On ICERMS Doorstep as NHS Ayrshire & Arran lead the way in green technology

During 2014 NHS Ayrshire & Arran picked up three awards for our contribution towards energy efficiency and renewable technologies.

Two awards were collected at the NHS National Services Scotland annual conference. The 'Engineering and Energy Excellence Award' was received for the Ecocent kitchen boiler project at University Hospital Crosshouse. The new boilers use the kitchen's excess heat and moisture to generate domestic hot water, which is then fed back into the kitchen for use by catering staff. This is the first time such technology has been used in the NHS. A bi-product of this process is cold air, which is used to help keep the kitchen cool.

The second award was the Paul Taylor Environment award, received on behalf of NHS Ayrshire & Arran by our Energy Manager Alastair Kay for our contributions in energy saving and carbon reduction work. The awards were presented by Paul Gray, Director General Health and Social Care and Chief Executive NHS Scotland.

The third award was presented to NHS Ayrshire & Arran at a ceremony in London, for our 'Contribution to Energy Efficiency and Renewables improvement work in 2014'.

NHS Ayrshire & Arran is one of Scotland's leading NHS boards in terms of sustainable energy production. Thirteen per cent of our heat is generated from renewables, with Girvan Community Hospital producing 66 per cent of its total energy from renewable sources. Other innovative work includes the installation of new solar LED lighting at Ayrshire Maternity Unit car park. The lighting is not connected to any power source and generates all the energy it needs through daylight. LED lighting with automated controls are being installed throughout the hospital sites, and achieving energy savings of more than 60 per cent in most cases.

John Wright, Director for Corporate Support Services, commented: "We have invested a lot into renewable and sustainable technologies, in working towards saving money in the long term. Our work in meeting national targets is leading the way in carbon and energy reduction having exceeded the national carbon reduction target by 16 per cent and the energy reduction target by five per cent."



Photograph: Left to right: Paul Gray Director General Health & Social Care and Chief Executive NHS Scotland presents the Paul Taylor Environment award to NHS Ayrshire & Arran's Energy Manager, Alastair Kay.



## POLAND: IEP-NRI Dissemination Activities

During the 11th and 12th September 2014 the 12th International Conference "Man, Health and Environment" took place in Warsaw. The Conference was organized by Institute of Environmental Protection – National Research Institute (IEP-NRI/IOS-PIB) and Main Board of the Polish Society of Environmental Medicine. The Conference was attended by 150 researchers and students. IEP-NRI presented the project and distributed the leaflets during the poster sessions.



IEP-NRI also attended the International trade fair of environmental protection POLEKO, which was taking place in Poznan between 14th and 17th October. POLEKO is the biggest Environmental Protection and Waste Management Event in Poland. IEP-NRI had a stand located in the area named "Salon Eco-Innovation" in the Pavilion 8A. EU-HCWM project was presented to Polish and international visitors and leaflets were distributed. For more information on the event please refer to <http://poleko.mtp.pl/en>

Just recently (12-13.03.2015) IEP-NRI also attended the International V4 Environmental Export Platform conference in Prague, Czech Republic. IEP-NRI had a information table with the project materials. EU-HCWM project was presented to Polish and international participants. For more information please refer to: <http://v4.kszgysz.hu/conference>



# EUHCWM Project Publish New Qualification Framework

One of the first major milestones of the EUHCWM project was the development of a qualification framework. This has now been completed after an extensive consultation process with key industry stakeholders from all partner member states. As a result the project has developed a qualification framework reflecting the needs of a modern healthcare waste manager. The result is a suite of award units which will be developed into pathways to be undertaken by professionals managing healthcare facilities and/or healthcare waste treatment facilities.

## *Healthcare Waste Management and Treatment Award*

- Control the collection of hazardous and non-hazardous waste at a healthcare facility
- Control the movement, sorting and storage of hazardous and non-hazardous waste
- Implementing a Waste Minimisation Programme, including the sorting and storage of recycled materials, at a healthcare facility
- Monitor the procedures to control risks to health and safety of the waste management function at a healthcare facility
- Managing Waste Transportation operations for the transfer of hazardous and non- hazardous healthcare waste at a healthcare facility (Dangerous Goods Safety Adviser)
- Control the reception of infectious wastes at a healthcare waste treatment facility
- Control site operations for the treatment of infectious healthcare waste at a healthcare facility
- Control the disposal of outputs and residues from infectious healthcare waste treatment operations or, healthcare waste transfer operations, at a healthcare facility
- Control maintenance and other engineering operations at an infectious healthcare waste treatment facility
- Control improvements to waste management operations/practices at a healthcare facility
- Ensure protection of the environment at healthcare facilities treating or transferring hazardous waste from a healthcare facility
- Managing a budget to Supporting the efficient use of resources
- Select and manage sub contracted services
- Implement and manage contracted service or supplies
- Contribute to the selection of personnel for activities
- Review the performance of teams and individuals
- Create effective working relationships
- Understanding Healthcare Waste Management Legislation and the Defining Healthcare Waste
- Developing a Healthcare Waste Policy Document and a Healthcare Waste Management Plan
- Waste Management Plan Implementation, Record-keeping and Reporting
- Preparing for and Delivering a Healthcare Waste Management Vocational Training Programme
- Conducting a healthcare waste management audit and pre-acceptance auditing for healthcare waste
- Sharps Waste Management and Biosecurity at a Healthcare Facility
- Injection Safety
- Climate Change Adaptation Auditing & Reporting at a Healthcare Facility

In the coming weeks the project team will complete the National Occupational Standards for each of the unit titles and then create the award units themselves. A series of training modules in PowerPoint format will then be developed to underpin the award. Once those task have been completed the next task will be to develop an assessment strategy and assessment plans for each of the units and these will be developed in the format of guidance for award assessors and additionally guidance for candidates undertaking the award.

We will publish progress on this development process through the LinkedIn group.

# ET Log Health



ETLog Health is an independent, international consultancy, logistics and engineering company, mainly working in the Environmental & Technical Hospital Infection Control sector (ETHIC). The goal of the company is above all to contribute to the sustained transfer of knowledge in hospital hygiene, sterilization services, integrated waste and waste water management for healthcare facilities, for disposal companies and for governmental institutions. ETLog Health mainly operates in the areas:

- Development and establishment of district, provincial and national healthcare waste disposal concepts, as well as the set up of national healthcare waste development plans.
- Institutional strengthening and capacity building in ETHIC. Training courses on healthcare waste & waste water, cleaning, infection control, injection safety, bio-safety and the management of Central Sterile Supply Departments (CSSD) incl. ToT (Training of the Trainer). Adapted training programs for primary, secondary and tertiary level hospitals.
- Consulting and engineering for secondary health services in the fields of environmental health, hygiene, injection safety, sterilization, waste, water and waste water management.
- Development, tendering, commissioning, testing, start-up and implementing of sustainable central, de-central or in-house solutions for healthcare waste management, waste water treatment and disposal logistics.
- Technical & Engineering consulting, needs analysis, building design, equipment planning, tendering services and supervision of civil works and installation for infection control, healthcare waste, waste water and the logistics sector.

ETLog Health is one of the leading German companies in the field of international ETHIC Projects. ETLog Health is the leading European company for donor financed healthcare waste management and treatment projects. We are one of the few companies in the world who is able to deliver environmentally and economically sound solutions for healthcare waste from cradle-to-grave.

We planned, tendered, commissioned and put into operation nearly one hundred treatment systems for the treatment of bio-hazardous waste all over the world. We supervised the set up of small in-house solutions and solutions on district and provincial level, incinerator systems as well as alternative treatment systems.

The staffs of ETLog Health are acknowledged experts in infection control and waste management for the healthcare sector and are regularly deployed by national and international organizations. ETLog Health maintains an in-house pool of professionals and experts with extensive working experience in the field of healthcare waste and hospital hygiene. All consultants have obtained university degrees from universities in EC countries.

In our training courses we strictly train in accordance with International and EU Guidelines e.g. the guideline on safe management of wastes from healthcare activities by the WHO or the EU Framework Agreement on sharps injuries (European Biosafety Network).

## The Hospital Environment & Waste Manager

*Issue 4 — June 2015*

The June issue of the HEWM newsletter will feature the following:

**EUHCWM - National Workshops in Review**

**Sharps Management —**  
What is considered EU best practice?

**Around the Block — Best Practice from the UK**

**Pharmaceutical Waste —**  
Management in the Community

**EUHCWM Partner Profiles -**  
Club EMAS and QKEV

**Healthcare Sector - Climate Change Adaptation Challenge**

**Industry News**

**Project Co-ordination Meeting in Barcelona —**  
Debrief

**Project Update—**  
Comparison Report Findings



**ISWA**  
International Solid Waste Association

## HEALTHCARE WASTE WORKING GROUP

The ISWA Working Group on Healthcare Waste will hold its annual Spring meeting on 14-15<sup>th</sup> April, 2015 in Istanbul, Turkey. The event will be hosted by ISWA's National Member the Turkish National Committee on Solid Wastes and go on for two days, including site visits to two healthcare waste treatment facilities. ISWA experts from 10 countries will discuss cutting edge healthcare waste management related topics and two invited guest speakers from UNDP will make the meeting even more remarkable.

# Hospital Environments Around the Block: Best Practice in Italy

The management of healthcare waste has always been a priority for the public hospital districts located in the Province of Ferrara (Regione Emilia-Romagna); a lots of investments have been made for the separation of urban waste from special waste and for separate collection in strict sense. Separate collection is an essential tool for proper waste management as it facilitates recovery and limits the use of landfills and/or incinerators.

This project is one of the first experiences carried out in Regione Emilia-Romagna between healthcare facilities and waste management companies and is focused to reduce the production of municipal waste while increasing the separate collection. The action plan for the management of municipal waste, and in particular the separate collection system, is applied to all the hospitals in the district of the Province of Ferrara.

The implementation of internal procedures for a proper healthcare waste management has enabled to:

- harmonize and standardize the procedures for management of the various types of waste in the various locations;
- decrease the risk of injury to operators (with particular reference to the handling of waste at risk of infection like sharp materials);
- identify the different responsibilities.

The companies responsible for the waste management service provided in free loan containers for recycling, to be placed inside the facilities, and recycling containers of greater capacity to be placed outside in recycling areas. Thanks to these agreements, each department of the hospitals has been provided with specific containers enabling the separate collection of paper, plastic packaging and glass. In addition to containers, the companies provided specific vademecums on the management of separate collection which were then distributed to all operators of the healthcare facilities involved. The material collected and given to the recovery industry underwent many quality checks to verify the presence of any extraneous fractions. Moreover visits were carried out to assess the correctness of collection operations.

Subsequent developments will address:

- extending the separate collection systems to healthcare facilities currently not involved
- involving users in the process
- signs and forms translated into more languages
- construction of new recycling areas.



Photo 1. Recycling Area

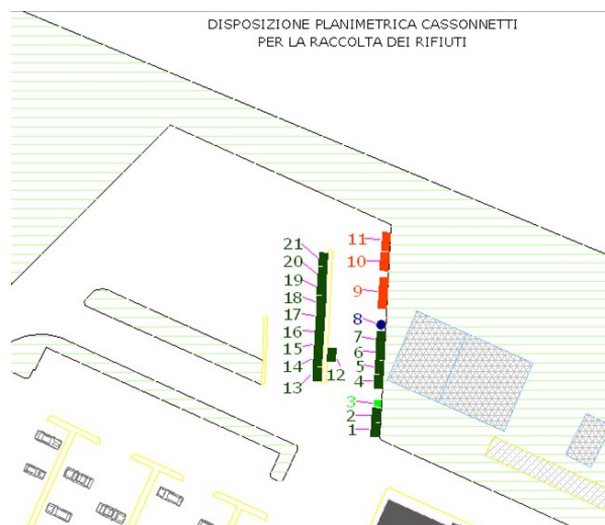


Photo 2. Plan of containers for waste collection.

- 1-2: Containers for the collection of organic waste
- 3: Containers for the collection of batteries
- 4-5-6-7: Containers for the collection of recyclable waste (paper, cardboard, plastic metals, wood)
- 8: Container for glass
- 9: Container for drip glass
- 10-11: Container for various residues
- 12: Containers for the collection of paper and cardboard
- 13 to 21: Containers for the collection of municipal solid waste



## 2. “Prevention is better than cure” – A project for separate collection and minimization of food waste in hospitals

The slogan "Prevention is better than cure" is very common in the medical field and is intended to raise awareness on the idea that citizens' health is also a matter of correct behaviour towards the environment.

Aim of the project is the technical reorganization of healthcare waste management in 3 hospitals located in the Province of Torino (Regione Piemonte) in order to optimize the waste collection thus minimizing the production of waste.

The project has been promoted by the following actors: Covar 14 (a company dealing with waste management and treatment), the healthcare facilities (Ospedale San Luigi Gonzaga in Orbassano, Ospedale Santa Croce in Moncalieri, Istituto di Ricerca per la Cura del Cancro in Candiolo), and by the Banco Alimentare, the Italian “food bank” that collects the production surplus of the food supply chain, and by means of its network, it redistributes it to over 8.898 charitable organizations that assist the poor all over Italy.



Banco Alimentare in Torino is therefore in charge of recovering the meals not given within the hospitals and of distributing them for free to the needy.

The healthcare facilities addressed by the project already provide a good separation of waste however the objective is to refine the existing models for waste management and communicate more effectively to users.

*Picture 1. The large kitchens of the hospital in Orbassano: the recovery of the meals has also enabled the separate collection of waste.*

### WEB UPDATE

The EUHCWM website has had some additions to it over the past couple of months and will continue to grow and expand over the coming months. The site is now available in all nine partner languages, further expanding the potential audience for the project. Furthermore, all newsletters are now published to the site for anyone to access with the full version being available only in English, but summaries being available in all partner languages.

Keep an eye out for the new knowledgebase section which will be added shortly, which will be an excellent resource for content related to the project. Each partner will have its own knowledgebase with content in its native tongue so be sure to check out your countries' page for information that may be relevant to you.

Our website has also seen a great increase in traffic over the last few months, rising from about 150 unique visitors per month to over 270! We are happy with this progress and hope to further increase the visibility of the project by providing a website that is useful and informative.





## REGIONAL ENVIRONMENTAL CENTER

### Regional Environment Centre — Country Office Macedonia

The Regional Environmental Center for Central and Eastern Europe (REC) is an international organization established in 1990 by the United States, the European Commission and Hungary. Today, the REC is legally based on a charter with over 30 signatories. The REC has an office network in 17 countries in Central and Eastern Europe. The REC actively participates in key global, regional and local processes and contributes to environmental and sustainability solutions within and beyond its country office network, transferring transitional knowledge and experience to countries and regions.

REC Country Office Macedonia (REC COM) has been present in the country through a local coordinator since July 1993, and the country office officially began operations in January 1995. The REC COM is one of the leading organizations working in the fields of environment, energy and sustainable development. Its programmes have been designed to promote the following key processes:

- integrated waste management planning and support to implementing private sector participation processes;
- strategic environmental assessment (SEA) and environmental and social impact assessment (ESIA);
- integrated water resources planning;
- public participation in decision making on environmental protection issues, involving governments, NGOs, municipalities, businesses, academia and other stakeholders;
- education for sustainable development, and
- raising public awareness of environmental issues.

The REC's methodology encourages:

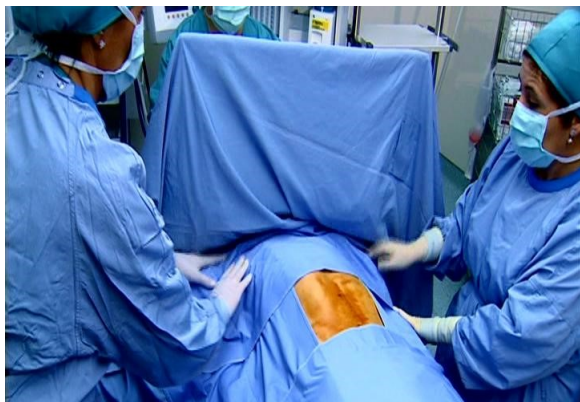
- local solutions to local environmental problems and a broader-based approach to regional problems; and
- an integrated approach to addressing environmental problems in a sustainable manner.
- The country office's programmes and projects help to strengthen the knowledge and capacities of individuals and organisations contributing to the solving of environmental problems in the region.

The REC COM is a well-established and respected international organization and it is a trusted working partner of key government institutions, industries, local practitioners and donor community. It has extensive experience in developing and implementing technical assistance projects funded by either national or international donors.

During the past years, REC COM has been involved in the implementation of complex projects, such as: the "Smart City Stakeholder Platform", "Transaction Advisory Services towards Issuing Concession on Integrated Waste Management in South-East and Polog Planning Regions", "Lepenec River Protection via Introducing Transboundary Integrated Water Resource Management", "Catalyzing market transformation for industrial energy efficiency and accelerate investments in best available practices and technologies in the Former Yugoslav Republic of Macedonia", "Green Pack" and "Green Pack Junior" etc. The REC COM implemented projects funded by the IPA programme, Governments of Japan, Norway, Finland, Sweden, UK and Austria, World Bank, EBRD, UNDP, UNEP and UNIDO.

For more information visit the centre website at: [www.rec.org/office.php?id=10](http://www.rec.org/office.php?id=10)

## Spotlight on SPAIN: *Waste reduction in surgical areas through the reusable technical materials*



### ***An alternative to disposable products***

Health care centres currently face a challenging activity environment where all their activity areas must be able to provide quality services, ensure compliance with all quality standards and legal requirements at EU, State, Regional and local level and also be able to improve their environmental management, for example in terms of waste prevention and minimization.

The use of disposable products in HC surgery areas is widely extended. The yearly number of surgeries in Spain is about 4.800.000 and each surgery generates about 5 kg of disposable textiles waste (garments for the professional team and drape sets for the patient.)

Nowadays reusable textiles are a technically superior alternative: they offer an excellent quality, better safety conditions and are more eco-friendly.

Professionally manufactured reusable products offer a **higher quality**. In order to compensate the potential performance reduction of the materials, that may decrease along its life cycle, these reusable textiles are manufactured to guarantee higher quality levels than those specified by the EU legislation. Thus they ensure additional safety levels for the patient and for the professionals, they satisfactorily respond to unexpected situations that may occur during a surgery.

“Barrier” properties are crucial for this type of products and reusable materials have confirmed their **capacity to control the transmission of infectious agents**. Indeed, they comply with the requirements defined by the UNE-EN 13795:2011 standard on “Surgical drapes, gowns and clean air suits, used as medical devices for patients, clinical staff and equipment - General requirements for manufacturers, processors and products, test methods, performance requirements and performance levels”.

Reusable fabrics must be strong enough to withstand the mechanical stress of a surgery without breaking. Reusable technical textiles are much more resistant than disposables. This high resistance also allows a **more effective barrier to microbial penetration**.

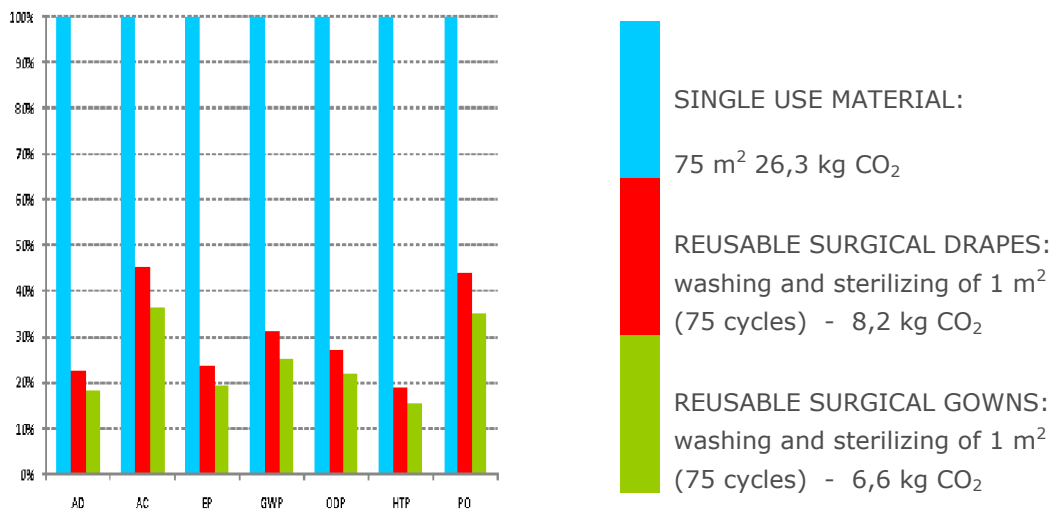
**Comfort** is a medical requirement in the surgical area.

The technology applied to in these reusable fabrics, based in micro-porous structures, allows an adequate breathability, greater flexibility and therefore more comfort for the user. Reusable textiles are recycled and reused at the end of their long life, to generate industrial by-products to for other applications such as footwear, upholstery, etc.

The use of reusable textiles avoids a major waste generation and management costs. With the use of reusable material, besides the significantly reduction of waste generation, a Healthcare centre can also get a cost saving of about 15% depending on the distribution of surgical activity.

A study carried out by the Institute of Environmental Science & Technology of the Autonomous University of Barcelona, compares between 75 usages of single use product and 75 cycles of reusable products. The study concludes that the consumption of single use surgical materials multiplies the environmental impact by 2,2 to 5.

Results from the Life Cycle Analysis of the reusable polyester ( $m^2$  of reusable textile and reusable surgical gown) versus the single use polypropylene.



Characterization factors defined by the Centre of Environmental Science of Leiden University:

AC: Acidification  
AD: Abiotic Resources Depletion  
EP: Eutrophication Potential  
GWP: Global Warming Potential  
ODP: Ozone Layer Depletion  
HTP: Human Toxicity Potential  
PO: Photochemical Oxidant formation

In the diagram its can be seen how the reusable material sensibly reduces the environmental impact, not just in terms of CO<sub>2</sub> emissions and its related impact on global warming, but also in relation to the other environmental impacts included within the scope of the analysis.

The reusable textiles for surgical areas are widely implemented in different EU countries such as Austria, Germany, United Kingdom, Italy and others.

## LINKEDIN Group Update

It is a key goal of the project to ensure that project information is disseminated to professionals throughout the world, and the project team is dedicated to exploring every means in which to accomplish that. Therefore the project team has been much more active on social media these past few months, specifically on LinkedIn, in order to spread the word of the project and its accomplishments to professionals worldwide.

We would invite you to connect with us on LinkedIn and join our group, where you can discuss the project with other like-minded industry professionals and keep up to date with the project. The link to the group is below:

[www.linkedin.com/groups/euhcwm-7472255](http://www.linkedin.com/groups/euhcwm-7472255)

## EBOLA - New Guidance Developed by WHO Team

Dr Anne Woolridge one of our project partners working with ISWA was a part of a group who been developing new practical guidance on the management of wastes from Ebola patients. The guidance was commissioned by the World Health Organisation. According to the WHO website the safe handling, treatment and disposal of health-care waste (HCW) are important tasks within the broader activities of stopping the Ebola outbreak. This is especially true considering the large amount of waste generated, including disposal Personal Protective Equipment (PPE). The main objective of this document is to highlight specific public health issues concerning HCW in the context of low-resource settings, particularly in West Africa. It is not a stand-alone document and should be read in conjunction with more comprehensive guidance on safe management of health care waste, infection control and water and sanitation.

Anne explained the process of the guideline development and told the HE&WM newsletter that

“A team of people were invited by the WHO to develop practical advice for health centres in West Africa. The team consisted of international experts in healthcare waste, some of whom had dealt with waste generated from previous outbreaks of Ebola in Africa. The guidance had to be straightforward and utilise the existing facilities.

Although the UNDP has since installed 11 autoclaves, these were not available at the time while the guidance was being written. There were some interesting challenges as the WHO is not in favour of and incineration technologies, however in some cases the only way of making the waste safe was to burn it. One of the key points to consider was that the guidance from WHO should be in harmony with guidance already published by the aid agencies working in the field. After several iterations and much discussion the document was finalised. We came up with a document that could be used in future scenarios in addition to dealing with issues in the current outbreak.”

The guidance can be found at **Key questions and answers concerning health care waste** [http://apps.who.int/iris/bitstream/10665/144730/1/WHO\\_EVD\\_WSH\\_14.2\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/144730/1/WHO_EVD_WSH_14.2_eng.pdf?ua=1)

In addition the above document has a number of useful references and these have been listed below:

**WHO/ILO 2014. Ebola Virus Disease:** Occupational Safety and Health, WHO / ILO Briefing Note for Workers and Employers. World Health Organization, Geneva. [http://www.ilo.org/safework/info/publications/WCMS\\_301830/lang--en/index.htm](http://www.ilo.org/safework/info/publications/WCMS_301830/lang--en/index.htm).

**WHO/UNICEF 2014. Ebola Virus Disease-** Key questions and answers concerning water, sanitation and hygiene. World Health Organization, Geneva. [http://www.who.int/wate\\_sanitation\\_health/en/](http://www.who.int/wate_sanitation_health/en/)

**WHO 2014. Clinical management of patients with viral haemorrhagic fever.** A pocket guide for the front-line health worker. World Health Organization, Geneva. <http://www.who.int/csr/resources/publications/clinical-management-patients/en/>.

**WHO 2008. Essential Environmental Health Standards in Health Care.** World Health Organization, Geneva. [http://www.who.int/water\\_sanitation\\_health/hygiene/settings/ehs\\_hc/en/](http://www.who.int/water_sanitation_health/hygiene/settings/ehs_hc/en/).

**WHO 2014.** How to conduct a safe and dignified burial of a person who has died from suspected or confirmed Ebola virus disease. World Health Organization, Geneva. <http://www.who.int/csr/resources/publications/ebola/safe-burial-protocol/en/>

**WHO, 2014. How to safely put on and remove personal protective equipment.** World Health Organization, Geneva. [http://www.who.int/csr/disease/ebola/put\\_on\\_ppequipment.pdf?ua=1](http://www.who.int/csr/disease/ebola/put_on_ppequipment.pdf?ua=1) [http://www.who.int/csr/disease/ebola/remove\\_ppequipment.pdf?ua=1](http://www.who.int/csr/disease/ebola/remove_ppequipment.pdf?ua=1)

**WHO 2014. Interim Infection prevention and control guidance for care of patients in health-care settings, with focus on Ebola.** World Health Organization, Geneva. [http://www.who.int/csr/resources/publications/ebola/filovirus\\_infection\\_control/en/](http://www.who.int/csr/resources/publications/ebola/filovirus_infection_control/en/).

**WHO 2014. Safe management of wastes from healthcare activities.** Second edition. World Health Organization, Geneva. [http://www.who.int/water\\_sanitation\\_health/medicalwaste/wastemanag/en/](http://www.who.int/water_sanitation_health/medicalwaste/wastemanag/en/).

**WHO 2006. Management of wastes from injection activities at district level.** World Health Organization. [http://www.who.int/water\\_sanitation\\_health/medicalwaste/mwinjections/en/](http://www.who.int/water_sanitation_health/medicalwaste/mwinjections/en/)





# Industry News

## **Joint Healthcare Waste and Resources Research Group and ISWA International Conference**

In conjunction with the International Solid Waste Association (ISWA), the Group will be hosting an international conference on April 14 and 15, 2016. It will be held at Guy's and St Thomas' NHS Trust in London.

## **NHS Sustainability day (March 26)**

On 26th March 2015, every NHS organisation is encouraged to participate in initiating or continuing activities which will improve their sustainability. March 26th 2015, NHS Sustainability day is one day in a sustained campaign, yet it provides a focus for organisations to participate on that day in initiating or continuing progress on achieving better sustainability practice. It has now attracted senior level endorsement within the NHS and from the Prime Minister.

The campaign of regional road-shows gives health-workers across the country the chance to participate in networking, learning about best practice and innovative ideas. The national awards scheme recognises and publicises this achievement. The tools and case studies contained within this website will provide you access to proven technologies, methods and projects that have yielded great results. And remember all change starts with a single action.

More information at: [www.nhssustainabilityday.co.uk](http://www.nhssustainabilityday.co.uk)

## **Article on survey of H&S and waste management training among clinicians within the NHS**

Major occupational risks are often associated closely with specific job sectors. These risks can lead to significant psychological and physiological impacts (Gonclaves et al, 2008; Patwary et al, 2012; Akpieyi et al, 2015). According to the HSE (2014), in the UK in 2013/14, 1.2 million individuals suffered an illness that was caused by or made worse by work. There were 28.2 million days lost, costing around £14.2 billion. A total of 133 employees were killed....

Read the full article at: [www.emhmagazine.com/article.php?article\\_id=1134](http://www.emhmagazine.com/article.php?article_id=1134)

## **NHS Confederation commissions Rand Europe report on hospital governance models**

Our partners at the NHS Confederation (the NHS European Office) have commissioned a report into hospital governance models across the EU. The NHS European Office actively monitors a wide range of EU channels in order to identify developments of potential importance for the NHS. A range of key policy developments are highlighted on their website. The 'our work page highlights a selection of news, publications, research and commentary from and about the EU regarding health and social care issues that may be of wider interest to NHS colleagues.

This report by Rand Europe looks at different hospital models in other countries and whether they could provide lessons for the hospital sector in England. In particular, it explores group hospital provider structure and governance models and the extent to which these may be associated with greater efficiency and improved quality of service provision.

Read the report at:  
[www.rand.org/content/dam/rand/pubs/research\\_reports/RR700/RR728/RAND\\_RR728.pdf](http://www.rand.org/content/dam/rand/pubs/research_reports/RR700/RR728/RAND_RR728.pdf)

## **ISWA study tour of sorting plants in London (May 11 – 13)**

The ISWA Study Tour on Sorting Plants will take place on 11-13 May to examine new developments in the processing of waste in order to extract value from it. The tour covers the initial recovery of materials for recycling as well as several London plants which both sort residual waste to extract more recyclable materials and also process waste into refuse derived fuel, both for use in the UK and for export to other European countries.

More info at: [www.iswa.org/nc/events/calendar/eventdetail/show\\_detail/sorting-plants-study-tour](http://www.iswa.org/nc/events/calendar/eventdetail/show_detail/sorting-plants-study-tour)

## **UK Healthcare Waste Contract Cancelled — Lancaster Telegraph**

ANGRY home-treatment patients have been left with bags of dangerous clinical waste piling up in their homes after a specialist collection contract was suddenly cancelled. Items including needles and tubes contaminated with blood and soiled bandages and pads are amongst the by-products which are involved. The decision to stop the contract, taken on the orders of London-based NHS England, shocked medical supervisors, local councils and MPs. NHS England has now promised to investigate after being contacted by the Lancashire Telegraph.

More info at: [www.lancashiretelegraph.co.uk/news/11781987.BLOOD\\_WASTE\\_HAZARD\\_\\_Home\\_patients\\_hit\\_out\\_after\\_collection\\_service\\_stopped\\_by\\_NHS\\_England/?ref=mac](http://www.lancashiretelegraph.co.uk/news/11781987.BLOOD_WASTE_HAZARD__Home_patients_hit_out_after_collection_service_stopped_by_NHS_England/?ref=mac)



# Industry News

## **Study on the environmental impacts of heavy metals in pharmaceuticals**

A study on heavy metals leaching from pharmaceuticals in Greece. NB. If you wish to see the full article, you will have to either contact the authors or purchase a copy.

Read the abstract here: <http://wmr.sagepub.com/content/33/2/191.abstract>

## **Secure return of unwanted medicines program**

The King County Board of Health passed the Secure Medicine Return Regulations on June 20, 2013, establishing an industry – funded product stewardship model to collect and safely dispose of unwanted household medicines from residents of the county. Legislation was developed through a year-long process where a subcommittee of the Board consulted with stakeholders, examined barriers to medicine take-back in the county, and developed a proposed product stewardship policy which was adopted unanimously by the full Board.

Read more details at: [www.kingcountysecuremedicinereturn.org](http://www.kingcountysecuremedicinereturn.org)

## **Food Waste Initiative in Spanish Hospital**

The Hospital Germans Trias i Pujol of Badalona has participated to the European Waste Prevention Week and within this initiative has created a multidisciplinary working group that met weekly in order to analyze why food was not consumed by patients (the patient did not like the food, mistakes in the kitchen when preparing special diets, planning, etc.). After the analysis they have been able to reduce about 50% of the food waste, mainly by integrating information from patient treatments and patient circuits with the food & beverage service planning.

See more on youtube:

[www.youtube.com/watch?v=1s-Zl3T3yVQ&feature=youtu.be&list=PLWQMeO43vsueKo-2CvV2bFS4AVQbN1SBI](http://www.youtube.com/watch?v=1s-Zl3T3yVQ&feature=youtu.be&list=PLWQMeO43vsueKo-2CvV2bFS4AVQbN1SBI)

## **Polish Supreme Audit Office report on medical waste.**

In December 2014 The Supreme Audit Office (NIK) in Poland published a detailed report about the medical waste disposal system in Poland. The main conclusions are:

“The medical waste disposal system in Poland has many gaps. NIK points out that both the reliability of procedures and documentation in this field are extremely important. Any negligence leads to problems with monitoring hazardous waste. Long distance transport of waste poses significant risk: hospitals often choose the cheapest, not the nearest incineration plants, guided by the service price, without considering the safety of citizens and the environment”.

To read more about the report please visit NIK's homepage: [www.nik.gov.pl/en/news/nik-about-medical-waste.html](http://www.nik.gov.pl/en/news/nik-about-medical-waste.html)

Full report (in Polish) can be downloaded here: [www.nik.gov.pl/aktualnosci/nik-o-odpadach-medycznych.html](http://www.nik.gov.pl/aktualnosci/nik-o-odpadach-medycznych.html)

## **Joint Healthcare Waste and Resources Research Group and ISWA International conference**

In conjunction with the International Solid Waste Association (ISWA), the Group will be hosting an international conference on April 14 and 15, 2016. It will be held at Guy's and St Thomas' NHS Trust in London.

## **Polish Education and Research Institute**

The Polish Educational Research Institute is organizing an international conference entitled “Qualifications for the labour market. Sectoral qualifications frameworks as new tools for managing competences” that will take place on 23 and 24 April 2015 in Warsaw, Poland. The Conference is aimed at facilitating the exchange of experiences and ideas on the development and implementation of solutions to match qualifications with the needs of the labour market. The Conference will focus on the key issue of Sectoral Qualifications Frameworks (the SQF) which are designed for the labour market and specific sectors of the economy. SQFs help link qualifications to specific work tasks, business processes and occupational profiles by improving and adapting educational programmes to the demands of the labour market. The conference will cover such topics as:

- Sectoral Qualifications Frameworks: challenges in the process of their design and implementation,
- Other systems of qualifications management: case studies,
- Sectoral Qualifications Frameworks as a source of inspiration for non-formal education,
- Sectoral qualifications: the role of stakeholders and sectoral associations,
- Changes in work processes and the challenges for qualifications management,
- The role and functioning of Sector Skills Councils.

For further information visit: [www.kwalifikacje.edu.pl/en/news/772-invitation-to-an-international-conference](http://www.kwalifikacje.edu.pl/en/news/772-invitation-to-an-international-conference)

*Better waste management benefits health organisations*

Supporting health care workers to classify waste appropriately can bring benefits to health organisations as well as the environment, according to new waste management guidance issued by the RCN. Reflecting legislative changes and current forms of best practice, the guidance calls for a greater focus on the waste hierarchy and for more distinction to be made between different waste types. The RCN is highlighting the need to risk assess all waste rather than simply labelling it infectious. It also argues for strengthening staff training on waste management and suggests that all organisations should consider appointing a dedicated waste manager.

*Need to distinguish between different waste types*

Rose Gallagher, the RCN's nursing adviser for infection control, said: "Safe management of health care waste is the responsibility of all staff in health settings. This guidance is designed to support health care workers, and particularly nursing staff, in managing the waste generated through their roles.

"There is evidence to suggest that a large quantity of health care waste is classified as infectious when it doesn't actually present a risk of infection. It should instead be classed as offensive waste, meaning it is non-hazardous. This improvement in classification could lead to cost savings and a reduction in carbon emissions.

"All health care organisations should use this new guidance and provide adequate support to their staff in dealing with waste management issues."

The guide was developed with RCN members and waste management experts from across the UK. It was co-authored by WSP, the professional consultancy which also helped produce the Department of Health's revised guidance on the safe management of health care waste.

To view the guidance visit: [www.rcn.org.uk/\\_\\_data/assets/pdf\\_file/0006/585447/004187\\_health\\_care\\_waste.pdf](http://www.rcn.org.uk/__data/assets/pdf_file/0006/585447/004187_health_care_waste.pdf)

**Royal College of Nurses in UK Publishes Report  
based on Freedom of Information on HCW**



Nurses make up approximately 70 per cent of the health care workforce in the United Kingdom and are therefore the largest producers of clinical waste. They are both the purchasers and users of consumables. Nurses are responsible for the management of waste as producers and participants in waste disposal procedures. This is reinforced by the International Council of Nurses (ICN) which highlights that 'in order to fulfil their role and take on their responsibilities, nurses must understand the hazardous consequences of improper waste handling, the 'cradle to grave' waste cycle and methods that mitigate the negative impact of waste on the environment' (ICN 2009). The Royal College of Nursing's (RCN) Frontline First campaign, launched in 2010, serves to highlight where waste occurs within health care systems and how innovations can contribute to efficiency and cost savings at local and national level. RCN members contacted the Frontline First campaign to raise concerns over local segregation of waste, in particular, inappropriate and overuse of the infectious waste stream resulting in unnecessary financial costs to NHS organisations. A Freedom of Information (FOI) survey was developed to provide a snapshot of waste segregation of three main waste streams for bagged waste (municipal, offensive and infectious waste) and comparative costs for the period 2008-09 and 2009-10. These streams were selected as a starting point to raise awareness and influence changes in practice that could result in environmental benefits and net savings for the NHS

To view the report visit: [www.rcn.org.uk/\\_\\_data/assets/pdf\\_file/0005/372308/004108.pdf](http://www.rcn.org.uk/__data/assets/pdf_file/0005/372308/004108.pdf)

This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Grant Agreement Ref. No. 2013-4928/001-001 Project Ref. No 541982-LLP-1-2013-1-UK-LEONARDO-LNW