

Hygiene *for the* World

Cutting-edge expertise in hygiene and infection control

Issue 4 / December 2013

EDITORIAL

The goal to be achieved sounds marvellous: patients should be relaxed and at ease and notice as little as possible of the typically



oppressive hospital atmosphere. At Medica 2013, the world's biggest trade fair for medical technology, hospital specialists from the Association of German Architects (BDA) presented their first ever award for outstanding building design in the healthcare sector. Why is this such a crucial step? Because healthcare and hospital projects have traditionally been under-represented in architectural criticism. This issue needed to be redressed for two key reasons: firstly, because hospital architecture is a reflection of medical progress and, secondly, because it is also a reflection of our society and, above all, a reflection of how we treat the sick, the weak and the elderly.

Healing architecture – a style of architecture that benefits patients' recovery and, at the end of the day, also makes life better for care personnel – is increasingly gaining in popularity. It stands out as a key aspect of our report on the Orthopaedic Clinic Markgröningen in Baden-Württemberg, Germany, which appears on the following pages. This is where MEIKO recently installed the biggest combined care unit in a utility room that the company has ever recorded in its

85-year history. The MEIKO planners fully respected the fact that the welfare of the nursing staff was paramount – something that is, of course, inextricably linked to the welfare of patients in a hospital setting. The care personnel, infection control specialists and hospital engineering team all had their say in this project, right down to the very last details. We take our hats off to everyone involved for demonstrating so much mutual respect.

The fact is that the topic of planning is a constant source of inspiration to the 'Hygiene for the World' editorial team. But over the last few months we have thrown ourselves even more enthusiastically into the subject. Our research, interviews and most striking case studies found their way into a special issue of 'Hygiene for the World' devoted entirely to planning. Experts we interviewed from Australia, Germany, India and Switzerland showed us that even utility rooms can be planned with patients firmly in mind, that we can learn important lessons from the history of hospital architecture, and that there are clear milestones on the path to creating the outstanding hospitals of the future.

If you would like to receive our special 'Planning' issue, we would be delighted to send you a free copy. Simply email your details to stam@meiko.de and we'll do the rest. Or to browse the contents online, you can also head straight to www.meiko.de

Very best regards, Markus Braun

Teaching the basics has a crucial role to play at scientific conferences, too

The topic of infection control and hospital hygiene was recently the focus of interest at the heart of the Argentinian capital of Buenos Aires. Some 700 professionals from all over the world accepted the invitation issued by the International Federation of Infection Control (IFIC) to attend their annual conference. The globally active organization is determined to play a key role in building a worldwide network of all experts in this field in order to improve infection prevention and infection control practices. The 'Hygiene for the World' editorial team spoke to the Chair of the IFIC, Dr. Judith Richards (Consultant Medical Microbiologist and Director of Infection Prevention & Control at Norfolk & Norwich University Hospital, UK) and the IFIC's Regional Coordinator for Western Europe, Prof. Dr. Walter Popp (Head of Hospital Infection Control at University Hospital Essen).



Prof. Dr. Walter Popp – the IFIC's Regional Coordinator for Western Europe

Question:

How would you rate the response to the most recent conference in Argentina?

Walter Popp:

The conference was very successful because the IFIC once again did an excellent job of presenting itself in a South American setting. The conference was well attended – just like the one in Chile a few years back – with some 700 participants from virtually all the South American countries. And of course that echoes the IFIC's key goal of linking up countries and people involved in the infection control sector to promote the exchange of best practice.

Judith Richards:

We were delighted to see so many attendees and to get such a positive response from our colleagues in Latin America, particularly the enthusiasm shown by participants from the host country, Argentina. The feedback we've received so far shows that people rated our conference very highly, both the local participants and those from abroad.

groundwork sessions so important at scientific conferences, because they can motivate novices in the field to evolve into active conference participants and they give everyone the opportunity to head back home equipped with new knowledge.

Judith Richards:

The selection of topics for the sessions, especially those in Spanish,



This year's IFIC conference took place in the Argentinian capital of Buenos Aires. Gertie van Knippenberg-Gordebeke, the Dutch "Queen of Bedpans" who runs her own consultancy firm, KNowhow Infection Prevention (KNIP), once again played a key role at this year's event.

Question:

The conference schedule included sessions focusing on core basics such as how to organize training programmes and how to formulate guidelines. How important are those issues in South America?

Walter Popp:

There are huge differences in hygiene conditions from one South American hospital to the next. The same applies to the level of expertise among infection control specialists, especially when it comes to issues such as academic knowledge-building and critical appraisal of evidence. That's why I personally find these kinds of

was carried out methodically on the basis of a careful assessment of the local situation. The local partners who helped us organise the conference were determined to choose topics that were as relevant as possible to the conference participants from the region. Ultimately the aim of the conference is to give everyone an opportunity to have useful experiences and to take home valuable new knowledge. And the selected topics certainly offered plenty of educational content.

Question:

There was some discussion as
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[1] Taking stock:

The International Federation of Infection Control (IFIC) recently held its annual conference in Argentina. The organisers described it as a resounding success. The 700 attendees, many of whom travelled from Latin America, enjoyed a great networking event and an opportunity to refresh the basics.

[2] The biggest yet:

At almost 10 metres, the combined care unit installed at the Orthopaedic Clinic Markgröningen in Germany is the longest ever built by the well-known manufacturer of cleaning and disinfection appliances MEIKO. The interdisciplinary approach to the project ensured that everyone was satisfied with the results – especially the infection control team and nursing staff.

[4] Infection control in Ecuador:

The doctor and infectologist Carmen Soria is responsible for hospital hygiene at the Luis Vernaza Hospital in Ecuador. She is delighted with the drop in the infection rate since the hospital installed its new bedpan washers.

[4] Masthead

Questions & Answers

Question:

What are Archaea?

Answer:

The term comes from the Greek *archaios* meaning ancient or primitive. It refers to Archaeobacteria, or ancient bacteria, which were described for the first time in the late 1970s. Archaeobacteria have adapted to extreme environments. They were discovered by researchers in acidic sulphur springs, a boiling hot environment which illustrates how they seem only to thrive at very high temperatures which are reminiscent of the conditions on early Earth.

One of these Archaeobacteria is Nanoarchaeum equitans, or "primitive riding dwarf". Regarded as a living fossil left over from the beginnings of life, it is just 400 millionths of a millimetre across, making it one of the smallest organisms on Earth. Oxygen is toxic to its metabolism, yet it can survive in the human body, for example in the mouth. Archaea creep under the protective film of larger Eubacteria and produce the biogas that is responsible for the unpleasant phenomenon of halitosis, or bad breath. They do not cause any infections.

Ten metres of perfect

Designed to cut down staff travel distances and make life easier for care personnel, the biggest combined care unit in MEIKO's history is now up and running at the Orthopaedic Clinic Markgröningen in Germany

There was a time when every doctor had their own ultrasound unit. But as the space in hospitals steadily becomes more compressed, floor space and room management has taken on a critical role. Yet transcending boundaries is not just a physical act but, above all, one that must take place in people's heads. This is illustrated by a project recently completed at the Orthopaedic Clinic Markgröningen (OKM in its German abbreviation), where a 9.8 metre long combined care unit now offers unparalleled dimensions of utility room excellence.

The set-up of the new combined care unit is a textbook example of how to achieve the very best in occupational safety, hygiene and ergonomics: Regardless of which side you enter the utility room in the neuro-orthopaedics and spinal cord injuries unit at the OKM in southern Germany, the slop sink is followed by a bedpan washer and a sink unit, then cupboards with storage space, and then the

same sequence again of sink unit, bedpan washer and slop sink, all arranged over a total length of 9.8 metres. While in other places cleaning and disinfection appliances, care utensils, laundry bags, flower vases and incontinence care supplies jostle for space in closely packed environments, this utility room is characterized by its ample size, generous proportions, clean lines and the sense that everything has its place.

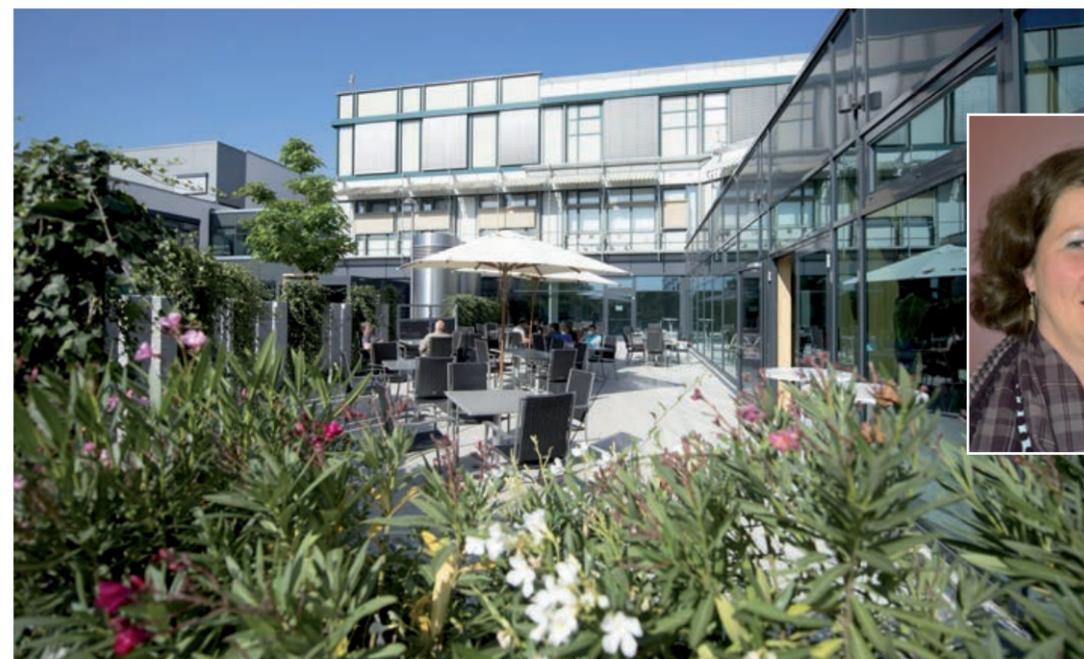


The Orthopaedic Clinic Markgröningen is one of the best facilities of its kind in Europe. As part of the Ludwigsburg-based RKH holding company of regional hospitals, it can exploit the synergies in hospital engineering and infection control that only a multi-facility network can offer. Photos: OKM



"Instead of the previous plan of having two utility rooms on the ward, we decided to switch to one large room with two access points," says Jörg Kunz (pictured on left). A qualified hospital engineer, his responsibilities encompass the smooth interaction and functionality of all the

technical systems not only at the OKM, but at a total of ten hospitals, all of which belong to the Ludwigsburg-based RKH holding company. One of his proudest achievements is exploiting the synergies that can be drawn from a network of regional hospitals – and indeed the synergies achieved through interdisciplinary approaches within individual hospitals.



"The special thing about this new utility room was that the care personnel got the opportunity to draw up their own wish list," says nursing services director Manuela Lehrach (pictured). Visits were also paid to other hospitals in the RKH holding company to see how

colleagues there had solved some of the most pressing issues. Harmonizing processes and standards has the added benefit of enabling people to switch jobs within the holding company without suddenly having to work under entirely different conditions.

Manuela Lehrach has had plenty of feedback from her team on how satisfied they are with the results: "Staff on the ward are really pleased with the new utility room because they finally have a solution that provides all the space they need," she says, explaining how the workflow in her area has improved. People's realization that they had the power to help make things better had a snowball effect, with a further



key suggestion for improving the combined care unit coming from the OKM's users after it was already up and running. The fact is that user requirements sometimes only become fully clear when users start working with medical appliances on a daily basis – so it is useful to have an industry partner at your side who offers the flexibility and enthusiasm to pursue a process of continuous improvement. The canister containing the cleaning chemicals for the existing detergent mixer unit was originally positioned above the bedpan washer, which not only made it difficult to replace but also created clear difficulties in regard to occupational health and safety. "We worked together with MEIKO,

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Teaching the basics has a crucial role to play...

to whether the time has come to make IFIC resources subject to a fee. Might this not make access to key information more difficult, especially in poorer countries?

Walter Popp:

The IFIC executive board would very much like to increase the number of individual members.

That's why the idea was discussed of making some IFIC resources available exclusively to members by providing them with a special keyword. My feeling is that this will involve a relatively small number of resources and that the IFIC's key services such as the Basic Concepts book will continue to be made available for free.

Judith Richards:

The IFIC charges a membership fee just like all professional associations. This is scaled to ensure that even the poorest countries can afford to become members. There are also a number of exemptions and a special bona fide programme we have developed to make all our services available to the most needy members at no cost.

hygiene

This remarkable 10 metre long combined care unit is located in the neuro-orthopaedics and spinal cord injuries unit at the Orthopaedic Clinic in Markgröningen. Photo: MEIKO



Pleased with the results: Jörg Kunz is in charge of hospital engineering for the ten hospitals that make up the RKH holding company in Ludwigsburg. Both he and the care personnel are very satisfied with the decision to transform two utility rooms into one. Thomas Bandel from MEIKO helped develop this innovative concept.



the bedpan washer manufacturer, to design a solution that would enable the canister to be stored below the machine on one side," says hospital facilities engineer Norbert Scholtissek (pictured), who works solely on the technical systems at the OKM. Together with his boss Jörg Kunz, Manuela Lehrach and the MEIKO customer account manager, the solution didn't take long to develop, including the addition of a magnetic catch to the canister compartment door to provide easier access. "It's important to listen carefully to what our staff members need,"



says Kunz, articulating a philosophy that applies across the entire holding company. "That partly comes down to the scarcity of skilled professionals, but also the fact that we think it is only fair to make work as easy and pleasant as possible for a team that achieves so much every single day," he adds.

Many of the patients at the Orthopaedic Clinic Markgröningen certainly require high levels of care due to their often critical condition, and there are few places this is more evident than

the neuro-orthopaedics and spinal cord injuries unit. Many of these patients are paralysed or in extreme pain because they have primary tumours or metastases on their spines or have been involved in serious accidents. Virtually everyone on this ward requires the use of care utensils, which makes it even more important to ensure that utensil reprocessing runs like clockwork.

And that's exactly what the new combined care unit offers in the ward's fully renovated utility room. "The care personnel are pleased that they don't have to cover such long distances, and the outstanding levels of hygiene of MEIKO products dovetail with our

hygiene management policy," says Scholtissek.

The effectiveness of this policy is clear from just one glance at the OKM's website. As well as participating in the German hospital infection surveillance system KISS (hand hygiene, MRSA-KISS, OP-KISS, ITS-KISS), the hospital's central sterile services department is certified, and the holding company issues its own antibiotics manual and publishes the resistance statistics for all its hospitals. Even the cleaning services in the hospitals rigorously apply the very latest standards, substituting buckets of water with specially prepared mops and fully trained staff.

The RKH also recently set up its new Central Department of Infection Prevention and Hygiene Management comprising a team of infection control specialists led by hospital hygiene expert Dr. Sabine Gfrörer. One of its tasks is to identify infection risks at the earliest possible stage and implement effective countermeasures. And the engineering department will also soon be adding a new member to its team: "We're bringing in the skills of a hygiene engineer," says Kunz. As someone who is already convinced of the benefits of transcending boundaries, he sees this is a crucial step because – in his words – "Hygiene and technology quite simply belong together!"

Significant reduction in infection rate thanks to installation of bedpan washers

Carmen Soria (pictured) heads up the infection control team at the Luis Vernaza Hospital in Ecuador. The young doctor and infectologist is also an active member of the organisational committee of Ecuador's "IX Congreso Panamericano de infecciones intrahospitalarias" and the "I Congreso Internacional de infecciones asociadas a cuidados de la salud" – the largest infection control conference in Latin America, which takes place once every two years. We spoke to Carmen Soria about the emphasis placed on infection control in her country, the improvements achieved by innovative bedpan washers and hygiene protocols, and her personal motivation for dedicating herself to the field of infection control.



continent? And what role do they play in hospital settings?

Carmen Soria: It's still a fairly low-key profession in some of our countries, but the status of infection control specialists is gradually gaining ground because they fight for improvements in patient care in order to guarantee the safe facilities and high quality services that patients need.

Question:

What is the general situation in Ecuador in terms of access to clean drinking water and how much emphasis do you think is placed on infection control in this context?

Carmen Soria:

Nowadays virtually everyone in our country has access to clean drinking water. We've seen huge improvements across all segments of the population – not just on a community level, but even more so in hospitals where the use of filter systems or the addition of

Question:

Why did you decide to work in the field of hospital hygiene? What attracted you to it?

Carmen Soria:

Infection control is my passion. It's a subject I could talk about for hours without getting bored! My decision to work in the field of infection control was the next logical step in my career. But the more you delve into the topic, the more you realize that there are many things and situations in which people are only concerned with the purely scientific aspects. In contrast, there are also many situations in which people with all their psychosocial dispositions play a key role in implementing new measures. That's why I've come to realize that the success of any initiative depends both on scientific knowledge and the actions of each individual. I find that complex interplay fascinating.

Question:

As well as acquiring bedpan washers for your hospital, you also implemented a hygiene protocol.

What changes has this initiative introduced?

Carmen Soria:

We made a number of changes to improve how we deal with patients at the Luis Vernaza Hospital where I work. Bedpan washers were installed on some wards to improve the disinfection of care utensils and reduce the time care personnel spend on those tasks. That has led to general improvements in our workflow. Things have changed on many different levels. We've reduced the rate of hospital-acquired infections and of cross-contamination by multi-drug-resistant microorganisms. That's particularly important in highly sensitive areas, for example wards for patients with severe burns.

Question:

What are your three most important goals in terms of improving hygiene in your hospital?



Infection control ultimately comes down to people

chlorine has made the quality of the water even higher. That has also improved hospital hygiene, especially in highly specialised hospitals that have already implemented infection control systems which take proper account of water treatment requirements.

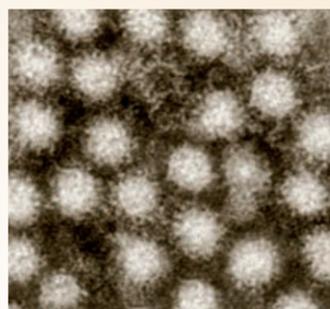
Noroviruses are described as the "perfect pathogens" – but they are rendered harmless at temperatures above 60°C

It only takes between 10 and 100 virus particles to give you a norovirus infection. To put that in perspective, every time an infected person suffers a bout of diarrhoea or vomiting, they release billions of virus particles. In fact, tests have shown as many as one billion pathogens in just one gram of stool! Although most people get infected by introducing noroviruses into their own digestive tract through the mouth, it is also possible for the infection to be spread through the air. This typically occurs when virus particles become airborne as a result of vomiting.

Dr. Ernst Tabori, Medical Director of the German Consulting Centre for Hospital Epidemiology and Infection Control (BZH) in Freiburg, has spoken in an interview about a passenger who ended up vomiting in an aeroplane as the result of a norovirus infection. In the sub-

sequent weeks, a steady stream of people who had been sitting close to that passenger succumbed to the norovirus infection. "People sometimes call it the perfect pathogen because it can withstand temperatures between -20 and +60 degrees Celsius," says Tabori.

Since norovirus infections can cause serious health problems – especially for elderly, immunodeficient and immunocompromised patients – it is important to take a rigorous approach towards reprocessing care utensils in hospitals and nursing homes. Markus Braun, who heads up sales and marketing at MEIKO – a well-known manufacturer of cleaning and disinfection machines – explains the best method: "Reprocessing bedpans and kidney bowls in a cleaning and disinfection machine during a norovirus outbreak increases safety for both patients and care personnel. Since the virus cannot survive at temperatures of 60°C or higher,



Norovirus under the microscope. Photo: Wikipedia

you can be sure that the utensils will be perfectly hygienic and safe for use when they come out of the machine."

According to Dr. Ernst Tabori, hand hygiene among both care personnel and patients plays the biggest role in halting the spread of noroviruses. And it is also important to remember that some patients are still excreting the virus as many as 14 days after the infection itself subsides.

Carmen Soria:

We want to reduce the transmission of multi-drug-resistant microorganisms and, above all, prevent infections, especially among care personnel and patients.

Question:

You work on the organisational committee of Latin America's biggest hygiene conference. How would you describe its key tasks and aims?

Carmen Soria:

I'm currently responsible for the organisation as the Chair of the IX Congreso Panamericano de infecciones intrahospitalarias and the I Congreso Internacional de infecciones asociadas a cuidados de la salud. Our task is to organise the conference and promote the dissemination of knowledge and experience among professionals in our country and across the whole continent. We do that by drawing on scientific knowledge tailored to the situations in our countries.

Question:

What kind of status do infection control specialists have on your

CALENDAR

27–30 January 2014
Arab Health, Dubai

12–15 March 2014
IFIC 2014, Malta

30 March – 2 April 2014
DGKH, German Society of Hospital Hygiene Berlin, Germany

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