Switzerland to adopt DRGs system

Switzerland's hospital system is highly complicated because the 26 cantons each have different regulations. Nonetheless, they all have one common feature, i.e., billing is calculated on a per diem basis, which means that medical insurers simply pay an agreed amount per day spent in hospital – independent of a patient's diagnosis. Any further costs are covered by the hospital, meaning the state or private hospital operators pay.

Dr Carlo Conti, President of SwissDRG AG, based in Basle, will organise the switch to DRGs. ‘There can be no doubt that the current billing systems in Switzerland contain some misguiding incentives and are therefore causing a conflict when it comes to achieving more efficiency for hospitals. The partners in the healthcare sector and the world of politics agree that a system change to DRGs would result in real improvements. National, standardised tariffs would also make it easier to achieve comparability and to promote the exchange of healthcare services between different geographical areas within Switzerland,’ he told European Hospital.

What do they hope to achieve?
The introduction of DRG case-based lump sums is to achieve two things: More transparency of all medical services offered and provided in a hospital and ideally a performance-based kind of remuneration. In our Federal structure, the DRGs will provide a prerequisite for more competition between the service providers because services and products delivered by hospitals can be compared, regarding cost as well as quality.

Switzerland is to adopt the German case-based system, for example, although this has now fallen.

Cancer care advances – but at what cost?

Although incremental improvements in cancer care were unveiled at the 44th Annual Meeting of the American Society of Clinical Oncology held in Chicago, USA, – the world’s largest gathering of cancer specialists, our correspondent Ian Mason writes that, even as new study results were being reported, their cost implications for stretched healthcare budgets were questioned.

Professor Robert Parker, Medical University of Vienna, Austria, announced results from the FLEX study (Abstract 45) showing that combining the targeted therapy cetuximab with platinum-based chemotherapy improved overall survival compared to chemotherapy alone, when used as a first-line treatment for patients with advanced non-small cell lung cancer – which accounts for more than 80% of all lung cancers.

The addition of cetuximab boosted overall survival from 10.1 months to 11.3 months, a result that Professor Parker described as ‘setting a new standard’ for the first-line treatment of this dreadful malignancy.

However, Professor Thomas J Lynch, Harvard School of Medicine, pointed out that this modest survival benefit – just 1.2 months – came at a cost per life year gained of $450,000 to $622,000.

The eye-watering cost of such interventions underscored the importance of pharmacoeconomics – another major theme at this year’s ASCO. ‘This exciting field gives us new tools to identify the most appropriate treatment for each patient,’ said Dr Julie Gralow, associate professor of medicine at the University of Washington.

In one such study, Professor Eric Van Cutsem, University Hospital, Leuven, Belgium reported results continued on page 2
Medical services

About 90% of hospital income is generated in the 30-day working period. Hospitals have to generate profits. However, due to new work time regulations fewer and fewer staff members are available to perform these productive shifts and much of the work time is spent in the 'unproductive' night shifts.

Albeit, medical services efficiency is a crucial factor in a hospital's survival strategy. This means, in view of the shortage of physicians and of funds to pay additional medical staff, there is only one solution: capacities should be reduced. Medical capacities needed to be concentrated in those shifts in which most medical services are delivered. In turn the capacity for provision of care is provided in late, night and weekend shifts must be reduced. Consequently, this implies that low-skill tasks, e.g. taking blood samples or document management, can be performed by clerical staff and additional capacities are needed for external patients. A better quality of life for patients.

Based on this study, we expect that vaginal brachytherapy will be adopted as the new standard of care for patients with this type of endometrial cancer. The Austrian Breast and Colorectal Cancer Study Group (Abstract #1590) showed that various types of heart services provided in late, night and weekend time are being offered, but their responsibility is different. The majority of physicians are available for these working hours of the 'unproductive' night shifts.

Technical approaches to identify, measure and calculate major and minor processes in hospitals are very promising. Frequently, only a few major processes need to be standardised to realise significant efficiency gains. The crucial in essence cultural, precondition to bring about this change is the willingness and discipline to follow through with regards.

Medical care

The traditional career path – specifically medical training that leads either to a high-status private practice or to a hospital position – i.e. that of assistant medical director and eventually medical director – seems a decreasing option for young physicians who are well aware of the financial and the reform pressure burdening the healthcare system. A new generation of physicians is therefore prepared to consider career alternatives. Consequently, hospitals should offer attractive, adequately paid jobs below the medical director level, which comes with status, long-term perspectives and allow a decent working and living balance. One option is to create a new medical middle-management level for physicians: so-called functional assistant.

Continued on page 1

The Aachen-Maastricht Alliance

International experts in hospital management and business will speak at the MCC Hospital World 2008 (Berlin, 8-9 September). Here, Dr Guy Peeters, CEO of Academic Ziekenhuis Maastricht, and Dr Robert Bider, CEO of the Hirnsland Private Hospital Group, summarise their presentations on the creation of a European University Medical Centre (EU-MEC) and the Aachen-Maastricht Alliance.

Dr Remi Nout, CEO of Academic Ziekenhuis Maastricht, and Dr Robert Bider, CEO of the Hirnsland Private Hospital Group, summarise their presentations on the creation of a European University Medical Centre (EU-MEC) and the Aachen-Maastricht Alliance.

In breast cancer, a study found that giving zoledronic acid (Zometa) to docetaxel (Taxotere) – a single dose of carboplatin (Paraplatin) – resulting in a 30% increase in overall survival compared with docetaxel alone. It's very exciting to find that in addition to standard endocrine therapy for breast cancer, the use of new agents such as zoledronic acid can also reduce the likelihood that breast cancer will return in some women," said Professor Michael Gnant, Medical University of Vienna, and President of the Austrian Breast and Colorectal Cancer Study group. Another study (Abstract #9509) reported that adding bevacizumab (Avastin) to docetaxel (Taxotere) allows progression-free survival for patients newly diagnosed with locally advanced or metastatic breast cancer (Abstract #2).

A further study (Abstract #5905) with potential cost implications for breast cancer treatment showed the finding that many survivors of childhood cancers are five to ten times more likely than the children's siblings to develop heart disease in early adulthood. The massive Childhood Cancer Survivor Study (CCSS) showed that various types of heart disease were two to five times greater in survivors who had antithyroid drugs (such as carbimazole) or radiation therapy to the heart as part of their cancer treatment, compared with survivors who did not undergo these treatments.

"Full ASCO abstracts: www.asco.org"
material directors who are specialised and manage their specialised field. While this would increase personnel costs it also—and more importantly—would increase hospital performance.

**Nursing services**

Since the early 90s, nursing staff is increasingly skilled and trained. While many nurses acquire additional qualifications and specialisations, the majority of their tasks are housekeeping, self organisation and messenger services, which accounted for 75% of their work time—yet are tasks for which most nurses are overqualified. To improve cost efficiency, simple tasks can be allocated to other functions. There are already successful pilot projects underway in which nurses’ assistants, housekeeping, service and hotel staff are employed.

On the other hand, highly qualified nurses could assume more responsibility and perform both medical and case management tasks. It remains to be seen, though, whether nursing staff are willing to assume medical assistant tasks and whether doctors are prepared to hand over case and process management tasks to nurses.

**Key issue: Logistics**

Hospital traffic is immense: Hospital hallways buzz with staff, permanently on the move. They accompany patients to examinations, hand carry reports, files and images because the electronic patient record (EPR) is still not a reality. Long distances between diagnostic, treatment, surgery and care facilities, scattered all over a hospital complex, force staff to spend more time in transit than in the workplace where they belong. These superfluous logistical processes generate superfluous costs of around 20%. Today, PACS, digital ordering, EPRs and electronic scheduling, as well as electronic stock and purchase management, are all possible and should be minimum standard. The core work areas of a hospital must be restructured. With short routes and short waiting times, staff will perform better and patients will be more satisfied.

**Data management to support decisions**

Hospital management has many possibilities to optimise the economics of medical treatment. Over the last few years, the ‘profit accounting centre’ at the Institute for the Hospital Remuneration System (Institut für Entgeltkalkulation im Krankenhaus – IndEK) has gained wide acceptance as a decision-making support tool. It provides benchmark-oriented profit and loss accounting as well as continuous DRG calculation, which generates actual cost data for each case. Excess costs as well as shortfalls are identified and their causes can be analysed.

All required data are automatically culled from the overall hospital information system and from functional sub-systems. For hospitals a professional software solution is as indispensable as the above-mentioned standardisation of processes.

**Empathy**

A major success factor of any hospital is the level of empathy patients receive. But today, in the face of organisational and structural weaknesses, empathy far too often falls by the wayside—a fact deplored by patients and staff alike. In modern society the avoidance of suffering plays an enormous role and, in addition to any pain therapy, human-centred empathic care can work wonders. If we conclude that, in the current system, empathy has become almost impossible, we need to ask who can serve as a model and how can we improve the situation. The organisational and structural changes suggested above are not merely technocratic, on the contrary, they all aim for one goal: to make empathy possible again.

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**Implementation example: Vascular Surgery**

The European Vascular Centre Aachen-Maastricht serves as a leading example for the development of collaboration in cardiothoracic surgery, cardiology and interventional radiology.

The partners established a joint Centre for Vascular Surgery: Each hospital has fully employed physician and nursing staff, whereas the director of the centre, Professor Michael Jacobs, travels between both locations. Communication with staff is possible by video conferencing. Moreover, corresponding technological solutions enable Maaschtum UMC to retrieve information, e.g. patient files stored in Aachen and vice versa. An IT system has been developed to enable neurophysiologists to monitor top-level thoraco-abdominal aorta aneurysma (TAAA) surgery in Aachen from their department at Maaschtum UMC. The European Vascular Centre Aachen-Maastricht was accredited recently.

More details of this project can be heard at the MCC Hospital World 2008 (www.hospitalworld.info) meeting in September.

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**Medi-Clinic**

The S. Africa-based private hospital group was founded in 1983 by Dr Edwin Hertzog, its present Administrative Board President, with the support of the Rembrandt Group. The corporation unites 50 hospitals (c. 7,000 beds; 13,000 staff) most of which operate the affiliated doctor system. The Swiss Hirslanden private hospital group, established in 1990 by a Hirslanden Clinic merger with four clinics owned by the American Medical International (AMI) Group. The group now owns 13 hospitals (c. 1,300 beds; 4,500 employees). Dr Robert Bider has been CEO since 1990. In 2007, Hirslanden changed hands from the private equity group BC Partners to the South African corporation Medi-Clinic.
Nurses! Dreaming of that special vacation? Sand, sea, snow, sailing? One thing never to forget is your camera, to ensure your holiday is never to be forgotten. Just take a look at our prize for this month’s competition.

The compact metal body of the Olympus Mju 850 SW comes in a choice of colours. However, as a special temptation and reward for someone in the nursing profession, we have selected this pink model as a splendid prize.

Don’t be deceived by that chic colour. This camera is tough! The Mju 850 SW is not only shock and water proof (to 3 metres), but also able to resist frost, and certainly offers so much more for anyone’s photographic aspirations – it even has 24 scene modes (including underwater snapshot, wide 1 & 2, and macro). In effect, even those with few camera skills should be able to produce memorable photographs.

Also, despite body size – 93.6 high x 60.9 wide x 21.3 mm deep – and weight, 136g (without battery and card), this 8 megapixel camera, with 3 x optical zoom, provides another reason for our choice: languages. It will suit most of our very international readers because the menu comes in 38! (EU, Greater European and Far Eastern languages, of course, but also Hebrew, Persian and Arabic and more).

So, no matter where you plan to take a break, why not see if you will be the one to pack this prize?

**ENTRY COUPON**

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DO YOU WISH TO RECEIVE OR CONTINUE TO RECEIVE EUROPEAN HOSPITAL? □ YES □ NO

**1. SPECIFY THE TYPE OF INSTITUTION IN WHICH YOU WORK**

□ General hospital □ Outpatient clinic □ University hospital

□ Specialist hospital/other

□ Other institution (eg medical school)

**2. YOUR JOB**

□ Director of administration □ Chief medical director □ Technical director

□ Chief of medical department/other

□ Medical practitioners/other

□ Other/department

**3. HOW MANY BEDS DOES YOUR HOSPITAL PROVIDE?**

□ Up to 50 □ 51-100 □ 101-500 □ 501-1000 □ More than 1000

**4. WHAT SUBJECTS INTEREST YOU IN YOUR WORK?**

□ Surgical innovations/surgical equipment □ Clinical research/treatments/equipment

□ Ambulance and rescue equipment □ Physical therapy/apparatus/equipment

□ Radiology, imaging/high tech advances □ Laboratory equipment, instrumentation, etc.

□ Hospital furnishings, beds, lights, etc. □ Hospital clothing and protective wear

□ Hygiene & sterilisation □ Nutrition and kitchen supplies

□ Linens & laundry □ Waste management

□ Information technology/technical communications □ Hospital planning/logistics

□ Personnel/hospital administration/management □ Material Management

□ EU/intergovernmental □ EU political updates

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Please complete this above questions and we would like you to answer the following additional questions by ticking yes or no or filling in the lines as appropriate.

**What is your specialty?**

In which department do you work? □ Yes □ No

Are you head of the department? □ Yes □ No

Are you in charge of your department’s budget? □ Yes □ No

How much influence do you have on purchasing decisions? □ Yes □ No

I can only present an opinion □ Yes □ No

I tell the purchasing department what we need □ Yes □ No

I can purchase from manufacturers directly □ Yes □ No

**Do you consider that your equipment is**

□ Out-dated □ Modern □ State of the art

**How do you use your second-hand equipment?**

□ If so, what do you use of this kind? □ Yes □ No

□ Is your department linked to an internal computer network? □ Yes □ No

□ Is your department linked to an external computer network? □ Yes □ No

□ Do your contract with telemedicine in the community? □ Yes □ No

□ Do you consider your department is understaffed? □ Yes □ No

**Do you consider your department is understaffed?**

□ Is your department linked to an external computer network? □ Yes □ No

□ Do you consider your department is understaffed? □ Yes □ No

□ Are you given ample opportunities to up-date knowledge? □ Yes □ No

□ Do you attend congresses or similar meetings for your specialty? □ Yes □ No

**This information will be used only in an analysis for European Hospital**
Restructuring in the hospital sector

MERGER CONTROL AND OTHER PITFALLS UNDER COMPETITION LAW

The restructuring process in the hospital sector has accelerated over the last couple of years. For example, since 2005 the FCO has reviewed over 50 hospital merger notifications.

The first prohibition of a public hospital merger was issued on 13 December 2006. The FCO prohibited the University Hospital of Greifswald from taking over the Wolgast district hospital. It argued that the merger would further strengthen the dominant position of the Greifswald University Hospital in the relevant market. In its decision, the FCO followed the principles established in the earlier merger case Rhön Klinikum AG/Bad Neustadt (10/5/05). However, despite the basic similarity, the final outcome of the two cases was different. Whereas in its ruling of 16/1/08 on Rhön Klinikum AG/Bad Neustadt the Federal Supreme Court upheld the merger prohibition, the merger could be consummated after receiving an exceptional authorisation from the German Federal Minister of Economics and Technology on 17 April 2008.

In its ruling on Rhön Klinikum AG/Bad Neustadt, the German Federal Supreme Court upheld the merger prohibition, the merger could be consummated after receiving an exceptional authorisation from the Federal Minister of Economics and Technology.

Relevant provisions

Turnover thresholds

In its ruling on Rhön Klinikum AG/Bad Neustadt the Federal Supreme Court supported the view of the FCO and stated that hospital mergers are subject to merger control provisions in accordance with the provisions of the German Act against Restraints of Competition (ARC). As the ARC does not distinguish between mergers of private and public undertakings, the merger control provisions apply irrespective of the legal status of the hospitals concerned.

Mergers (incl. the acquisition of at least 25% of shares in a company, etc.) must be notified with the FCO if the total global turnover of the parties involved exceeds €500 million and if at least one of the companies involved generates turnover in Germany exceeding €25 million.

The fact that such mergers do not normally take place in so-called de minimis markets (which are exempt from German merger control provisions) means that merger applications may only be dispensed if a company having generated global turnover of less than €10 million in the last fiscal year (including parent company and subsidiary turnover) merges with another company. Mergers must be notified with the European Commission if the total global turnover of the parties exceeds the threshold laid down in the EU Merger Control Regulation. The turnover thresholds for German merger control were met both by Rhön Klinikum AG/Bad Neustadt and Greifswald/Wolgast.

In the latter case the state of Mecklenburg-Western Pomerania argued that its total turnover on the hospital sector does not meet the threshold of €500 million. However, the FCO rejected this assessment arguing that the relevant turnover achieved by the state includes not only the hospital but also any other commercial activities of the state.

Substantive assessment criteria

If a merger is likely to create or strengthen a dominant market position, it will be prohibited by the FCO under sec. 36 (1) of the ARC, unless the parties are able to demonstrate that the merger will have a significant positive effect on competition. A company is regarded as having a dominant market position if it is able to supply or demand certain goods or services on a specific market without having any competitors or being exposed to any substantial competition, or if it has a paramount market position in relation to its competitors (sec. 19 of the ARC). This is presumed to be the case if the company has a market share of at least one third. It is also possible for several companies jointly to hold a dominant market position, if up to three companies have a joint market share.

The hospital sector has recently faced increased competition law scrutiny, particularly in Germany. In recent years the German Federal Cartel Office (FCO) has made it clear, on numerous occasions, that mergers between hospitals (private and public) are as much subject to competition law provisions as any other merger cases. Here, Marc Besen analyses a few recent German merger cases to provide an overview of the impact of competition law provisions on hospitals – and on hospital mergers in particular.

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As a lawyer and partner at Clifford Chance, Dusseldorf based Marc Besen primarily specialises in German and European antitrust law. He advises companies during the implementation of merger control proceedings at the German FCO and EC and co-ordinates worldwide multi-jurisdictional filings. He also has broad expertise in advising interested third parties in successfully intervening proposed transactions within merger control and court proceedings. In addition, he focuses on cartel investigations, issues of compliance systems, control of implementation of competition and antitrust law requirements, and domestic law across a wide range of industry sectors (in particular healthcare and hospitals).

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Siemens AG
Planning pathways to a peaceful end
Annick Chapuy reports on the landscaping of the Centre Hospitalier Emile-Roux in France

The décor of the park, kiosks, fountains or ponds helps patients to navigate, with comfort. The kiosks, providing shelter, toilets, benches and nurse alarms, are placed every 50 to 100 metres. Benches – created to retain neither heat nor cold, the benches have back and armrests and the seats incline to resist a fall. A metal framework ensures the benches, providing space for a wheelchair.

Not higher than 90 cm, the waste bins are made of metal. They also are on the ground to enable the blind to tap and locate them.

Any sudden change in luminance can lead to orientation problems, especially for the partially-sighted. For patient safety, various pathways in the park are clearly lit. Additional lighting equipment must be coherent and continuous. Lights illuminate the paths in areas used at night, as well as at pedestrian-crossing points. The angles of sun- nays are controlled to eliminate glare and reflection.

Light from lamp post intersect at a height of 2.10 metres minimum. Glare from lower sources of light (under 1.5 metres) can lead to visual discomfort.

Planting – The designer divided the existing large lawn in to four distinct and complemental zones: a forest; valley of flows; prairie from which to admire the landscape; walkways.

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Planting – The designer divided the existing large lawn in to four distinct and complemental zones: a forest; valley of flows; prairie from which to admire the landscape; walkways.
The NHS is still suffering from wide variations in infection control standards, according to a survey of health staff in the UK.

The study carried out by the watchdog body the Healthcare Commission, after questioning more than 155,000 NHS staff, indicated that there had been improvements in infection control in several areas. This was reflected in 82% of staff saying their trust did enough to promote the importance of hand-washing to staff, up from 70% in 2005.

There was also an improvement in the number of staff trained in infection control, up from 68% in 2005 to 71% in 2007.

However, the Healthcare Commission said work still needed to be done in hospitals in parts of the UK to ensure that hand-washing equipment was always available to staff when they needed it. In 2005, 69% of staff said hand-washing equipment was available but in the latest survey, this had only risen to 61% with wide variations between hospital trusts.

Healthcare Commission chief executive Anna Walker said: ‘At a time when public concern about healthcare associated infections is so high, I’m pleased to see some improvements in this area. But trusts must make sure that frontline staff always has the necessary equipment to wash their hands. There are trusts that have shown that it is possible to do this well, with as many as 82% of staff saying they always had equipment available. But this fell to as few as 39% at other trusts. Every trust should be aiming to make this 100%.’

In Britain, Prime Minister Gordon Brown ordered a ‘deep clean’ of every hospital ward last year as a pre-emptive move to halt the spread of nosocomial infections such as MRSA.

Various practices have been introduced in UK hospitals to this end – one, in Plymouth, for example, which had the highest number of MRSA deaths in England with 94 between 2002 and 2006, now has all serious cases of MRSA and clostridium difficile infections reviewed by senior managers.

Another NHS Trust reports it has eliminated MRSA bloodstream infections by stopping the routine practice of administering intravenous injections. (See page 23 for a roundup of UK approaches to control nosocomial infections.)

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The end of disease starts at the beginning.
Nurses spend 1.6 million hours weekly on form filling

UK – A plea to hire more ‘ward clerks’ to free hospital nurses from excessive bureaucracy has been made by the Royal College of Nursing to the government and change.NURSE targets so as to place more emphasis on patient satisfaction and hygiene standards.

The excessive hours nurses spend on tasks that keep them away from patient care are highlighted at the RCN annual conference this April, based on an ECM poll of over 1200 staff nurses. The poll found that they spend, on average, 7.3 hours weekly filling in forms, part-time nurses spend some 3.9 hours in this way.

Figures for nurses in managerial positions and part-time nurses spend, on average, 7.3 hours weekly filling in forms; part-time nurses spend, on average, 3.9 hours in this way. These include filing, photocopying and ordering supplies. Over 28% pointed out that they had no access to clerical help. Only 22%

**What singles ResearchGATE out compared to, for example, using Facebook for social networking?**

**Dr. Madisch:** It’s a social network tool adapted to a researcher’s needs, i.e. optimized to present yourself in the context of your research. ResearchGate enables you to get in touch with colleagues internationally, to stay informed about their actual projects and latest publications, as well as to contact information and the literature they read. We want to combine various Science 2.0 applications in order to create a unique collaborative environment.

ResearchGate can initiate and foster collaboration among researchers in different ways; the platform is increasing efficacy, inter-disciplinary and economical way of collaboration. Through our search engine you can find a researcher specialized in specific fields, so it’s easy to find someone who may be a big help. Just search registered researchers.

**Given the importance of collaboration for researchers we developed a new application:** ReSTORy (Research Storage History Storage) – a platform that sticks to your personal workflows. Several other features are already available. However, driven by feedback and scientific of the social network, we are continuously developing new applications tailored to researcher’s needs.

**What is Science 2.0?**

We have all heard about this evolution - same period as it revolution - within the internet widely known as Web 2.0. Let us take encyclopedias. For decades they were hardcovers on the bookshelf, then followed a static online version. Finally, e-encyclopedias were revolutionized by Wikipedia. Within science – and other research areas, we are currently in the static online stage. Science and scientific publication can only completely modern concepts that Web 2.0 offers, which will change through Science 2.0. This is already happening, and established learning paradigms have given way to wikis, and the amount of open access journals is increasing. Nobody knows how science in the future will look – but with ResearchGate we want to support that change. ResearchGate is a part of the Science 2.0 community and will evolve with the community from scientists for scientists.

**Malnutrition in the elderly**

Malnutrition is a serious problem for many older people, particularly those above the age of 70. European research results indicate that 15-40% of the elderly admitted as in-patients suffer from malnutrition.

Profoundly a poor nutritional state is caused by chronic diseases, dementia, disorders in the mechanism that regulate hunger and satiety, loss of sense of taste and problems with chewing. An estimated 50-70% of people in nursing care suffer from malnutrition, while for people living in their own homes, the figure is 15%.

A first indicator for malnutrition is the body mass index (BMI). Patients with less weight loss, a low BMI (< 18.5) can be assumed to be the quality of nutritional state. When patients are losing weight rapidly, their weight should be measured over time to be able to assess and minimize the risk.

Nurses provide the key information, which compromises their immune system, muscle mass disappears, trend to lose weight and, due to lack of calcium, bone fractures happen more often. Particularly in older people, malnutrition means loss of independence and quality of life, since decreasing muscle mass makes walking and standing up difficult.

Identification of the nutritional state via BMI requires scales and other measurement tools of utmost precision. Scales with handrails that facilitate climbing and standing on the platform help both healthcare workers and patients, seca gmbh & co. kg, Hamburg, Germany, offers a broad range of products that are ideally suited for older patients such as scales with large platforms that provide ample space for a second person, or a chair so the person can be weighed while sitting. The additional weight is tared and the net body weight is displayed. Source: seca

**Cardiology at the Crossroads Institute**

Pharma company Eli Lilly has increased an existing partnership with the World Medical Association (WMA) by granting c. 646,505 euros to expand online training courses for physicians on multidisciplinary risk-reducing interventions (MDR-TB), which they have been developed over the past year. The course aims to help physicians to more effectively diagnose, prevent and treat MDR-TB. Clinical guidelines were developed and harmonized with evidence-based material sourced from the WHO, International Council of Nurses and the International Hospital Federation.

The course was tested among physicians in South Africa. The German Medical Association gave managerial support for the conception of the project, and the Norwegian Medical Association adapted the material to a web-based format and will provide CME credits to course participants.

The new four-year joint partnership agreement was signed in Geneva in May by Jacques Tapiero, president of the European Medical Association: http://lupin-nma.net/.

**WMA gives EU doctors free access to CME**

Doctors across Europe now have free access to the British Medical Journal’s library of Continuing Professional Development (CPD) content.

With ‘revalidation’ of medical training becoming common in many EU countries, the availability of unbiased, peer reviewed, accredited CME will become increasingly important, explained Dr Michael Sloman, Chair of the BMJ Group, adding: ‘Medical knowledge is changing at such a rapid rate, that a physician’s knowledge edge needs replacing every seven years.’

More than half a million physicians already use univadis, but only now have access to BMJ Learning. Under the new scheme, started in June, EU primary care and hospital physicians can access 350 interactive learning modules and 100,000 pages of BMJ learning at www.univadis.com (sponsored by Merck Sharp and Dohme). Until now, the most popular CME modules have been about cholesterol and flu.

Languages: The courses are being translated first into Spanish, German and French, to be followed by other EU languages.

Report: Ian Mason
ICELAND’S ADVANCING MEDICAL SERVICES

With two campuses, Iceland’s Landspitali University Hospital (LUH) is the largest medical institution in Reykjavik. Both are affiliated with the University of Iceland. While LUH is chartered to serve the entire national population of 313,000, its primary focus has traditionally been on the 178,000 residents in and near the city. LUH is at the forefront of specialized healthcare in Iceland, and is the central base for providing medical services to its citizens as well as educating health professionals. More than 1,100 students are trained at the hospital annually, and nearly all Iceland’s physicians received their medical education at LUH.

Thorgeir Palsson, Clinical Engineering Manager in the Medical Service Department at LUH

Today, Iceland counts 53 personal health clinics, widely scattered across the nation, which, despite its relatively small population, encompass a land area nearly the size of the UK. A combination of hospital-based PACS technology and remote computed radiography (CR) units from Agfa HealthCare will now help many Icelanders receive prompt medical care regardless of location.

LUH had originally installed a basic PACS from Agfa HealthCare in 1997 linking various digital modalities within its radiology department, as well as workstations in other hospital-based locations. A comprehensive CR system was added in 2003. More recently, it upgraded to a newer IMPAX PACS version with an expanded network that included nearby clinical locations outside the main hospital campus.

Thorgeir Palsson, Clinical Engineering Manager at LUH, explained: ‘Growing our PACS over the years clearly demonstrated how we could link and archive images from various modalities, as well as make data available to other in-hospital sites. We also saw the speed, workflow improvements, performance reliability and image quality benefits of distributing digital imaging and information. Going digital meant no more film processing, with all the caustic chemicals and strong odors,’ he added. ‘I also like not having to store and manage chemical supplies, as well as avoiding the huge cost of safely discarding old chemistry. The CR system is very user-friendly, and I’m pleased with all the advantages it offers.’

‘LUH physicians and administration agreed it was logical to expand the network using Agfa HealthCare CR systems, since their experience with the original and current IMPAX products was so positive, and deploying the company’s CR technology would be an easy, transparent connection,’ Agfa pointed out. ‘As a result, Agfa HealthCare also deployed CR 35-X and CR 30-X CR systems.’

Performing over 6,000 procedures annually, the Keflavik facility’s single CR unit and 11 special cassettes are in constant use.

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Siemens

2008 Medical Design Excellence Award

The Medical Design Excellence Awards competition is organized and presented by Canon Communications LLC (Los Angeles) and is the only awards program that exclusively recognizes contributions and advances in the design of medical products.

Sectra MicroDose Mammography has been given the 2008 Medical Design Excellence Award. Entries are evaluated on the basis of their design and engineering features, including innovative use of materials, user-related functions that improve healthcare delivery and change traditional medical attitudes or practices, features that provide enhanced benefits to the patient, and the ability of the product development team to overcome design and engineering challenges so that the product meets its clinical objectives.

The independent jury, with expertise in biomedical engineering, human factors, industrial design, medicine and diagnostics, pronounced: ‘Sectra MicroDose Mammography with its ultra low-dose radiation output and elegant ergonomics clearly stood out with regard to both the criteria patient safety and ease-of-use. Aesthetics, while not absolutely critical, is also important and the elegant European form factor was another positive.’
Cardiac-CT for guidance of electrophysiologic interventions in patients with cardiac arrhythmias

Over the last decades innovative cardiac electrophysiologic studies gained widespread acceptance for the diagnosis and treatment of cardiac arrhythmias. The spectrum of supraventricular and ventricular tachyarrhythmias that can be cured by catheter ablation increased significantly. More complex tachyarrhythmias such as atrial fibrillation (AF) or atrial tachycardias, premature ventricular contractions (PVC) or ventricular tachyarrhythmias in patients with complex congenital heart disease can nowadays be successfully approached.

Electrophysiological studies and ablation procedures are currently performed with manually deflectable catheters under fluoroscopic guidance. The fluoroscopic silhouette of the heart, together with excursions of the catheter during manipulation as assessed by different X-ray angulations as well as the electrical signals recorded by the distal electrode of the electrophyslogic catheter, are the tools to localise the target region for an effective therapy. Some major disadvantages are obvious. Frequent fluoroscopy is needed to control catheter movement which may lead to substantial radiation exposure time for both, the patient and physician. The cardiac anatomy is not visible during conventional procedures. Therefore, electrical signals recorded from the endocardium by the mapping catheter cannot be directly associated to the individual anatomy in case of conventional fluoroscopy.

However, the last decade has witnessed the development of high-resolution non-fluoroscopic mapping systems and integration of CT or MRI data sets of cardiac anatomy. The three dimensional pattern of electrical activation during the arrhythmia, such as recurrent PVC or regular supraventricular or ventricular tachyarrhythmias can be reconstructed with sequential registration of the electrical activity from different anatomic regions of the heart. Furthermore, continuous non-fluoroscopic control of the tip of the visualised mapping catheter during manipulation in the heart chambers is possible. Thus, movement of the catheter can be performed with less or even without fluoroscopic control. Finally, the new generation electro-anatomical mapping systems offer the possibility to integrate high-resolution cardiac CT or MRI images in the electrical map of the heart. Prior to the procedure a contrast-enhanced ECG-gated CT is mandatory for successful and sustained ablation of the target. The knowledge of the individual anatomy is essential for a safe and effective therapy. Therefore, electrical signals recorded from the endocardium by the mapping catheter cannot be directly associated to the individual anatomy in case of conventional fluoroscopy.

Hence, morphological information with a preprocedural approach has the disadvantage that it does not account for dynamic changes in anatomical structures and diameters.

Most recent technological developments enable the physician to steer catheters remote either by magnetic navigation or by robotic navigation with a remotely controlled flexible guiding sheath. Highly accurate and reproducible catheter placement and navigation is mandatory for successful and sustained ablation of the target. The knowledge of the individual and often significantly variable anatomy of the patient is essential for a safe and effective therapy.

Thus, improved integration of anatomical CT or MRI data of the individual patient during electrophysiological procedures offers the opportunity to increase orientation, safety and efficacy in ablation therapy and to reduce radiation exposure.

Fig. 1. Pre-interventional ECG-gated Cardiac CT of a patient with atrial fibrillation scheduled for pulmonary vein isolation demonstrating a separate right middle lobe vein (arrows). The pre-interventional identification of the middle lobe vein has direct implications on the therapeutic success, as it is often difficult to identify this small caliber vein at fluoroscopy. A, B: 3-D volume-rendering reconstruction with different posterior views, C: Virtual angioscopy of the left atrium, view from left side (UL=Vein of upper lobe, LL=vein of lower lobe).

Fig. 2. A: Example of an electro-anatomical reconstruction of the right atrium in a patient with focal right atrial fibrillation. B: The 3-D fusion of an electro-anatomical map of the left atrium with the pre-interventionally acquired 3-D CT data offers the opportunity to increase orientation, safety and efficacy in ablation therapy and to reduce fluoroscopy time and radiation exposure.
The rush to Russia's booming med-tech market

For medical technology giants such as GE, Siemens and Toshiba, Russia has become a highly promising market, with the potential further increasing in its growing private hospital sector. Development of the Russian Radiology Congress (26-29 May, Moscow) Leeflang Medical Equipment is one company that has experienced this success is based on strong regional partnerships that introduce GE's technology to the market, with a focus on training local medical staff. "Providing a superb service is one of the most important aspects, if you want to succeed," explained Slava Grishchenko, who heads GE Healthcare in Russia. "Although our products cover all necessary hospital areas, users need very good training to benefit from the technology. To provide this service we need to establish strong partnerships in management with the company itself; this wasn't easy when we began here 20 years ago. Today, GE is very well prepared for that task." For the near future the company is focusing on customers' "intensive" sector: Hospital networks are created by big players, he pointed out. "The middle class is growing exceptionally fast in Russia, and as the income of people increases, the demand for medical care will be higher than in China. Consequently, demand for healthcare becomes even more intensive. Additionally, compared to the West, Russian health levels are bad: Stroke rates and heart disease are the highest in Europe, and the life expectancy for men is about 56 years. Russia's healthcare market faces a backlog, which is a great opportunity for us."

Richard di Benedetto believes that the Russian situation fits neatly in GE Healthcare's Eastern & Africa Growth Region. "In Russia we have been very successful and this time we tried to broaden the congress topics to include radiology, cardiology, urology and some more clinical areas. Our aim is to bring all these specialists to one round table to discuss the latest trends, share experiences and of course talk about education. In Russia, the term national radiology is used as a broad definition as in Europe. In common use, we say Radiology for Nuclear Medicine and we distinguish between 'Roentgen' and Ultrasound. So at this congress we invite specialists from all those specialties to discuss the problems, in the interest of patients."

"International experts such as Professor Matthias Oudkerk, Head of the European Society of Cardiac Radiology, and Professor Semyon Sinitsyn, President of the European Society of Radiology (ECR) 2009, were excited by the developments and about the cooperation between East and West European countries: 'Russia and the Soviet Union' is not a general term. In the recent years we see that Russia and European countries are becoming increasingly important, something we’ve noticed just by looking at the trolley of ECR. At the moment, what we can see are differences in imaging technology. In western European countries we are investing in large medical equipment, such as CTs and MRIs, whereas in Russia we see more investment in ultrasound scanning. This has not only impacted on costs within the healthcare systems, but also on training, which, in Russia, for instance, is much shorter. Understandably, radiology departments are interested in harmonising teaching and training, i.e. they would like to see a convergence of standards from Portugal right across to St. Petersburg. This is, of course, a Singhoe task, as each of the 47 European countries has different training regulations." Prof. Matrinic expects developments in Russia to take a similar turn to those in the West. "There will be a shift away from ultrasound towards CT, a more understandable approach. The same goes for MRI. The acquisition and use of this equipment obviously always represents a cost issue, and Russia’s current situation means that this technology is becoming more widely available in larger cities, whilst rural areas are more or less excluded from those developments." His colleague Professor Valentin Sinitsyn, Radiology Chair at the Moscow State University, Cardiology Research Complex and a full member of European Society of Radiology, pointed out another problem related to the shift to CT and MR: "Our government has declared a national health service project and provides money for hospitals for refurbishing and construction. But one problem that remains unsolved is equipping the service. The money donated to the hospitals is not enough for equipment maintenance. Sometimes the situation is paradoxical, because it's easier to send an application for a new machine than it is to repair a system that is four or five years old." Another problem face is teaching. If you look at the statistics, we have many radiologists, but the number of them who are active and able to work efficiently with modern equipment is not that high. So we need more specialised training and I agree with Prof. Marinin that education has to become more equal across Europe."

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Successful therapy for uterine fibroids using MRgFUS

Matthias Matzko (left) with Gerlinde Dobus

MRgFUS, explained Bernd von Polheim, is a particularly gentle procedure for focal ultrasound therapy with a sonic beam. The surrounding tissue gets heated only sufficiently to destroy just the small-volume tissue, but not the intact skull. We are working in cooperation with the Brain Tumor Network, where doctors have already identified centres in the brain responsible for some certain functions. Last month they received clearance from the Ethics Commission to treat the first patient.

The potential of MRI guided Focused Ultrasound is far from exhausted, he concluded. 'The development processes for these systems are long and it’s a long way from a clinical trial to conceptual to clinical application.'
Lean principles applied in path labs

Lean Laboratory and Lean Automation are vital ingredients for the efficient and productive running of today’s modern pathology laboratories. Automation serves as an essential tool for enhancing the efficiency and productivity of laboratories, enabling them to operate more effectively and achieve higher levels of quality. The integration of Lean principles, which focus on the continuous improvement of processes, can greatly benefit laboratory operations. Lean is a methodology aimed at identifying and eliminating waste in all its forms, thereby increasing efficiency and productivity.

At ValuMetrix, Ortho Clinical Diagnostics underpins Lean principles with an emphasis on process efficiency and productivity. This involves the systematic elimination of waste and non-value-creating activities, leading to improved performance. Automation plays a significant role in this process, as it allows for more streamlined and efficient operations, thereby reducing manual tasks and improving accuracy.

The benefits of Lean and automation are realized across various domains. By implementing Lean practices, laboratories can ensure that the core processes are optimized, leading to substantial cost savings and improved patient care. Automation, on the other hand, provides a means to achieve higher levels of precision and consistency, ensuring that each step in the process is performed accurately and efficiently.

Automation: A five-year experience

Work processes have been radically simplified since, over one week-end five years ago, two specialist laboratories owned by Dr. Helge Riegel GmbH Medical Supply Centre in Wiesbaden, Germany, installed the two Olympus OLA2500 systems. "The goal was to have one system in routine operation on the Monday," explained Dr. Patrik Zickgraf, specialist at the Centre’s clinical laboratory. 

Charles D. Hawker, PhD MBA FACP, Scientific Director of Automation and Special Projects at ARUP Laboratories and Associate Professor of Pathology (Adjunct), University of Utah School of Medicine in Salt Lake City.

Machine vision technologies

A group of technologies that can replace human inspection are entering the clinical arena, writes Charles D. Hawker PhD MBA FACP, Scientific Director of Automation and Special Projects at ARUP Laboratories and Associate Professor of Pathology (Adjunct), University of Utah School of Medicine in Salt Lake City.

In today’s clinical laboratory the technical staff performs quality inspections that are separate and distinct from normal laboratory testing and quality control. These inspections include checking if the specimen type is correct for the ordered test, determining the correct temperature, verifying that it is from the correct patient by comparing the doctor’s office label to the laboratory’s label, or inspecting specimens for clots, fibrin, haemolysis, scum, or lipaemia. Systems that have been used in industrial settings for the past two decades are now starting to make their way into clinical laboratory automation. Generally known as machine vision, this is a group of technologies that can replace human inspection.

Practically every product you purchase today is assembled and packaged with greater efficiency and quality due to machine vision technology. In pharmaceutical assembly plants, sophisticated optical systems inspect bottles on conveyors to ensure labels are straight and clear. These inspections include checking if the specimen type is correct for the ordered test, prompt a report containing the results of the test, and calculate the volume of red cells, and calculate the volume of serum or plasma above the cells. This information can be used to verify correctness of the specimen for an ordered test, prompt a report comment, or set aside the tube for manual intervention. The latter step is more valuable than it sounds. If 95% of tubes pass an automated inspection, then the technology only has to handle 5% instead of 100% to determine the next step.

Two decades ago, automobile assembly plants and other manufacturers began to use automation robotics. Japanese automobile manufacturers began to apply automation concepts, but it was another decade before early Japanese automobile ideas for clinical laboratories appeared in systems from laboratory equipment vendors. Similarly, machine vision systems have now been in place in industrial settings for at least two decades, although much faster and more sophisticated today than in the early years. Nonetheless, it seems interesting to this observer that, once again, the clinical laboratory is roughly 20 years behind in applying industrial technologies that could have real value in the laboratory setting.
Laboratory automation of the 21st century is now widely applied in disease diagnosis, patient care, and research. The potential of automated laboratory processes to improve safety, efficiency, and precision in healthcare is well recognized.

The ability to do half a million AIDs tests in one day has opened up new strategies in research and drug development. An example is the use of the US corporation Caliper Life Sciences’ high throughput plate format, which can lower the volumes of samples needed to sub-microtitre and microtitre plates. This is much less. Although moving and measuring small quantities of fluids presents challenges, automated liquid handling does allow precise measurement of amounts as low as one nanoliter (a hundredth of a litre). That not only permits scientific investigation, but it also means that fewer repeat tests are needed because the equipment can perform rapidity, and at high quantities are dispensed.

The results of such experiments provide starting points for drug design and for understanding the interaction or role of particular biochemical processes. Following general trends and the emergence of genomics, life scientists have developed proteomics, the new window to our understanding of living cells and how they function. This has disclosed huge numbers of proteins, which are the substances of drugs, far too many for researchers to digest on their own. Thus, HTS has become a key element in modern drug discovery. No laboratory service, no matter how small, in the medical supply market in Europe alone is now worth some €200 million.

Effective HTS relies on efficient information management systems to deal with the data it generates. Typical large pharmaceutical companies are generating 20 terabytes of data daily and store more than 100 terabytes of data on disk. An effective HTS management system is an information system that captures, manages, and delivers research data in a way that is efficient, flexible, and comprehensive.

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New sequencing tech for the 1000 Genomes Project

Three companies that have pioneered development of new sequencing technologies have joined the 1000 Genomes Project – the largest genetic study ever. The recent resolution, announced in January, will build the most detailed map of human genome that provides a view of biomedically relevant DNA variations at a resolution unmatched by current resources.

The new participants: 454 Life Sciences (Roche, Branford, USA); Applied Biosystems (App HG4 Corporation, Foster City, CA) and Illumina Inc., of San Diego, USA.

Organisations already committed to major support: Beijing Genomics Institute, Shenzhen, China, the Welcome Trust Sanger Institute, Hinxton, Cambridge, UK, and the National Human Genome Research Institute (NHGRI), part of the National Institutes of Health (NIH), US.

The NHGRI-supported work is being done by the institute’s Large-Scale Sequencing Network, which includes the Human Genome Sequencing Centre at Baylor College of Medicine, Houston, and the Broad Institute of MIT and Harvard, Cambridge, Mass., and the Washington University School Sequecing Centre at Washington University School of Medicine, St. Louis.

Previous studies, such as the International HapMap project, have identified genetic variants that are present at a frequency of 5% or greater. The catalogue produced by the 1000 Genomes Project will map genetic variation in the human genome and how it varies between individuals, identifying genetic variants that are present at a frequency of 1% across most of the genome and down to 0.5% or lower within genes. The 1000 Genomes Project’s high-resolution catalogue will serve to accelerate many future research studies of people around the world and help develop new treatments.

The full-scale project will involve sequencing the genomes of at least 1,000 individuals, drawn from several populations globally, though that number could become 1,500 or more. The project will use sample donors who have given informed consent for their DNA to be analyzed and placed in public databases. Most of these samples have already been collected, and any additional samples will come from specific populations. The data will contain no medical or personal identifying information about the donors.

* 454 Life Sciences develops and commercialises the innovative Genome Sequencing System for ultra-high-throughput DNA sequencing. Specific applications include de novo analysis of, for example, human genome sequence, metagenomics, RNA analysis, and targeted sequencing of DNA regions of interest. Thirteen half-marks of 454 Sequencing are its simple, unbiased sample preparation and long, highly accurate sequence reads, including paired reads,* the firm reports. This has enabled peer-reviewed studies in diverse research fields, e.g. cancer and infectious diseases and drug discovery etc. * Source: www.roche-applied-sciences.com

 KNOW YOUR ENEMY

**High throughput sequencing technology enables analysis of protective intestinal flora that could combat Clostridium difficile**

Christoph Hohenauer relatively unexplored. The Medical University Graz has recently installed the Genome Sequencer FLX (Roche Applied Science), one of the most high throughput as well as improved reading length and sequencing accuracy. We are now able to identify the intestinal bacteria via their DNA and map their consistency and functionality.

Currently, patients are being evaluated and the researchers are examining the bacteria with the help of clinical samples. The samples are then sequenced and compared with a database. The objective is to find out which groups of bacteria in the gut have a protective effect against infection. If we achieve this we can then select from culture and culture just those bacteria and use them for therapeutic purposes. So far many patients with frequent, therapy-refractory relapses had to be treated with enemas.

A long with MRSA and ESBL producing enterobacteria, Clostridium difficile is causing a growing problem. Epidemics of a new C. difficile strain have already occurred in hospitals in North America, England and the Benelux countries. Although in the pre-antibiotic state it is not harmful to humans, C. difficile can abruptly proliferate in the gut if the protective flora is disturbed by, for example, antibiotic therapy; and then the toxins released by C. difficile can cause severe infections that can only be treated with special antibiotics. In some cases, this can lead to lasting damage to the gut flora, with subsequent recurrences of the infection.

One approach to prophylaxis and therapy would be treatment with the same intestinal bacteria that protect against C. difficile proliferations and release of toxins. In Austria, a study is underway to identify the protective bacteria and consistency of intestinal flora, using high throughput sequencing technology. At the Graz Medical University, Meike Lerner of the Institute of Microbiology and Immunology reports: 'The normal gut flora is made up of around 10^14 bacteria and around 500 different types of bacteria in each individual,' the professor explained. ‘With the technology available up till now, identifi- cation of the different types and their functions has only been possible in a very superficial way, because most types cannot be cul- tured or are only cultured with difficulty. This is why the role of the intestinal flora has so far been difficult to control their spread. If we succeed in identifying the bacteria that are a harmless part of the human gut flora, we can then target these bacteria and use them against disease.’

In 2005, former German Chancellor Schröder and Russian President Putin agreed on a strategic partnership to give infectious disease control the politically mandated status it deserves. Under the agreement, the 5th Petersburg Dialogue (co-ordinators: Prof. Benjamin Graham, Boston, Academic Exchange Council; Prof. Hahn, Chérité and Berlin Medical Association; Prof. Verbitskaya and Prof. Trojan, St Petersburg State University) decided to transfer the experience that has been gained by a German-Russian working party of infection specialists – named the Koch-Metchnikov-Forum – to the Russian Federation and its institutions. The forum includes physicians from both countries and meets in Moscow (Central TB Research Institute), the Russian Association of Tuberculosis Physicians (mainly medical and diagnostic companies) and the Russian Academy of Sciences (for basic science TB immunology research). The purpose of the forum is to exchange information on new research results, make recommendations on clinical procedures and basically help to co-ordinate the efforts of the Russian and German health care systems.

The TB projects, and subsequently the foundation and organisation of the forum, are funded by the International Office of the German Federal Ministry of Education and Research (BMBF) and the German Academic Exchange Council (DAAD). In January 2006, there was also a project supported by the BMBF and the Robert Bosch Foundation aimed at a better understanding and treatment of tuberculosis.

In January 2006, a project that is also of interest to German and Russian partners was started. The aim of the project is to develop an innovative treatment for tuberculosis. This can improve the treatment of tuberculosis in Russia, which is an increasing problem for hospitals. The project is funded by the BMBF and the Robert Bosch Foundation. The project is being carried out by the Institute of Medical Microbiology and Hygiene of the German Federal Ministry of Health and the Institute of Molecular Microbiology of the German Federal Ministry of Education and Research. The project is being carried out by the Institute of Medical Microbiology and Hygiene of the German Federal Ministry of Health and the Institute of Molecular Microbiology of the German Federal Ministry of Education and Research. The project is being carried out by the Institute of Medical Microbiology and Hygiene of the German Federal Ministry of Health and the Institute of Molecular Microbiology of the German Federal Ministry of Education and Research.

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In 2005, the Robert Bosch Foundation awarded it prize for civil engagement to the Russian TB control centre. During the TB Symposium held on World Tuberculosis Day 2008, the Koch-Metchnikov-Forum received the innovation award from the German-Anglo-American TB Alliance in Germany – Land of Ideas.

30-minute Chlamydia test

An estimated 92 million Chlamydia trachomatis infections occur annually. Often, this disease presents no clear symptoms. Inverness Medical reports that its Clearview Chlamydia MF test can provide a diagnosis in as little as 30 minutes, so that, during a single clinic visit, patients can begin treatment.

The test detects the antigen using either female endocervical swabs or male urine samples, so is suitable for male or female patients. The easy-to-use lateral flow test has built-in procedural controls which reliably confirm the test has worked correctly. It uses a unique heating step in the processing which gives Clearview Chlamydia MF its high sensitivity, meaning clinicians can be confident in the test results,* Inverness reports.

Acinetobacter baumannii genome sequence determined

**Italy** – The genome sequence of Acinetobacter baumannii has been determined by scientists at the Istituto di Tecnologia Biomediche, the Dipartimento di Malattie Infettive at the Istituto Superiore della Sanità and the Dipartimento di Biologia at Roma Tre University. In Italy, Acinetobacter antibiotic resistant pathogens cause 4,500 to 7,000 deaths annually.

Genome sequencing is the foundation for rapid diagnosis and targeted therapy approaches, said project manager Gianluca de Bellis of the Dipartimento di Biologia. Genomewide sequencing was the ideal technique for the development of new antibiotics. The phenomenon of antibiotic resistance will be examined from a basic and applied research angle. This genetic sequence is available free, via www.itb.cnr.it/genome-project.
Prevalence of adult obesity has increased three-fold since 1990. The prevalence of childhood obesity has increased ten times since 1970. In Europe, almost 50% of adults and over 20% of children are overweight. A third of these are obese. Conservative esti- mates show that Europe has over 80 million adults and 10 million children who are obese. Obesity is accountable for c. one million deaths annually.

Costs – Over 6% of direct EU health-care expenditures are attributable to obesity, and obesity related co-morbidities (i.e., type 2 Diabetes Mellitus). Indirect costs, e.g. loss of productivity, obesity related unemployment, etc., are twice as high as direct healthcare expenditures. All this underlines the seriousness of obesity as a rapidly spreading epidemic disease.

**Prevention Measures** – These are important, e.g. promoting healthy lifestyles. Healthy food should be pro- moted and available. So should physi- cal exercise, with more opportunities created for this, e.g. safer roads for cycling/walking.

**Already obese adults** – Ideally, obe- sity should already be treated and man- aged in specialized centres, thus a multi-disciplinary, scientific medical approach to obesity treatment and the key movements in long-term treat- ment success.

**Bariatric surgery** – From the long- term perspective, the severely obese (Body Mass Index > 35), can be effectively treated through bariatric surgery only. Bariatric surgery (either diverting or restricting stomach volume – e.g. adjustable gastric banding, orifices thus providing ‘scarless’ surgi- cal treatment. In the future this approach may enable some surgeries to be performed on out-patients in a few hours.

**Collaborative Group (BSCG)** panel was appointed through the joint effort of major European Scientific Societies that are active in obesity manage- ment. Published Guidelines encourage effective collaboration in obesity man- agement not only across medical spe- cialties, but also help to standardise management of severely obese patients in Europe. Recent remarkable progress is reported in NOTES (Natural Orifice Transluminal Endoscopic Surgery). NOTES stands on the border- line of endoscopy and surgery. Although still experimental, it may open new opportunities in the near future in obesity treatment, indeed in a minimally invasive way – NOTES accesses the body through the natural orifices thus providing ‘scarsless’ surgi- cal treatment. In the future this approach may enable some surgeries to be performed on out-patients in a few hours.

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**Fig. 2** Adjustable gastric band device, placed around the upper stomach, creating a ‘hair guspe’ shape, with small upper gastric pouch connected with the rest of the stomach by a narrow channel.

**Fig. 3** Gastric bypass operation, affecting both stomach capacity and digestion by diverting food from one part of the small bowel, which decreases food digestion, restricting capability to absorb energy.

**Fig. 4** Bioprosthetic diversion, substantially decreases food digestion by bypassing (diverting) food from contact with part of small bowel, thus decreasing food energy absorption.

In the future, the machines at the Worldwide Mesh Technology Centre will annually create over half a mil- lion surgical meshes, such as Vypro and Ultrapro. Different designs and combinations of materials will be offered for a wide range of functions: some implants meant to stay in tissue forever, others to dissolve in a set period.

The next generation of meshes envisaged are bioactive meshes that offer more than mere mechanical sup- port for tissue. Cornelia Groehl and Dr Schumpelick have no doubts the application potential of mesh technol- ogy in healthcare is far from exhaust- ed – that is why they know the Technologies to be conducted at the Worldwide Mesh Technology Centre will prove immensely valuable.

**Fig. 1** Adjustable gastric band device, placed around the upper stomach, creating a ‘hair guspe’ shape, with small upper gastric pouch connected with the rest of the stomach by a narrow channel.
For the world’s children—
from Russia with love

For 20 years a unique paediatrics team from Russia has provided a significantly welcome presence at natural and man-made disasters worldwide. During our interview with Professor Leonid Roshal MD, Executive Director and Chief of the Scientific and Research Institute for Children’s Emergency Surgery and Traumatology, in Moscow, he recollected areas in which the team’s assistance provided medical aid and pointed out ways in which countries worldwide could improve disaster care for the children of today and those of the future. Journalists have dubbed him ‘The Children’s Doctor of the World.’

Russian paediatric surgeons, working with teams on the basis of geographical proximity, have become leaders of fashion. Our work has been rewarded with gratitude from each government.”

Four days before our interview, the team had applied to China’s government (via the Chinese Embassy in Russia) to enter the country’s earthquake region and join the medical teams there. ‘The Russian team in China has also applied to China’s Ministry of Foreign Affairs,’ Prof Roshal said. ‘From our experience and calculations we can expect 80,000 injured from the death toll of 20,000. Hence, based on the adult/children ratio, we can calculate the number of injured children, we can also estimate the rate of injured children who definitely need hospital treatment – it should be 20%.

‘There is another highly important point. The Russian team does not engage directly at an emergency site, he added. ‘We don’t stand near houses waiting for our patient to be rescued from the debris. This important and hard task is accomplished by pre-hospital relief teams, by mobile clinics, not to forget the stationed high-skilled neurosurgeons or reanimation specialists. If they should be able to arrive by air in the disaster site – and here, the coordination of efforts among different organisations involved is the crucial point. Additionally, in a medical emergency it is essential to evaluate the number of injured and the scale of devastation. The kind of specialists needed at the scene needs to be clear in order to deploy the staff adequately – perhaps five or 10 traumatologists should be sent, but no neurosurgeons or reanimation specialists are needed. It is of major importance that information comes very quickly and is precise. At present, there is no effective information on the necessary medical aid for children’s emergency sites, this is a weak point.’

“Thank you for your good wishes,” replied Prof Roshal. ‘As far as my jubilee is concerned, I’d say 75 is no age at all.’

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Professor Leonid Roshal MD, Executive Director and Chief of the Scientific and Research Institute for Children’s Emergency Surgery and Traumatology, in Moscow.
A meeting with Dr Valerij Mitish was difficult to arrange – every day he’s at a different Moscow hospital. Yesterday he carried out a complicated procedure in a children’s hospital; today he’s at the Military Institute, tomorrow it will be the Military Institute of Emergency Care. He also heads the department of wound infection and wound surgery at the Moscow Research and Clinical Institute of Emergency Children’s Surgery and Trauma. In addition, Dr Mitish heads a team of Russian surgeons that helps in other countries following disasters, and is professor of disaster medicine at the Russian University of National Friendship. Between procedures at the Endocrinology Centre of the Military Institute, we asked him:

"What can be done in the..."
Pressure ulcers

Heidi Heinhold, of the German League for Decubitus Ulcers, sums up physiological basics and practical care issues.

Physiology is the science concerned with the processes and functions of an organism. Profound knowledge of physiology allows us to recognise states that deviate from the norm and decide whether these anomalies should be classified as diseases or disorders and thus require care. The initial objectives, the planning and implementation of care measures and the assessment of results are judged in terms of quality control and nursing science.

The staging system was defined by Shea in 1975 and provides a name to the amount of anatomical tissue loss. The original definitions were confusing to many clinicians and lead to inaccurate staging of ulcers associated or due to perineal dermatitis and those due to shearing stress, which in turn provoke pathological changes if patient mobility is not encouraged.

Non-invasive, in vivo detection of intra-tissue pressure and tension

Previous calculations regarding the pathological effects of pressure on biological tissue were realised in animal models. Such investigations gave rise to findings such as the Kosia model, which were extrapolated from investigations of tissue pathologies. These postulates allowed investigators, for the first time, to analyse stress on the human soft tissue using a non-invasive self-constructed pressure stamp and, at the same time, to observe and document the physiological processes in the terminal vessels of the skin and musculature non-invasively.

In this process, erythrocyte movement in the capillary bed was measured in the direction of pressure using a Doppler laser, while at the same time the erythrocytes were counted and the oxygen load was measured using a white light spectrometer.

In the gluteal region, the pressure stamp was pointed directly at the ischium. The force was then increased in defined increments until erythrocyte movement ceased in the tissue under the stamp. Up to 50 Newtons were exerted on the skin, with peak pressure ranging as high as 100 mmHg. The deformation was then stepped down using the same increments.

Findings

The force exerted during the various pressure stages was not constant. The force was higher at the beginning of each deformation and then declined to a lower level. The tissue reacted plastically. The number, oxygen saturation and movement of the erythrocytes decreased as force and deformation lessened. However, substantial numbers of erythrocytes were trapped in the capillary bed when they stopped moving. The oxygen saturation of these erythrocytes was initially high, but decreased as long as the pressure remained constant.

Conclusions

Kosia’s hyperbola model should be expanded, as this would allow the effects of altered hydration status to be brought into play.

Although tissues tolerate pressure peaks for brief periods, pathologies are provoked by erythrocyte oxygen depletion, i.e. in small quantities.

Key parameters for prophylactic mobilisation in cases of bedsores:

- Frequency of movement
- Pressure
- Movement and frequency of pressure ulcers

USA – Following five years of work, which began with the identification of deep tissue injury in 2001, the National Pressure Ulcer Advisory Panel (NPUAP), in Washington DC, has refined the definition of a pressure ulcer and the stages of pressure ulcers, including the original four stages, and adding two stages of pressure ulcers, including the definition of a pressure ulcer and the staging of pressure ulcers associated or due to shearing stress on tissue. The skin turgor and sex) the following:

- The proposed definitions were refined by the NPUAP with input from animal models. Such investigations gave rise to findings such as the Kosia model, which were extrapolated from investigations of tissue pathologies. These postulates allowed investigators, for the first time, to analyse stress on the human soft tissue using a non-invasive self-constructed pressure stamp and, at the same time, to observe and document the physiological processes in the terminal vessels of the skin and musculature non-invasively.

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Fig. 2 The red curve shows the movement frequency of the various areas and parts of the body. The head and neck move more frequently (or are mobilised, e.g. during food intake). More movement occurs even in the heel region than in the coccyx. Movement and position are the key parameters for bed sore prophylaxis.
continued from page 19 cases where tissue deformation accompanied by flow stasis remains unchanged for an unduly long period.

The amount of oxygen consumed by the cells decreases when tissue deformation is tolerated by nerve tissue for only a few minutes, for example, during an inactive posture, by approximately 60 minutes, and by cartilage for several hours. This process of deformation provokes irreversible modifications to the structure of collagen and fibrous tissue, leading to the weight exerted on the surrounding capillary beds.

Kosak showed that a small amount of pressure can result in a critical weight threshold being exceeded, which in turn provokes tissue subsidence if the deformation remains unchanged.

Elalorhemi, who provides a contact surface via softness does not solve the problem, since softness is habitually unable to counteract the patient’s already diminished desire to move autonomously. Hence softness indisputably promotes both the development of pressure ulcers and the body image. In this respect, it is essential that immobile patients be mobilised several times daily by a nurse, physiotherapist and/or the family caregiver. Only in this way can bedsores be avoided.

The current annual social cost of bedsores treatment is about 0.8 billion Euros per year, which is likely to reach two to three billion euros in coming years due to increasingly elderly populations.

Investigating new wound healing approaches
Thinsulate Thermal Insulation

Optimising chronic wound care

Process optimisation is a major issue in any healthcare facility, say Ellen Schaperdott, Claudia Roland, Rudolf Pape, René A. Bostelaar. Some organisations have already come a long way, others are just about to attempt the first steps.

Wound management goals
The recently launched KFH Novo from Kingsbridge Healthcare (KFH) is an excellent example of a product that utilises Bio-Electric Stimulation Therapy (BEST) to deliver extremeely tailored care for chronic wounds. This does not interfere with standard conventional therapy—just supplement and optimise some way from the wounds, beyond the normal treatment area.

Dressing changes need not be painful

Because the dirt and liquid repellent fibres used in Thinsulate Insulation Type 2 are substantially thinner than conventional fibres, the material can be used to treat wounds and dressing-related procedures. But Safetac dressings are produced by the Wound Care division of Mölnlycke Health Care, manufacturer of single-use surgical and wound care products and services for healthcare.

Thinsulate Thermal Insulation

Chronic wound patients can experience acute pain during dressing changes, which can sometimes cause aggressive aggressiveness on the patient on the dressing wound bed and surrounding skin.

Clinically significant patient benefits of using dressings with Safetac technology have been highlighted in a large multi-national survey of patients (pub. Wound Care, 2006; Pain in Wound Removal Cases (PORC) survey involved over 3,000 patients with various wounds, from 20 countries. Over 90% of them said they preferred dressings with Safetac® soft silicone adhesive (Mepilex was used in the study) because they suffered less pain during dressing changes than when advanced dressings with traditional adhesives (e.g. polyurethane, acrylic or hydrocolloids). The PORC survey illustrates the benefits of using dressings with Safetac technology for chronic wounds.

Managing patients’ pain during wound dressing-related procedures. But neither evidence nor guidelines are lacking within the chronic wound management, and that appropriate solutions can be identified for a building set for chronic wound healing, which brings together the optimum combination of different treatment methods. Source: Bayer

Further optimisation of active substances is another important area of research. Bayer’s approaches centre around the addition of growth factors that are lacking within the chronic wound, and that prevent the break down of growth factors by protein-decomposing enzymes. Dr Burkhard Fugmann’s long-term goal is the development of a ‘building set for chron- ic wound healing’, which brings together the optimum combination of different treatment methods. Source: Bayer

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Thinsulate Thermal Insulation
Less weight, same warmth

Laundering — The material’s compression resistance and quick recovery ensures that the dressing does not become excessively bulky or full, despite many washings. In addition, its light weight and low volume mean more freedom of movement and drying is quicker, all resulting in cost saving.

Available in three different lofts (120g, 150g and 180g), the Oeko-Tex Standard 100 Classes 1 to 4.

Details: www.3M.com

Process optimisation concerns all primary and secondary processes in a hospital. Case management is a tool that supports the implementation of comprehensive optimisation efforts. The Cologne Case Management Model is designed as a process of interdisciplinary cooperation between the patient and his environment. It encompasses assessment, planning, documentation, communication and evaluation of healthcare services. During assessment and during the entire period of monitoring by the case manager the wound manager identifies problems and problems with about agreed solution-oriented actions such as wound management. At the recently launched in Cologne central wound management has been implemented in the context of introducing case management. There are a few approaches to complex processes involved in wound healing. Industry seems to exploit this trend to provide quality management products. However, for the user it is increasingly difficult to gain an overview of the wide range of available wound care products. Moreover, clinicians are not always aware of the best practices regarding wound care, making this issue a bone of contention between the users and unnecessary distress. In everyday hospital life many patients are subjected to changing treatment methods, which means a lack of continuity of care. Different materials with different requirements, and above all uncontrolled costs, are applied.
The 7th Villacher Hygienetag

Experts from almost a dozen European countries – including for the first time Russia, Bulgaria, Serbia and Croatia – will meet at the Villacher Hygienetag (Hospital Hygiene Congress) in October to discuss ‘Antibiotic resistance – development, consequences and concepts’.

20 presentations and discussion rounds will try to find answers to why the antibiotics and other agents developed to vanquish viruses and bacteria also made the organisms stronger.

ESGE-ESGENA

2008 Guideline update on cleaning and disinfection in gastrointestinal endoscopy

Endoscopic procedures, which are well established in the diagnosis and therapy of gastrointestinal diseases, not only carry procedural risks but also the risk of endoscopy associated infections. These include:

- Endogenous infections
- Exogenous infections caused by inadequately reprocessed equipment from one patient to another
- Risk of infection to staff working in endoscopy

Appropriate reprocessing of flexible endoscopes and endoscopic accessories is an essential part of safety and quality assurance in gastrointestinal endoscopy.

Since the late 1970s there have been sporadic reports of nosocomial infections linked to endoscopic procedures. These include bacterial infections caused for example by Salmonella spp, Helicobacter pylori and Pseudomonas spp, as well as viruses such as Hepatitis B and C.

The majority of documented cases were due to non-compliance with national and international reprocessing guidelines.

Since 1994, the ESGE-ESGENA* Guideline Committee has developed a number of guidelines focused on hygiene and infection control in Endoscopy (see www.esge.com or www.esgena.org).

This year, the Committee has updated the current guideline on reprocessing of flexible endoscopes and accessories. It addresses several important aspects of safety in gastrointestinal endoscopy. In addition to general statements, the guideline provides detailed technical protocols for the daily work of medical staff as there are multiple local variations in the application of general guidelines.

The consensus guideline has been prepared by endoscopists, microbiologists, hygienists, endoscopy nurses, and representatives of the biomedical industry.

In 2007, two guidelines were published that also address the necessity of hygiene control in GI Endoscopy:

- ESGE-ESGENA Guideline for process validation and routine testing for endoscope reprocessing in washer-disinfectors, according to the European Standard EN ISO 15883 parts 1, 4 and 5
- ESGE-ESGENA Guideline for quality assurance in reprocessing: Microbiological surveillance testing in endoscopy

These two guidelines must be taken into account when establishing local quality management and infection control in Endoscopy.

The ESGE-ESGENA guidelines can be adapted locally to comply with national laws and regulations.

Source: Ulrike Beilenhoff, President of the European Society of Gastroenterology and Endoscopy Nurses and Associates (ESGENA)

The broad range of topics covers:

- inter alia infection risks after natural disasters
- sources of infections in hospitals, a look at the relationship between nursing staff and physicians from a sociological point of view
- the applicability of aviation safety strategies to healthcare
- the economic aspects of improved hospital hygiene will also be discussed.

Conference languages: German, English, Italian, with simultaneous interpreting.
As nosocomial, or healthcare-related infections have become more prevalent in the US, and into protocols to manage this problem remain complex and constantly changing, surveillance of healthcare IT systems offer hope to control and reduce these infections. Those offer the potential for data to be uniformly collected, quantified, and assessed. How rapidly they will be implemented enough is unknown.

The Centers for Disease Prevention and Control (CDC) believe that HAIs are one of the top ten causes of preventable deaths in the US. According to a study published in November 2007, infections caused by staphylococcus aureus alone have increased by 7% annually from 1991-2003. In 1998, US hospitals reported approximately 250,000 staph infections, in 2003, nearly 300,000, the equivalent of 1% of in-patient patients. In addition, there are many databases that have been established to acquire meaningful data, the numerous studies to quantify the cost of HAIs differ dramatically.

Lead author Dr Gary Noskin, of Northwestern Memorial Hospital in Chicago, estimated that the cost to treat staph infections alone increased from $8.7 million in 1998 to $14.5 million in 2003. His source of data originated from a National Inpatient Sample Database containing data from seven million admissions in 2000.

A study by University of Alabama researchers (pub. Medical Care. 1/89) included data from over 1,300,000 hospital admissions to 55 hospitals for a five-year period (2001-2005). The investigators were representative in size of the mix typical throughout the US, from 50 to 1,000 beds. Each hospital provided data for 2003. Data, including actual hospital costs, were uniformly collected, quantified, and published by a healthcare IT data analysis company. Using this database, it was possible to estimate methodically the number of HAIs and their cost in 2003.

A total of $8,181,427 (4.3% of the total) infections were identified. Out of 54,450 re-admissions treated by previously hospitalised patients, 7,501 were due to an infection acquired during the previous admission.

The additional average total cost relating to the infection was $7,007 in an added cost, $12,100 in added total cost, and 5,4 extra in-patient days. The majority of infections were urinary tract (32.4%) costing $10,506, blood (21.0%) costing $11,774, respiratory (18.3%) costing $24,408 and wound (14.3%) costing $7,007.

Clearly, the cost to treat HAIs infections is a huge waste and a travesty of care. The US healthcare treatment continues to soar. As of October 2008, Medicare, which pays for in-patient care for about 43 million people aged over 65, has stated that it will stop reimbursing hospitals for three types of preventable infections, which include urinary and vascular catheter infections. These will have a ripple effect, because US healthcare insurance companies typically follow the lead of Medicare.

New GAO report criticizes federal health agencies

In April 2008, the General Accounting Office (GAO) ‘watchdog’ over US federal agencies, issued a report about infection control to Congress. This detailed how four different US agencies within the Health and Human Services Department (HHS) all collect data, but collect different types of data about different patients. Almost all hospitals report data on infection rates. 14 states require that data be reported to HHS and 36 states have legislation pending to do so.

The GAO’s very critical report stated that the US healthcare agencies were taking any steps to integrate any of the data from the four huge databases or communicate effectively with each other. The report concluded that HHS should not use its databases to provide reliable national estimates of HAIs rates, even for the selected types of HAIs being monitored, because none of the databases collect data on the incidence of HAIs for a nationally representative sampling of hospitals.

The GAO identified over 1,200 recommended practices to be followed by hospitals, clinics, and long-term care facilities. 500 infections. 500 are strongly recommended. The GAO pointed out that this huge number has hindered efforts to promote their implementation, and recommended that HHS establish guidelines that can be reasonably followed.

MRSA

According to the respected Society of Healthcare Epidemiology of America, antibiotic-resistant MRSA among in the community is increasingly the cause of infections transferred to hospitals. The drug resistance factors have increased the nationwide cost for MRSA-hospitalised patients to be $13,642 billion.

In Illinois, New Jersey and Pennsylvania, state legislation requires that high risk patients and those in ICUs be tested for MRSA. At least eight other state legislatures are considering this. Testing of patients is a very contentious issue, and has divided the medical community. Screening is expensive. Opponents do not believe that screening and isolation is preventing the spread of MRSA. Legislation was introduced in 2007 in the US Congress called the STAAAR Act to create an Office of Antimicrobial Resistance. Fund research, collect data and establish research. While many hearings have been held, it must be passed by August, due to election year politics, and controversy is associated with annual research, which may cause it to fail.

Surveillance IT

Meanwhile, hospitals with electronic patient records (EPR) are increasingly moving to specialised commercial healthcare IT systems. One such service, from Cardinal Health, uses a Nosocomial Infection Marker to provide hospitals with a report of HAIs by type and location throughout a healthcare facility and specifically identifies MRSA. By using specialized data mining and artificial intelligence software, it constantly evaluates EPR data in real time, and alerts administrators to issues of concern or abnormal incidents indicative of infection outbreaks.

The software is similar to that used by credit card companies to monitor purchases for fraud, and identifies deviant patterns, and tracks possible credit card fraud, and also reports potential fraudulent transactions.

This IT tool brings hope of an efficient means to fight infection in hospitals at its source. It would not exist without the infrastructure of EPRs, and is still a relatively new technology. Combined with the old-fashioned remedy of repetitive hand washing, it seems to be one of the best tools available to help tackle this huge, expensive and dangerous problem.

NOSOCOMIAL INFECTIONS IN THE USA

By Cynthia E Keen

The remote monitoring of the operating status of automatic bedpan washers has become possible with the launch of the Thermologger, made by Meiko. This new technology complements the company’s cleaning and disinfection appliances, which also have integrated control and measuring systems.

Current DIN 18853 standards governing the functional capability of medical devices (the category in which Meiko products belong) require triennial compliance assessment and documentation. Its service package covers this task, Meiko points out. ‘A specially-developed process guarantors minimum inventory, and simplicity of use. A temperature logger is attached to a holder in an optimum position on the sanitised item. During the wash cycle a continuous stream of temperature data is wirelessly transmitted at a logging interval of one second. At the end of each equipment test, a set of DIN-compliant documentation is generated and sent to the customer in PDF file format. Obtaining a validation certificate has never been easier. The service package also provides the customer with all the relevant data for his appliance logbook.’

The logger wirelessly transmits data from inside the machine to a data receiver. Should the logger detect an irregularity, e.g. temperature fluctuations, it will be able to remedy the fault immediately.

This new temperature measuring technology, which was developed in close cooperation with clinical experts and specialists, means that no additional monitoring, including the microbiological inspection of the appliances, is necessary. The temperature logger measures and monitors the clinical data profile, which correlates with the microbiological destruction of pathogenic organisms, as well as the temperature data profile – providing users with information on the life expectancy of the machine, to meet logbook requirements at all times.

Details: www.meiko.de
Hospitals with only single en-suite rooms: is this the answer?

Medical professionals are hailing plans for the new £33.7 million hospital in Wales, to be named after the Welsh MP Aneurin Bevan who became known as the architect of the National Health Service after its launch 60 years ago. Due to open in 2011, the hospital will have 96 en-suite single rooms. It will also provide 11 adult mental health beds, 15 out-patient consulting rooms, a radiology department and a GP out-of-hours and minor injuries unit. Health Minister Edwina Hart said the single, en-suite rooms will help to aid recovery, improve privacy and reduce infection risks. However, the Royal College of Nursing commented that the

The UK’s MRSA rates have been declining since 2006 — and this year could be 50% lower in 2007. This increasing control over dangerous pathogens has not been achieved without considerable hospital staff efforts, relentless public and government pressures on them, and in-house malcontent about the out-sourcing of cleaning work.

Given the cost of nosocomial infections, the NHS has developed many practices to be followed — for example operation ‘deep clean’ — and it spends a lot on developing various strategies, promotions as well as equipment to promote more stringent hygiene. Here are just a few measures taken as well as debates currently in the UK news.

**France’s 200 million ultraviolet lamps**

Next year, thousands of hospital buildings in France will be banishing MRSA with ultraviolet light. The French government recently decided to equip hospitals with ultraviolet lamps in a battle against MRSA. The lamps are to be used to disinfect patients and hospital objects, and can be used whenever the hospital is empty. The lamps work by emitting ultraviolet light that damages the DNA of bacteria, viruses and fungi. The lamps come in different sizes, from small units for private rooms to larger models for larger areas like corridors and operating rooms.

**Infection control strategies**

The US National Institute of Allergy and Infectious Diseases (NIAID) has launched a new website for hospitals to access infection control strategies. The website provides guidance on how to prevent the spread of infectious diseases in healthcare settings, including recommendations for the use of evidence-based infection control practices. The website also includes links to other resources and tools for healthcare providers.

**The Glow and Show machine**

EUROPEAN UNION

In 2010, the European Commission launched a £25 million public health project to combat drug-resistant bacteria. The project, called Horizon 2020, aims to develop new antibiotics and other treatments to combat drug-resistant bacteria, which are becoming increasingly common in hospitals and other healthcare settings. The project involves researchers from across Europe and is expected to run until 2015. The project’s success will depend on collaboration between researchers, healthcare providers, and patients.
years MEDICA
1969 – 2009

World Forum for Medicine

www.medica.de

Düsseldorf, Germany
Nov. 19 – 22, 2008