‘Watch out for VF identity fraud’

Researchers to warn EU clinics of serious medico-legal implications

Hospitals and fertility clinics across Europe are to be warned that safeguards must be implemented to prevent impostors gaining access to IVF treatment. The move follows research showing that identity fraud is being used increasingly to gain access to IVF by people who would otherwise be denied it.

According to Dr Luca Sabatini, from the Centre for Reproductive Medicine at St. Bartholomew’s Hospital, London, one in three clinics in the United Kingdom probably has experienced attempts to gain treatment fraudulently. He told the conference of the European Society of Human Reproduction and Embryology (ESHRE), in Prague, Czech Republic, that a survey of 70

licensed fertility units, including both publicly funded and private clinics, showed that 37% had experienced or suspected cases of patient identity fraud. Overall, more than half felt that they did not have sufficient safeguards. Identity fraud among patients has important medico-legal ramifications, Dr Sabatini explained: Our overwhelming feeling is that there are insufficient measures to protect the unit, the patient’s legal rights, and most importantly the future welfare of the unborn child. Fraudulent behaviour may be fuelled by financial pressures, as the cost of treatment is high and public resources are limited. A patient may use a false identity in an attempt to have access to public

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STENTING: DYNAMIC GROWTH CONTINUES

Paris, France - The explosive growth in demand for drug eluting stents has shaped a market worth more than six billion euros annually. According to figures published at EuroPCR, the annual European Paris Course of Revascularisation, some 2.5 million percutaneous coronary interventions (PCIs) will be performed globally this year - and 75% of these procedures will employ drug eluting stents (DES) - remarkable statistics for a medical technology that is under five years old.

At the meeting, Boston Scientific Corporation announced that it had received indication extensions to the European CE mark for its Taxus Liberté paclitaxel-eluting coronary stent system for use in some of the most challenging coronary procedures, including re-stenotic lesions and total occlusions in patients with coronary artery disease. These new indications account for more than 20% of all coronary interventions, and Boston Scientific also announced funding for a new EU medical training facility - The Institute for Therapy Advancement - that will open in Brussels, Belgium, in early 2007. The company has a several new pipeline offerings including the platinum chromium alloy Taxus Bx Ascend stent, which has narrower struts for greater conformability, and the AST Petal stent platform for use in bifurcated vessels. The latter is designed to expand into the side branch, permitting blood to flow into both branches of the bifurcation and providing support at the branch. Report: Ian Mason

Liberal drugs policy works

Switzerland - Providing heroin addicts methadone or buprenorphine as a treatment for their addiction has led to a decline in the number of new heroin users in Zurich, according to a paper by Carlos Nordt and Rudolf Stohler from the Psychiatric University Hospital, Zurich, published in The Lancet. The country implemented various policies to try to reduce harm to dependent heroin users, including needle-exchange services, low-threshold methadone programmes, and heroin-assisted treatments. However, some critics believe those policies could lead to a growing number of new drug users and lengthen the period of heroin addiction.

However, following analysis of data from over 7,250 patients in Zurich who had received substitution treatments with methadone or buprenorphine over a 13-year period from 1991, the researchers estimated trends in the number of new heroin users and found that the incidence of heroin use had dropped from 850 new users in 1990 to 150 in 2002.

The agreement applies to universities - negotiations regarding an agreement for municipal hospitals continue.

3-month doctors strike partly over

The agreement equates to a compromise, which according to the Marburger Bund will increase in salaries by between 16-20%. The level of income for junior doctors is set to rise by around €5,400, correlating to an increase of up to 18% in addition, doctors are due to receive additional pay of 25% for working on public holidays and for being on-call. These increases applied from 1 July.

However, the unions did not manage to negotiate the extra pay of €100 a month for junior doctors, and the equalisation East and West German salaries for doctors.

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Berlin, Germany - The three-month universal hospital doctors’ strike was nearing its end at the time of EH going to press. Dr Frank Ulrich, President, Director of the medical union Marburger Bund (MB) and, for the Employers’ Association of German States (TGL), the Minister of Finance for Lower Saxony, Hartmut Müllring, of the CDU (Christian Democratic Union), announced their agreement on 16 June.

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continued from page 1

 thousand from which he or she would otherwise be precluded. On there may be more personal reasons, such as a change of partner during treatment. If identity fraud is practised, litigation between the IVF provider and the deceived partner who discovers the different genetic origins of the child could result, he added. Dr Sahatemi’s team intends to send the results of their research to clinics across Europe. In a year’s time, they will carry out a further survey to assess whether changes in practice have occurred.

Professor Paul Ivery, Chairman of the European Society of Human Reproduction and Embryology commented: ‘To protect clinics, patients and children against IVF identity fraud, ESHE recommends that photographic identity and the hospital treatment card should be produced by couples at every treatment visit. Verifying birth date is crucial in establishing identity.'

Ironically the move comes at a time when Europe is being urged to make greater use of assisted reproductive technology (ART) to boost fertility rates.

According to a European Commission report, a fertility rate of 2.1 children per woman is necessary to renew the population – however the current fertility rate in Europe is only 1.5 children per woman – and in some countries even lower.

Dr Irena Belboska, a former gynaecologist and now a Slovak politician and Member of the European Parliament, believes that more use could be made of ART to boost fertility rates. ‘We are witnessing more and more gynaecological problems in women of younger age. Early ovarian ageing, gynaecological cancers and infertility are now also very common – more and more young women being unable to conceive naturally. For many couples,’ she added, ‘the costs for infertility treatment are prohibitive resulting in inequitable access to treatments.'

Dr Belboska is urging the EU Commission to improve access to ART services.

Bologna, Italy - With 670 exhibitors - 595 domestic and 78 international companies from 18 countries as well as 344 represented companies from 36 countries - and close to 28,000 visitors, the medical event Exposanita was, once again, a huge success.

With Dusseldorf-based Medica, and Paris-based Hopital Expo-InterMedica leading European medical venues, Exposanita has become Europe’s third biggest medical trade fair. Over four days of the art medical technology was presented on about 31,000 square metres of exhibition space. The event, however, is more than a mere trade-oriented product showcase as the impressive programme with about 120 workshops, seminars and conferences proved.

The hall on Medical Innovation Technology (MIT), where nanotechnology, innovative materials, biotechnology and the newest developments in diagnostics were presented, was a particular attraction. There was also high interest in therapy, therapy and nursing on the one hand and handicaps, orthopaedics and rehabilitation on the other. As in 2005, visitors gained a comprehensive overview of technological equipment and services offered by the Italian healthcare industry.

The European Hospital team, including our representatives in Italy, Denise Fries, gained information on state-of-the-art technology, including the Italian products and services. In addition, countless visitors collected our most recent issue of European Hospital.

**Exposanita 2006**

**Denise Fries, our representative in Italy, and the European Hospital booth**

**The 1st International Congress of Respiratory Biology (ICRB)**

*You are invited to be part of a forum to bring respiratory biological research together, to discuss and build. Ours is a growing and vital discipline. The 1st International Congress of Respiratory Biology lies in developing an integrative approach and fostering an environment where researchers can talk, listen and develop new projects on all aspects of respiration. Rather than focusing on specific organisational level, we aim to stimulate new research initiatives with a broad interdisciplinary approach.*

A reaffirmation of the goals of Respiratory Biology as a clear and distinct discipline will bring our research aims together, and allow not only the traditional horizontal networking but also vertical networking, breaking artificial barriers between genetics, cell biology, zoology, botany, medicine and many other disciplines. A glance at the proposed list of topics will convince you that this meeting is like no other that you have attended. Juxtaposed in the same session are talks on interstitial breathing in insects and vertebrates or strategies for dealing with hypoxia in organisms from different kingdoms. Gas transport in plants is compared with that in animals.

The mainstay of the ICRB is a series of workshops that emphasizes interdisciplinary, multidisciplinary approaches will be granted preference. In addition, posters and open sessions with short PowerPoint presentations will take place. Posters will remain in place throughout the entire meeting. When the symposium topics and speakers have been selected, to minimize overlap of interests in parallel sessions registered participants will be asked which they would prefer to attend.

This conference is intended to provide the basis for the future paid and ensure that Respiratory Biology remains at the forefront of worldwide research.

We also freely admit you will have plenty of opportunity to visit the local area and perhaps sample some of the world renowned Rhine Valley wine.

So join us with and make the ICRB the first in a long series to come!”

Details: www.respibio.org
THE NETHERLANDS AND BELGIUM

16 YEARS OF MEDICAL STUDY, BUT NO JOBS

Healthcare authorities have advised university hospitals to slow down surgical training, because, after years of study, newly qualified Dutch surgeons can find no hospital employment. Surgeons who have already trained are now considered sufficient to meet demand in the coming years. Paediatricians face the same problems.

In the 80s – the last time this phenomenon occurred – hospitals had to reduce vacancies for medical specialists.

Belgian doctors and nurses ‘escape’ to Holland

Around 1,500 nurses and doctors from Flanders have sought jobs in the Netherlands in the past five years, according to official Dutch Ministry of Health figures supported by information from hospitals near the Dutch-Belgian border. The reason is unclear, but is under examination.

Labour Inspectorate investigates hospitals

Staff working conditions – specifically when handling cancer medications and anaesthetic gases – are soon to be investigated by the Dutch Labour Inspectorate. The inspectors will also check whether employees are effectively protected against physical overload, aggression and violence from patients and visitors, which has increased – affecting four in five doctors in some way.

Exposures to cytostatica and anaesthetic gases can have serious consequences (as published in European Hospital, anaesthetic gases can seriously affect pregnant women and their babies). Although cytostatica are used to treat cancer, if not handled correctly they could conversely cause cancer to staff. A 2003 survey of 30 Dutch hospitals showed these risks were not systematically managed: in about 50% of cases something went wrong.

Commercial care

Although Dutch hospitals are currently not permitted to make a profit, from 2012 they might start paying dividends to stakeholders, and Amsterdam’s Slotervaart Hospital will be the first to do so.

It is bizarre that this hospital, which, financially, has been in very bad weather for years, is to be the first Dutch hospital to be taken over by a commercial firm. Founded as a municipal hospital 30 years ago, Slotervaart has been in financial difficulties since 1997. The health insurer that covered treatments provided by the hospital claimed that it treated too many patients, was too expensive, and the locality provided too many other hospitals.

Slotervaart’s medical specialists, rather than the hospital Board, took the initiative to commence talks with the insurer. The specialists said their goal in making the hospital a commercial enterprise is not self-motivated i.e. aimed at salary increases – but to create a better hospital in which more patients can be treated and cured. They believe more tasks could be performed. Presently, for example, due to budget restrictions, this hospital has no Intensive Care Unit and provides no first aid.

Luxurious setting for hip ops

Although orthopaedic specialists throughout the Netherlands perform hip and knee operations, for patients, the lure of a seven-day stay in a chateau, in the country’s south.

This is the first time a Dutch health insurer has offered such accommodation. Up to February this year this kind of service was not possible, because hospitals offered hip and knee care in several classes, but this is no longer the case. However, many patients still prefer to have more luxurious care.

The hotel and insurance company chose hip and knee operations because they can be planned. Prior to surgery, the patient will check in at the chateau. Following surgery at the hospital, he/she will be an in-patient for 48 hours, then be returned to the hotel for aftercare. However, the insurer will not pay all the hotel costs. In some cases a substantial amount must be covered by patients, which will depend on the level of services they select.

Because demands for such care looks high, negotiations with other hospitals and hotels are underway.
Low nurse levels cause deaths

Geneva - Inadequate staffing is reaching crisis levels in all regions, according to a report presented at the International Council of Nurses (ICN). Among studies reviewed, one showed that an increased workload from four to six surgical patients resulted in a 1% increase in the chance of a patient in that nurse's care dying. ICN President Hiroko Minami said: ‘Safe staffing leads to lower incidences of medication errors, post-operation urinary tract infections, upper gastro-intestinal bleeding, nosocomial pneumonia and infection.’ The ICN said that widespread shortage experienced today clearly threatens the Millennium Development Goals. ‘High patient-to-nurse ratios also put nurses at higher risk of emotional exhaustion, stress, job dissatisfaction and burnout, she added. Continuous overtime, or work without adequate backup, also can lead to greater absenteeism and poorer health. ‘The ICN said a policy is needed to focus on comprehensive health promotion and education of care of nurse-to-patient staffing ratio. An ICN advisory on this complex subject is available at: www.icn.ch

Dealers are not reponsible for faulty CE marked products

In a recent preliminary ruling the European Court of Justice decided that dealers are not required to ensure that an industrial product bearing a CE mark conforms to the EC directives. The court ruled: ‘The ECJ ruling constitutes an important support for dealers who are not responsible for faulty CE marked products.’

No2 is a killer

Becton Dickinson supported by medical devices manufacturer Becton Dickinson and the Diabetes Society fund ‘Diabetes-Nanni’, a programme in diabetes management. Children in need are placed with a diabetes-nanny, who helps with everyday problems of the whole family, and contacts, for example, the nursery school, school, after-school care club, school or parents’ employers. Professor Tsigoras, Director of the Diabetes Centre for Children, Basel, said that this kind of support - often with no significant medical effect on further medical treatment and development of children with diabetes - has been shown to improve quality of life and to raise health awareness. "Diabetes-Nanni" can also be beneficial for parents. So, a mother who has raised a diabetic child would not need to make use of the children's nursery school, after-school care club, school or parents’ employers.

The European Respiratory Journal (ERJ) has published the results for No2, a study conducted by Klea Katsoyanni, Evangelia Samoilou, and team at the Department of Hygiene and Epidemiology, University of Athens, Greece. Their research raises serious concerns. The team used the largest existing database, which comprised of c. 30 million people, with pollution measurements for at least three consecutive years. Mortality and hospital admissions were compared with measurements for various atmospheric pollutants taken by the ambient air monitoring stations in each of the No2 cities. The conclusion produced some alarming results. ‘They show that short-term mortality rates (i.e. in the days directly following exposure on various medical conditions was already known, only now is there evidence that an air pollution is a killer. According to the APHEA-2 study the chief culprit is the nitrogen dioxide (NO2) of diesel engines, which are increasingly popular in Europe.

In the study 'Air Pollution and Health - A European Approach' (APHEA) study demonstrated air pollution's harmful impact on human health using data from some 15 major European cities. The European Commission and the World Health Organisation considered these results when amending their air quality recommendations.

To enlarge the database and provide more information the second study - APHEA 2 - involving several European laboratories and 44 large cities from Scandinavia to Israel, set out to identify what specific effects could be attributed to each of the main pollutants, focusing on mortality trends. APHEA-2 found particulate matter of under 10 microns diameter (PM10), sulphur dioxide (SO2), ozone (O3) and NO2. No2 is a killer as the effect of other pollutants, or a flu epidemic, were taken into account. The correlation with NO2 concentrations is clearer still if we focus specifically on deaths from cardiovascular and respiratory causes in the days directly following exposure. Indeed, a rise of 10mg/m3 in NO2 levels increases deaths from cardiovascular and respiratory conditions by 0.40% and 0.38% respectively. The impact also varies according to length of exposure. Comparison of levels measured over six days (date of death and preceding five days) with those measured over two days (date of death and previous day) shows that 22% more cardiovascular deaths and 45% more respiratory deaths were connected with the six-day exposure. 'This most likely reflects different physiological effects,' the authors point out. ‘NO2’s cardiovascular effects are generally associated with mortality in the short-term (sudden deaths without hospitalisation), while its respiratory effects tend to involve disease that causes them to seek hospitalisation at a later date,’ Klea Katsoyanni adds.

The west-east variation

In north-western and southern Europe the impact of NO2 pollution is greater than in cities in the middle of Europe and in European counterparts. The researchers suggest a reason: 'In north-western and southern European cities was caused mainly by road traffic, while Eastern Europe had fewer cars at the time.' Older people, they also add, are more vulnerable to the short-term effects of air pollution, probably due to existing respiratory conditions or other diseases. Eastern Europe’s lower life expectancy in the past might therefore account for the lower NO2 pollution impact.

The study also shows that the effects of NO2 and PM10 can interact. NO2 seems to have a stronger impact when combined with high levels of particulate matter. Both pollutants are mainly emitted by diesel engines.

Because diesel vehicles emit 40% more particulate matter, Klea Katsoyanni believes the monitoring of diesel fuel quality and diesel vehicle maintenance should be improved, and that diesel-powered vehicles should be reduced. Diesel-powered vehicles are on the rise throughout Europe, they point out. However, the APHEA-2 data show that urban NO2 levels do not yet exceed the EU limits - which are now being reviewed on the basis of new data from further studies. No doubt, the authors, APHEA-2 will continue to operate when setting future standards.

Innovative Public Health Doctorate

Brunel University offers unique Public Health Doctorate

Brunel University offers a unique Public Health Doctorate, the first such course in the UK. Brunel University is to provide a new three-year course offering a Doctorate in Public Health. The doctorate course, which will commence in October this year, is unique because it is cross-disciplinary, involving internationally recognised academics in public health and health promotion, anthropology, biostatistics, health economics, epidemiology, environment, policy, planning, public health and social policy, health and human rights, psychology, rehabilitation, and health sociology.

Students will receive a practical as well as theoretical education, preparing them for leadership in public health, rather than academia. The course was developed following consultation with the UK’s National Institute of Health, UNICEF; the Tropical Disease Research Programme (WHO), and Primary Care Trusts across the UK, and is aimed at those already working in non-governmental organisations, local government, or the National Health Service (NHS), who would like to supplement their practical knowledge with an academic qualification. One of the course designers, Professor Pascale Allozy, explained: ‘We spoke to a number of organisations involved in public health to gain input on what kind of skills they look for, so that we can ensure the course has relevance. We ensured our course will involve a high chance of securing either jobs in public health, or promotions if they have prior experience in the sector. We were also keen to build relationships with organisations to try to provide students with as many options for work placements as possible, both in the UK and abroad. We are working with those courses that have a strong bio-medical focus or train academics: Public Health at Brunel is grounded in public health sciences and the aim of our course is to train tomorrow’s public health leaders.’

There is a desperate need for professional doctors in public health, Professor Richard Parish, chief executive for the Royal Society of Health pointed out: ‘Public health is rising up the political agenda as more policy-makers and planners realise the impact of today’s health, in the UK and overseas, is avoidable. We need people with the knowledge and skills, whether it is to help minimise tomorrow’s avian flu pandemic or to tackle the obesity problem. Put simply, public health is extremely expensive when it is carried out inefficiently, but can deliver phenomenal social and economic benefits if carried out effectively. This initiative has the full support of the Royal Society of Health.’

Correction: MDS

In the article ‘MDS assures greater care’ (EHP 17, page 8), MDS was translated from the German version as ‘The medical technical aids register’. The correct translation is ‘The Health Insurance Medical Advisory Service’. For MDS details go to: www.mds-ev.org
Diagnostics Division

Siemens to acquire Bayer’s diagnostics market

Siemens has signed an agreement with Bayer to acquire the chemical and pharmaceutical company’s Diagnostics Division. The acquisition will enable Siemens Medical Solutions (Med) reports that the acquisition will enable the firm to expand its position in the high-growth molecular diagnostics market. At the end of April, Siemens announced the planned acquisition of Diagnostic Products Corporation (DPC) in the USA, a leading company in immunodiagnostics. The purchase price for Bayer Diagnostics - which had sales of €1.4 billion and a double-digit EBITDA margin in fiscal 2005 - is roughly €4.2 billion.

‘Acquisition of Bayer Diagnostics is part of our targeted strategy to create the healthcare industry’s first integrated diagnostics company by combining the entire imaging diagnostics, laboratory diagnostics and clinical IT value chain under one roof,’ Dr Klaus Kleinfeld, Siemens President and CEO explained. The company adds that the Bayer division acquisition will enable the Siemens Group to ‘...tap the rapidly growing market for molecular diagnostics based on gene analysis (nucleic acid testing). Bayer Diagnostics is also a world market leader in clinical chemistry with a leading position in near-patient testing, laboratory automation and haematology (blood cell diagnostics).’

Expansion aims at high-growth molecular diagnostics market

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Smiths Medical wins US$3.4 million contract

USA - The 898-bed Massachusetts General Hospital (MGH) in Boston - Harvard Medical School’s biggest teaching hospital - has awarded a $3.4 million contract for 1,365 syringe pumps to Smiths Medical

The Medfusion 3500 syringe pumps, with PharmGuard Medication Safety Software, is the most recent innovation in Smiths Medical’s infusion technology. ‘This is a leading-edge infusion system that incorporates specific configuration profiles, a drug library composed of more than 4,000 entries, over 100 dosing units and safety dose limits on all infusion parameters to help reduce medication errors that may otherwise occur,’ Smiths reports. ‘The smart pump’s rapid occlusion detection technology with FlowSentry offers a comprehensive array of pressure-related safety features. Its graphic display of pressure trend allows for earlier clinical intervention. The Medfusion 3500 syringe pump imports and exports data and protocols and may be adapted and customised to interface with bedside environment. Its PharmGuard safety reports provide valuable information required for improved processes and medication delivery practices in the critical care environment.’

Ellen Kinnealy RN, at MGH Biomedical Engineering, said that the use of smart pumps, which contain vital information about specific medications, has enabled the hospital to make significant advances in the capability and safety of intravenous drug infusion systems. ‘This technology is an important way to prevent errors and enhance clinical care. In fact, it could help raise the standard of medical care throughout the country.’

As part of its national cancer program, the United Kingdom’s National Health Service (NHS) is currently investing in increased capacity for radiation treatment of cancer. These investments, sponsored by the Department of Health, are providing funding, which is applied for by the NHS hospitals and released in so-called ‘waves’. Recently, the awarded tenders in the 9th wave were announced.

Among these, the Swedish firm Elekta, which specialises in advanced radiation therapy, comprehensive cancer management and non-invasive treatment of brain disorders, has been appointed to deliver six advanced digital linear accelerators for radiation therapy to five UK hospitals: Guy’s Hospital in London, New Cross Hospital in Wolverhampton, Queen Elizabeth Hospital in Birmingham, Poole General Hospital and Southampton General.

In total, the orders are valued at over £6 million. The hospitals will install Elekta Synergy, fully equipped with precision IMRT, real-time portal imaging and the most clinically advanced 3D X-ray imaging for Image Guided Radiation Therapy (IGRT).

In addition to choosing Elekta’s clinical solutions, three of the hospitals will install image-guided treatment management systems from IMPAC Medical Systems, an Elekta company. These will connect treatment planning systems, imaging systems and the radiation therapy delivery equipment - regardless of manufacturer.
Bringing Toyota product  into the ICU

By Karen Dente, our correspondent in the USA

In this timely article Karen Dente highlights the obvious, yet so often the failure to see: the design and provision of health and social care as essentially a system. We have long been aware that adverse incidents within health and social care are rarely to be found at the feet of individuals alone.

Many of those involved in health and social care have considered their work fundamentally different from that of other industries - for too long. Whilst this may be true in the detail of what they do, there are clear similarities across industries, be they focused on service or production. However, health and social care professionals have argued that dealing with human beings who are in distress, be it physical, psychological or social, is complex and difficult, and lessons from other industries are not helpful.

This, in our view - and supported by Karen Dente's article - is to miss the point. One would not argue that to work in medicine is both complex and demanding, as is teamwork and the future of intensive care medicine

By Jean-Louis Vincent, Head of the Department of Intensive Care, Erasme Hospital, Free University of Brussels, Belgium

The recent 26th International Symposium on Intensive Care and Emergency Medicine - the largest meeting of ICU professionals, attended by around 5,000 participants, who travelled from Brussels to over 80 countries, worldwide - could be described as a wake-up call for intensive care medicine. Intensive care medicine is no exception. Well-developed protocols can certainly simplify patient management and care, but do they improve patient outcomes? Is the avoidance of problems with protocols in the ICU environment so that there is still so much we do not know and therefore protocols are often drawn up from guidelines and recommendations that themselves are based on relatively little high grade evidence. Randomised controlled trials are notoriously difficult to conduct and interpret in the ICU setting, so much so that the evidence for or against interventions must be based on alternative study design, case series, or expert opinion (Vincent JL. Evidence-based medicine in the ICU: important advances and limitations. Chest 2004; 126: 592-600).

In addition, once a protocol is established, does it mean that the end of the story for that disease process, or for that group of patients? As raised in the article, there are many examples of where Lean Principles have been used in health and social care. Our experience has reinforced the benefits that they bring. The Lean Principles insist on being crystal clear about the need for a process, the person responsible for the output, and so on. This enabled the Japanese carmaker it shouldn’t be implemented in the course of a patient care. These changes could be implemented in the ICU in a way similar to that of normal workday by clarifying what patient is it which procedures, who is responsible for what aspect of the job, and exactly how each step is to be carried out. Hospitals can be targeted by many of the problems that lead to much waste and so many deaths by preventable errors. In the case of the Toyota Production System has been shown to be effective in hospitals where the same capabilities in operations design and improvement are being used in the making of a Toyota car. Basically, the challenges involve getting rid of ambiguity in the output specifications and connections and methods of working processes, and help save patient lives, dollars, according to Steven Speer. So what are we waiting for?

ABOUT THE AUTHORS

Management consultant Eirian Lewis and Business Director Dr Mike Perides lead the independent UK-based firm Lean Healthcare Improvement in Cambridge, Massachusetts, as well as a Harvard Business School. In a review in Harvard Business Review, September 2005, titled ‘Fixing Health Care from the Inside’, Dr Perides argues that the healthcare industry could only save thousands of lives, but ‘billions of dollars’ if it were to emulate some of the factory-floor techniques developed by the Japanese carmaker.

Some pilot sites in the healthcare industry have been implemented with the professional of Eirian Lewis at Deaconess-Glover Hospital in Needham, where case studies have been obtained. Additional sites are at Presbyterian and South Side Hospitals of the University of Pittsburgh Medical Centre in Pennsylvania. Both the US government’s Centers for Disease Control and the private Robert Wood Johnson Foundation are providing support in this effort.

Why study Toyota? Steven Speer thinks that, by applying the same capabilities in operations design and improvement that the famous Toyota Production System, patient care delivered by doctors, technicians and nurses could radically increase the efficiency of patient care, while lowering costs markedly, with no necessary capital investment. By applying what has been demonstrated by the production processes of the Japanese carmaker it shouldn’t be necessary to wait for sweeping changes through legislation and market forces to occur inside the hospital system to assure improved social care. However, as with the American steel industry, in her article, the conclusion of all the enquiries into adverse incidents in health and social care has focused on poor or inadequate systems.

The Toyota example demonstrates the simple premise that at one end of a system there is a need, which requires input, and at the other end there are outputs leading to outcomes. The key to success lies in being crystal clear about the need and the value and function of the steps in between need and outcome. Toyota is precise about its need – reliable, cost effective production of desirable motorcars – and their outcome: consistent high levels of sales and increased market share. Their use of evidence enables them to target the production process to ensure that they wholly contributes to their desired outcome and that no step is redundant.

As raised in the article, there are many examples of where Lean Principles have been used in health and social care. Our experience has reinforced the benefits that they bring. The Lean Principles insist on being crystal clear about the need for a process, who is responsible for the output, and so on. This enabled the Japanese carmaker it shouldn’t be implemented in the course of a patient care. These changes could be implemented in the ICU in a way similar to that of normal workday by clarifying what patient is it which procedures, who is responsible for what aspect of the job, and exactly how each step is to be carried out. Hospitals can be targeted by many of the problems that lead to much waste and so many deaths by preventable errors. In the case of the Toyota Production System has been shown to be effective in hospitals where the same capabilities in operations design and improvement are being used in the making of a Toyota car. Basically, the challenges involve getting rid of ambiguity in the output specifications and connections and methods of working processes, and help save patient lives, dollars, according to Steven Speer. So what are we waiting for?

Teambot and the future of intensive care medicine

By Jean-Louis Vincent, Head of the Department of Intensive Care, Erasme Hospital, Free University of Brussels, Belgium

Lean Principles and systemic thinking

Eirian Lewis is also a Senior Assessor and EFQM Master Practitioner with the Wales Quality Centre and is an assessor for the Wales Quality Award. Mike Perides, has a doctorate in organisational culture, an honours degree in psychology and a Master of Arts degree in sociology. He has particular experience in health and social care. He is also an EFQM-licensed assessor, chair of the EFQM European Health Sector Group and, for many years, has been involved in promoting the EFQM Excellence Model within the public sector. This, in our view - and supported by Karen Dente's article - is to miss the point. One would not argue that to work in medicine is both complex and demanding, as is teamwork and the future of intensive care medicine.
Frankfurt/Germany - This year’s International Forum for Healthcare IT (ITeG 2006), held in May/June, has put this event firmly on the health-care industry calendar. Organised by the Association of Providers of IT Solutions for Healthcare (Verband der Hersteller von IT-Lösungen für das Gesundheitswesen – VHitG), and Mesago Messe Frankfurt, exhibitors at the event increased by 25% over 2005 (250 this year) the exhibition space increased by 44%, and visitors rose from 3,215 to 3,678. ‘We not only wanted to expand the product showcase but, more importantly, the ITeG professional sessions,’ Dr Wolrad Rube, chairman of the VHitG, explained. Consequently, an Advisory Board representing diverse user organisations was appointed, which turned the event in to a forum for medical controllers, IT directors in the clinical, nursing and care sector, and surgeon-based physicians.

Along with presentations and discussions, new this year were the ITeG Warm-up Sessions, held every morning before the trade show opening, to provide a compact overview of new solutions, developments and products. The fact that the ITeG and hospital information systems (HIS) meeting took place simultaneously considerably increased the number of qualified visitors, Dr Rube added.

Parallel with the ITeG, the 11th meeting of the HIS working party of the German Society for Medical Computer Science, Biometrics and Epidemiology (GMDS) and the Association of Medical Computer Scientists (BVMI) took place, in the usual format of presentations, workshops, etc, and providing case studies, concrete current information and problem-solving discourse. New reimbursement schemes with expanded documentation requirements, close co-operation between hospital and doctors surgeries, and the move among hospitals towards becoming integrated health service providers, are just a few current trends in the German healthcare landscape.

The introduction of patients’ electronic health cards is a daunting task for the HIS, underlining its strategic importance. At the event, an electronic physician’s letter, developed by the VHitG initiative Cross-sectoral communication, was demonstrated for the first time, live and several times daily, to show its transfer between IT systems in a doctor’s office to a HIS, on a shared network, across traditional sector boundaries, speeding workflow and online communication (See Siemens/DOCexpert feature on page 8).

The VHitG annual award - This was presented to the Knappschaftskrankenhaus Bottrop for its IT concept for digital clinical pathways that always encompass a standard and a deviation. With systemic standardisation and optimisation, Bottrop hospital management has achieved a 2-day reduction in the average length of stay.

Radiology - In Germany, it has been estimated that only 20% of hospitals have an integrated RIS/PACS - a poor contrast with other EU countries. At this year’s German Congress of Radiology held just one week before the ITeG - visitors’ interest in this issue was somewhat disappointing.

ITeG 2007 - This will take place in Berlin (17-19 April) at the same time as the eHealth Europe Congress 2007 and the national Telemed.

Despite growth in all areas, if it wants to leave its niche and appeal to a wider audience, ITeG will have to position itself more distinctly between the German Congress of Radiology and Medica, which is, and will remain, a top venue for IT solutions for healthcare.

In addition, as far as RIS/PACS solutions are concerned, Germany’s radiology congress provides the added value of showcasing all state-of-the-art modalities. In this country, investments in RIS/PACS enjoy a higher priority than the modernisation of administrative systems, because these are the pillars of future-oriented and image-based communications structures across all departments. Report: Guido Gebhardt

Dr Wolrad Rube: ‘This year, for the first time the ITeG Forum and Warm-up-Sessions were designed by an ITeG programme advisory board.’
Siemens and DOCexpert form a new collaboration

As one of Germany's leading suppliers of medical practice software, the DOCexpert Group has about 270 employees and provides software to over 16,500 physicians in more than 13,000 medical practices. DOCexpert is a member of the German Association of Vendors of IT Solutions for Healthcare (VHitG) and the SME Initiative Medical Practice IT.

A RADICALLY CHANGING

In a European Hospital interview, Jürgen Reyinger, General Manager, GE Healthcare Integrated IT Solutions, discussed the consolidation of the IT market and a boom in HIS and PACS sales throughout Europe.

The mood at the International Forum for Healthcare IT (IFH 2006), held in Frankfurt, Germany, this May/june, indicated that this market is gaining momentum. We asked Jürgen Reyinger, whether he shares that impression.

JR: The HIS and PACS business is booming for at least for the next three years, above all because they have to catch up in medical technology - but they have gained a lot of ground, particularly countries such as Poland, the Czech Republic, Hungary, even Russia. We receive interesting requests there for PACS solutions, because the RIS business is mostly picked up by local and regional companies. These countries have interesting markets, even those in which we are already active. They are not yet comparable to Western Europe, but the signs are promising.

When talking about Western Europe we must differentiate between England and the Continent. England launched a National Health Service programme the National Programme for IT (NPfIT), which means over the next three or four years the entire British hospital landscape will be fully digitized. With this initiative, England will certainly move to the European fore-front. It is quite remarkable that Tony Blair would invest more than six billion euros to push the digitisation of the healthcare system. This will call many benefactors for patients. Multiple admissions and examinations will be avoided, and the information pathways will become shorter and quicker.

RIS and PACS are obviously lucrative businesses, but what about the integration with HIS, as provided by, for example, Agfa with their Enterprise Solution, or Philips with Light - an integration that seems to be increasingly demanded by hospitals?

JR: That's a beginning. However, in 2002/2003, hospitals increasingly turn to best-of-breed solutions. It is only with such an approach that clinically relevant solutions can be implemented that really optimise workflow, allow for paper-based processes, where afterwards, and above all, contribute to reducing the number of medical errors. We're talking about a diabetes or cancer patient who - when purchasing or upgrading their enterprise solution - negotiate precisely for the future integration of best-of-breed solutions by third party suppliers. This happens because it has become obvious that providers of enterprise solutions regularly demand ridiculously high prices for interfaces, to push their own, often mediocre, department solutions, although there are internationally established standards such as HL7, DICOM or HLT. Does GE offer a HIS?

JR: Due to the acquisition of IDX Systems last January, GE can now offer one of the worldwide leading HIS solutions. Currently, this solution is available only in the USA, Great Britain, the Mediterranean and English-speaking countries in Asia, because it is an English-language solution.

Of course! The whole of administration - different European legalities, different names of pharmacists, and so on, have to be taken into account. That's a real Sisyphean task.

JR: Right. It is very difficult to adapt HIS worldwide to the different market conditions. To a great extent, the different reimbursement systems are specialised even within the same country. For example the DRG in Germany. Each country has a different system of its own. The reimbursement of medical services. In clinical departments, that's not an issue of great importance. That's why we can offer our clinical solutions world-wide. Our healthcare IT solutions generate a turnover of about US$1.3 billion. We mean for GE, we are among the top 5 players. As regards the consolidation of the IT market mean for GE?

JR: The consolidation primarily affects HIS worldwide to the different market conditions. However, in the healthcare IT this isn't viable, and their customers. That means hospitals and private radiology clinics will have a problem if they continue to buy from those companies. With the...
IT & TELEMEDICINE

INTERNATIONALISING IT SYSTEMS

TEA CLIMBS OVER LANGUAGE AND HEALTHCARE PRACTICE BARRIERS

In recent years, Agfa HealthCare has dramatically expanded its IT portfolio in line with its strategy to be an international leader in healthcare IT. At the recent ITExG exhibition in Frankfurt, the company’s ambitions were clearly visible: Agfa very much focused on ORIBIS, its leading Hospital Information System.

Daniela Zimmermann interviewed Eric Maurincombe, Vice President International Development, Healthcare Business Group, Agfa, about the firm’s continuing strategy.

Card

15 corporate members of the initiative, with a total of €15,000 each and each VHitG member another €2,000 per annum. Everybody was promised a development of a standard that was the basis for the structured physician’s letter. How can the VHitG physician’s letter be integrated into other systems?

Imagine the document, and further processing in each hospital system, are the next, rather complicated steps. Initially, we will focus on the classical hospital discharge data, as this is the biggest and most complicated steps. Initially, we will create a standard that was perfectly.

We want to facilitate this by providing the physician’s letter electronically. The physician will receive all pertinent data regarding medication, medication changes, discharge status immediately and can save them in his system and integrate them in his own IT.

How does this fit into your collaboration with Siemens? How did the Siemens competitors react?

We used the experiences with the IHE compatibility tests, the mixture of Connectivity and Marathon. And, prior to IHE, we performed a two-day connection test. Did it work?

Perfectly.

EM: Strategically, Agfa decided to play a leading role in the convergence of IT solutions for healthcare providers. That meant expanding our core strengths in analogue and digital solutions for radiologists (film, digital film, PACS), to other departments, such as cardiology, orthopaedics, women’s care, but also at the level of the enterprise. Keeping in mind, we acquired in the past two years companies like GE in Germany, Heartlab in the US, Symphonie on Line in France, and Medi2ard in Italy. All these have very strong solutions for their market and the knowledge of how to deploy it effectively. The integration process has essentially 2 goals.

The first one is to leverage beyond Radiology our global presence and leadership in Radiology Information Systems (RIS) and PACS. The second goal is to expand our integrated knowledge beyond its current geographical borders, i.e. we have ambitions beyond the German speaking market for our HIS/CIS business, and beyond the USA for our Cardiovascular Information Systems. During integration, we are bringing complementary skills of shareholders in each group and knowledge together, while for HIS and CIS, keeping a dedicated focus to the German speaking market, where we have established a name, brand and product line over the past decade. Likewise, in the USA, in cardiology, where we have a leading position.

How do you implement this approach in practice?

When we look at the ‘origin’ of the ORIBIS platform in these hospitals, most of the developments come from Germany and Austria, but some of the key modules come from Gent and Bordeaux. The most recent is the Centre Hospitalier Universitaire de Toulouse, counting some 10,000 users. This is a hospital group, which holds key medical information; the other is geographical differences in the framework and policies related to the EHR.

We will keep expanding beyond these initial European countries with our ORIBIS platform. Again, we are present in over 40 countries with our Radiology IT offerings. And we spend the necessary time in analysing each market, systematically, before deciding how we should support our platform.

How does ORIBIS relate to the electronic patient record (EPR) and the electronic health record (EHR)?

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The Society for Computer Applications in Radiology (SCAR) has undergone a name change. SCAR is now the Society for Imaging Informatics in Medicine (SIIM).

Established in 1980 to promote the use of computers to develop new diagnostic imaging technologies, SCAR was the first radiology society to publish research and applications for PACS, and has been the professional organisation most associated with the digital transformation of radiology departments in North America. The Society's books and peer-review publication, the Journal of Digital Imaging, and its Expert Hotline archives at www.scarnet.org provide a wealth of scientific and pragmatic information about PACS and related digital technologies.

The name change emphasises the Society's expanded focus on encompassing other clinical specialties beyond radiology - supporting research in imaging informatics, including all imaging sciences, and the expansion of medical imaging throughout healthcare.

At this year’s annual meeting SCAR/SIIM formally initiated an international Imaging Informatics Professional Certification Programme, designed to define the standards for PACS administrators. The first examination is scheduled for September 2007.

Delivering the keynote address, titled 'Leonardo’s Laptop: Next Generation Users Interface for Medical Informatics', Ben Shneiderman PhD, Founding Director of the Human-Computer Interaction Laboratory and Professor of Computer Science of the University of Maryland (Baltimore), demonstrated his models for managing and displaying a vast amount of data.

In the R&D symposium, Katherine Andriole PhD, of Brigham & Women’s Hospital (Boston, MA), discussed current medical imaging informatics research opportunities. Both presentations referenced the Transforming the Radiological Interpretation Process (TRIP) initiative, a multidisciplinary research effort initiated by SCAR in 2002 to address the problem of image and information overload generated by high volume diagnostic modalities like CT and MRI. (For podcasts go to: www.scarnet.org/presentations.html). 

Workstation design - David Weiss MD, of Geisinger Health System (Danville, PA) and Steven Horii MD, of Geisinger Health System (Philadelphia, PA), discussed future workstation requirements.

Dr. Horii described current design limitations of display, correlation, and performing image processing of 2D-3D-4D radiology, cardiology, orthopaedic and other types of diagnostic images and requirements for improved workflow through fluid integration.

Dr. Weiss predicted that entirely new digital viewing techniques are needed to provide efficient review of the large data sets generated by the latest CT and MRI equipment. The ideal, he said, would be to show a virtual image that could be ‘peeked away’ to display the underlying anatomy.

Network analysis - Sergio Camorlinga PhD, of St Boniface Hospital Research Centre (Winnipeg, Manitoba, Canada) described the use of a distributed network of modality simulators to produce graphs that display how networks respond to different levels of traffic. The graphs can verify if transferring data are within the tolerance parameters for a hospital, and identify the best performance for PACS under different sets of load levels.

New workflow workstation - The University of Texas M. D. Anderson Cancer Centre (Houston) created a new kind of workstation modelled on the concept of stock market displays of current market conditions, which, Kevin McInerney MD explained, provides greater flexibility and efficiency.

Archive storage - The challenge of the management of large databases of patients will continue because storage requirements steadily increase. Today, image accessibility is age-based. Richard Morin PhD, of Mayo Clinic-Jacksonville (Florida) and current chairman of SIIM, recommends that older images be stored on-line, based on the likelihood of future review rather than their age. Paediatric, cardiac, mammographic and radiology oncology images should be more rapidly accessible than daily chest X-rays verifying tube placement, which have no value after a patient is discharged, and could be immediately moved in highly compressed format to a long-term archive.

SIIM draws an international audience of 1,275 registrants and 150 exhibiting companies. In June 2007 the meeting will be held in Providence, Rhode Island. Proposal abstracts will be accepted until 11/09/06. Global submissions are strongly encouraged.

Proven Outcomes with Tim (Total imaging matrix technology). Around the world, Tim® has become the new standard in MRI. With hundreds and hundreds of installations, Tim is proving every day that a new era has begun. Now, with just one mouse click you can change Tim’s coils and perform a comprehensive assessment of an entire disease, not just a single body region.

You can scan the smallest lesions or the entire central nervous system without a detail lost. And you can do it all at the highest speed without sacrificing resolution. Let Tim prove it to you at www.siemens.com/Tim.

Siemens Medical Solutions that help
Progressing towards the EPR

By Luisa Cattanea, IT Director at ASL Nº 11 Empoli

Today, the Local Healthcare Company ASL Nº 11, of Empoli, Florence, is a highly advanced public utility, able to face the challenges of technological innovations and to perform long-term objectives with leadership and competence.

Prior to 2002, the company focused on IT development of operative units in conformity with the ‘best of breed’ strategy, and it was developing projects guided by functional operators with a limited input from central information systems.

Our users were very satisfied with the final results of departmental projects, but they did not take into account the Electronic Patient Record (EPR) objective and the patient-centric logic.

In this context, which could be defined as ‘IT alphabetisation’, the IT resources mainly played a technological role: they designated the infrastructural support to project co-ordinators, without being involved in engineering processes and in managing the changes.

Therefore, departmental products established the basic structure of our IT strategy and they are still today in the upgrading or evolutionary maintenance phases.

Between 2003 and 2006, under the direct sponsorship of a General Manager, the Hospital Information System (HIS) project developed, it began with the administration management of patients’ hospital admissions and discharges, then expanded to activities in hospital divisions, surgeries, operating theatres and the emergency department; it is strictly integrated with the above mentioned departmental systems.

The best specialised product was evaluated, particularly focusing on integrator competence. The strategy was for a medium to long-term partnership with a contractor.

We chose the company Italtbs, a European partner known for its clinical engineering division, with a business unit dedicated to the Hospital Information System Patidok, which is mostly widespread in Austria and Germany.

From the beginning the project integrated different functional areas, with the patient strongly in mind, along with models of sharing administrative and clinical data.

In the first two years the project encountered many difficulties:

● Computerising a ‘paper and pen’ process, which caused slow operations and needed computer skills (not always suitable)

● The lack of an IT project manager, to coordinate activities between users and consultants

● The lack of key users, to take strategic decisions on changing processes

● The poor knowledge Italtbs had in the context of an Italian hospital, sometimes less ‘standardised’ in terms of Austrian and German realities: they are guided by strict rules, which we do not have, so we needed - sometimes heavily - to model the software to allow the different processes doctors were used to

● Finally, to win over the resistance to changes, which required a conversion in the doctor’s role and job (I could say the lack of the strategic role of a changeover manager)

Beginning in 2005, with the appointment of an IT project manager and the designation of hospital administrative managers as key users, the project went through the critical phase, obtaining a high level of satisfaction in all management roles.

From the beginning of this year, the IT Direction has faced the third phase of a shared development programme, building a central datawarehouse (DWH) to support Top Management strategic and decisional processes, by giving value to the large amount of data generated by new information systems.

A heavy investment of all the human resources involved is planned for the next two years; a key factor to success is the identification of a partner with technological knowledge, extended experience and innovative skills.

Therefore the selection of a Business Intelligence tool and a strong partner to support IT operators is at the end, and the DWH project is beginning: as a matter of fact, for the first time, the IT Division will be an actor, in addition to being a director. This project will encourage internal competence and skills, focusing on the changes brought to our company by the DWH spreading.

Following the same logic of IT partnership with external suppliers, after 2007, ASL 11 will be able to build a real electronic patient record (EPR) project.

We see a way to do MRI with an increased signal-to-noise of up to 100%

The Tim Systems: MAGNETOM Trio™, MAGNETOM Avanto™, MAGNETOM Espree™, MAGNETOM Symphony™
Elaborate, evolving network to link radiology and cardiology

At Basle University Hospital, Switzerland, a unique networking project for the hospital's cardiology department is underway. In an interview with Healthcare IT & Telemedicine during the 41st HTI Congress, the radiology department's Dr Osswald described this complex system and its future potential.

Bellevue was a small radiological practice that offered mammography, ultrasound and computerized tomography. Dr Benoit explained, 'Dr Laser took over, moved to new premises and reformatted, modernized and expanded everything, with two objectives: to optimise patient care – and economic benefit.'

Does the group cater for private patients exclusively?

'To Switzerland things don’t work the same way as in Germany. We don’t make a difference in the outpatient sector, but receive the same amount from Swiss health insurers no matter where the patient is insured.'

So the typical private patient doesn’t exist?

'Correct. There are certain services that are not covered by health insurers; consequently the patient has to pay when he uses them.'

How do you ensure the economic success of your institute?

'Through the choice of radiology equipment and the work and speed of examinations - a patient does not have to wait over four weeks for our results. Most examinations can be performed in a day, which is currently a crucial issue in this market: How fast can I deliver my service?'

Why did you choose this particular PACS?

'Because the entire package - price, service, innovation potential - suited our needs perfectly. And I'm very pleased with the simple handling is crucial. I have to be able to access the information quickly and therefore made sure that our design of the system was very user-friendly. By means of a well-designed list to see immediately when and where previous examinations were performed, what still needs to be done and what's already there. I want to move through each step of the process swiftly and want the data to be clearly presented. Certainly it is also important for me to be able to view CT and MRI images on the PACS monitor and not have to switch to the workstations of the individual modalities. All this saves a lot of time.'

'We are certainly planning to implement a PACS in the surgical wards. Currently, the individual institutes work quite indepen- dently of each other. Since we feel this realisation is done quickly by means of standardisation, we noticed that products from almost all manufacturers are used. Why didn't you opt for a PACS from one of those equip- ment manufacturers?'

'Because the KODAK CARESTREAM PACS is the most innova- tive solution and, with a diverse equipment park, such as ours, it is the best possibility to work with an independent solutions provider.'

Some of the manufacturers of large equipment in the PACS: 'It works with our prod- ucts, but we don't know whether a consultant in another hospital or from other manufacturers'.

That was an important issue – a PACS must interface with all other products, market issues.

Bis, typically, we tried to set up a clinical database into which we could feed not only our own results or examination results, but also alphanumeric data as numbers or cat- egories. One example: A patient's blood pressure is too high – this result is not fed into the system as 'high blood pressure' but is measured as a number which, in turn is translated by the sys- tem into a report. Angina pectoris is another example: We have classified four possible levels. Between these levels of Angina pectoris itself is graded I, II, III and IV. Then we had to determine what four components best describe a clas- sic clinical Angina pectoris. For, if example, only three of the four characteristics are pos- itive, then this is an atypical form of Angina pectoris. Working with the sys- tem requires everyone knows what we mean by terms such as Dyspnoe IV, or Angina pectoris I, II, III and IV. We force the doc- tors to use the systematics that we have lanced in the database.

Only at the end of the data recording do we allow prose, i.e. a subjective, writ- ten diagnosis. A typical example that you would find in every anamnesis, such as 'the slight suspicion of atypical, mild chest pain', does not help us with our diagnosis. A typical example that we would find in every anamnesis, such as 'the slight suspicion of atypical, mild chest pain', does not help us with our diagnosis.

copy patients' master files and scanned documents generated by GP surgeries, and these are cleaned up in an interme- diate step, to guarantee data correctness. Unfortunately we have found that master files – until now only used for administrative purposes (e.g. insurance claims) contain quite a few errors; for example, duplicates where a patient named Müller is spelt with an i in one place and with an u in another. When you try to link medical results with this file you run into problems. That's how we realise that master files must put a lot of effort into cleaning up master files, to ensure we do not generate false medical diagnoses. That process is now standardised. Everyone who deals with a patient, for example ensures that the address match- es.

All alphanumeric information is stored on our server. EGIs are stored on separate servers and each time some- body does an ECG using one of the machines connected to the network, the server copies the data, but only carries out an ECG if, e.g. say, Dr Müller. When we next go into the system, we can gener- ate a list of all previous requests for Dr Müller. Unfortunately, this is not yet possible with angiography images, nor with MRI, because we are waiting for our PACS sys- tem to be fully integrated. We can only log in an MRI image in our system, so then we will have to access those images via a link.

So we are building a motorway between cardiology and radiology, which flows both ways and additional- ly frees up space on our server. We are already connected to a RIS system. The radiology has also received a standardisation is carried out, the X-ray machine copies all the data from our system and the original X-ray image is retrieved from one machine into another. We have a different interfaces of this kind and therefore access to a large number of different systems and servers. We basically have a fully elec- tronic anamnesis. Hand-written admis- sion letters are put through a mass scanner then electronically stored, so that effectively we have complete elec- tronic patient files.

Scientifically the database helps because we have fast access to all our consultant is no longer required to sort out a separate data collection for each scientific study. You can, for example, copy left or right cardiac catheterisa- tion data we already have, but, when prospective, each study protocol is writ- ten in which data must be collated. The same goes for statistics. If I want to do a prospective follow-up study tomorrow, I must plan it as such, because each database is only as good as its user, who regularly cleans up the data and who gives the right information. If one does not complete all the fields, we are left with an empty line here, an empty line there. We have no secretarial staff to write reports, of which we generate around 700 - 800 daily. So, everyone, even our head of department enters his own data and this makes compromise between how much we’d like and what we can leave up to the individual doc- tor, so that in the end we are left with a usable data file. Another amount of quality control is looking at our users, i.e. to find out who never completes files. Or we cross-correlate data by grading Angina pectoris I to IV, then look at the respective catheterisation results. This then results in a number according to the different examiners, and assume that the head of depart- ment and the nurse are then more likely to experience than a student, there must be a correlation. Should you then choose show some- thing different, we’d assume it proba- bly doesn’t understand a fact correctly. However, we ‘know’ how many patients have hit rate of 95% averages, then you must speak to those who differ, because they probably haven’t understood the sys- tem. But if you realise that even the most experienced examiners keep achieving bad hits then you can assume that the category itself is the problem. Of course there is a certain amount of effort if you want to evaluate data statistically. Because we have generated hundreds of categories, it takes five minutes to write a report. It may sound easy, but is is not, because most patients have 20-30 images that is everything is available electronically and there is no need for unnecessary telephones or faxes. This is also connected to all our data. The Internal Medicine Department takes the reports directly from the PACS. Doctors connected to our network have online access and also can register patients electronically. As soon as the registra- tion is entered, the data is transferred and an appointment allocated, an e-mail is sent to the GP. Following an examina- tion, both the appointment and result is available within the network, to which the GP has access. This does not completely replace dialogue with GPs, but now we can concentrate on a fac- tional dialogue instead of administrative issues.

As yet, we have no electronic lodge- ment of resources, so the system does not provide a certain degree that, say, patients A and B cannot have an ECG on the same day. So this is still done manually. We have a precisely measured number of slots; when these have been used then we have to switch, because the system does not have dynamic load balancing, which is the way it was planned. The problem is that in this way we cannot realise our second objective, i.e. if we then become scarce and you tell the system to block any further requests after which you send the patients to the surgical ward, you still should be able to plan this in the system. That's why a coordinator does it all manually. We are always working to improve planning, because almost 50% of cases are emergencies. If we automatically limit our resources we hinder ourselves.

The system we have is developed in-house and is very much a product and open platform, connected in all direc- tions, which gives a great overview of every process. And this is very important for the surgical ward, I’m called to see a patient who’ve never met, I can use the system, or what else? What has been diagnosed, what has been performed, what still needs to be done, we should be able to plan this in the system. That’s why a coordinator does it all manually. We are always working to improve planning, because almost 50% of cases are emergencies. If we automatically limit our resources we hinder ourselves.

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Tracking drugs and assets

Data management in cardiology

Imagine Mr. Miller has a sore throat and goes to see his family physician. The physician performs all the usual basic exams. The results indicate that referral to a cardiologist is necessary. The cardiologist performs the same basic exams which the family physician did plus a stress test. The results show that in-patient treatment in a hospital is required. In the hospital the patient for the third time goes through all the basic exams, through another stress test and a scintigraphy and a coronary angiography. When the patient is discharged from the hospital, he can read those codes, link them to the patient data in the hospital's IT system and gain instant access to the patient's detailed information, displayed on a screen. In addition to improving treatment quality, the hospital expects that the RFID infrastructure will help to optimize logistics processes and enable demand-driven supply management, thus reducing the amount of capital locked up in the university pharmacy's inventory. The new infrastructure will enable digital identification and immediate tracing of drugs down to the level of individual unit doses and also alert pharmacy staff as to the expiration dates of medication.

iSOFT Switzerland joins NEXUS AG

Nexus AG, which develops and markets healthcare IT solutions, supporting an integrated approach for the exchange of data between general practitioners, hospitals and rehabilitation clinics, has acquired 100% of the shares of iSOFT Switzerland GmbH, which produces administrative IT solutions (the HOSPIS brand) for home healthcare. With sales of around eight million CHF and 91 customers, the company has been one of the major software solution providers in this healthcare segment. The company will be registered as Nexus Schweiz AG. It will continue marketing iSOFT products in Switzerland.

Pictured from left: Dr. Ingo Behrendt, Head of the Nexus AG Board, David Gregory of iSOFT Group plc and Albert Besewski of SOFT Switzerland GmbH.
INTEGRATING SPEECH RECOGNITION WITH A RIS

A report turnaround time decrease of 50% leads doctors to plan for 100% usage of the dictation system

The Helsinki University Central Hospital, in Finland, piloted speech recognition at Toolo Hospital’s radiology department to evaluate its effects on report generation. The Technology Manager, Tomi Kauppinen PhD, presented the pilot’s first results at the 2005 European Radiology Congress (ECR). These indicated a 50% decrease in report turnaround time. At the 2006 congress, he followed up on the study, explaining how the pilot hospital plans to increase the number of reports processed through speech recognition from 70% to almost 100%. Interview: Armin Scheuer of HealthTech Wire.

“We are a trauma centre, so emergency reports are needed fast, or instantly, Tomi Kauppinen explained. ‘We used to dictate on cassettes, or handwritten reports. But, in modern healthcare this process is not acceptable, as it is error-prone and time consuming for radiologists. Although several European and US studies have suggested that radiologists who dictate, edit and validate their reports themselves work less time-efficiently, our experience has proved the contrary. In the beginning, eliminating deferred transcription slowed radiologists down, but after their training, reporting turn-around decreased, which for us was a major motivation to introduce speech recognition (SR).

Several steps in the process, such as secretarial queries, manual typing, or phone calls from those awaiting reports, have been eliminated, so overall workflow and productivity have improved, rather than declined. Achieving a 50% decrease in report turn-around was easier than we thought. Corrections are also minimal, because we trained the system and are constantly updating recognition vocabularies and adding unknown words - a key feature in making front-end speech recognition successful. A dedicated administrative person manages these updates and adaptations.

When introducing speech recognition, what other aspects need consideration? Ideally, SR should become a natural part of the RIS, so I would roll out the RIS and SR jointly, so that users need to adapt to only one new system. I’d also recommend demanding that RIS providers deliver a SR-based solution. Then, when you integrate the RIS with PACS, you get a truly homogeneous infrastructure that binds all radiology applications in one integrated solution.

You aim for 100% processing of radiology reports using speech recognition? As a teaching hospital we will always create some reports traditionally, for training purposes. Currently, 70% of our reports are created with SR, we could raise this to almost 100%. Optimising integration with the RIS and SR user interface is one aspect, another is the availability of SR at every workstation - ideally you should be able to use it from every RIS workstation, which is why I recommend rolling out our RIS and SR jointly. The third step is to optimise RIS/PACS integration, because an integrated SR system depends on seamless communication between both leading applications. This means that radiologists could choose a patient from a list in the RIS, and the PACS automatically delivers corresponding images. It’s a quality and security step, ensuring images and reports correspond with the correct patient. It is also the basis for structured dictation in radiology.

How did you convince your radiologists to switch from cassettes to speech recognition? User acceptance is a critical point and we underestimated it. People fear change and good, clear information in advance eliminates negative expectations. The integrated application is very user-friendly - however, investing time to explain it to users, supporting them with training their voice profiles, and showing them how straightforward the system is, will lead to fast user acceptance.

On average, training took 1-2 hours per user. Given the importance of PACS/RIS to the emergency team, a senior radiologist on the core team trains new users himself. We also implemented a help desk to give immediate support to users with problems, but it can’t really complain about much work. In fact, we had only a few technical difficulties with the SR system.

At the ECR you mentioned that reporting quality improved. Yes, First, because radiologists know their complex vocabulary, so immediately check whether a word was recognised correctly. A transcriptionist might make spelling errors, but radiologists no longer have to spell out difficult terms for them. Secondly, radiologists now dictate in a more structured and organised format, because they see their report directly on screen. This also adds to a final integrated system’s clarity and quality.

So why don’t all radiology departments do the same? Many RIS vendors don’t offer an integrated solution, which is why I recommend demanding the users avoid SR-isolated implementations on individual workstations; the experience will be disappointing. Instead, they should pressure their RIS providers to integrate SR in their system and help them to implement a structured reporting workflow that takes into account all involved applications - PACS, RIS, and speech recognition.

The all-in-one alarm and paging system could prevent incidents from becoming emergencies

The Personal Security Pager (PS-Pager), made by Bosch Security Systems, is an innovative mobile that houses two products: a personal alarm device and speech pager. Compact, lightweight, robust, comfortable and discreet to wear, the device is also as easy to handle as the messages are to read. The pager was designed for lone workers and those employed in high-risk environments, such as healthcare institutions and detention centres, where they might suddenly face unexpected or threatening situations. Using the PS-Pager, colleagues can be instantly alerted, as well as told the location where the alarm was activated.

It is also useful for various everyday tasks, for example to provide secure, versatile instant messaging for individuals and large groups. The pager has an internal antenna; reversible top display (ideal for hands-free reading in a pocket); an automatic scroll function; and easily recognisable icons. Alphanumeric paging calls are displayed on the 12-character top display and graphical front display, which presents three lines of 12 characters and gives a visual (plus audible) indication of low battery and/or an out-of-range area. The last 10 messages received are held in a memory stack and can be recalled when needed.

Each of the two manual alarms - emergency and assistance - is adjustable for loud or silent alerting of the emergency team. A built-in vibrator provides more discreet alerting when audible alerts are not desirable or are inadequate (e.g. noisy environments, night shifts or deaf-alert).

Radio frequency based location

The Digital Telephone Desktop 9850 can be accessed and operated using any touchtone telephone, mobile phones, PDA or car phone. The device answers calls automatically and physicians can record dictations wherever they are by making a simple telephone call. The user ID grants them individual access rights, while the telephone keypad gives full control of the unit. Dictations are stored on a memory card and can be uploaded automatically on a PC or server, ensuring central and secure file storage.

In combination with the digital dictation software SpeechExec, the Telephone Desktop offers numerous workflow options and routes voice files to specific locations such as a LAN, FTP server or an e-mail address for remote transcription.

The new Philips SpeechMike, with barcode scanner, further adds to workflow comfort in
France and Spain gain the first region-wide speech recognition systems

Speech recognition in healthcare has evolved from a departmental installation to a hospital-wide system. In an effort to optimise efficiency and patient service, Spain’s Castilla-La Mancha region and the Paris Hospital network AP-HP have become the first in Europe to introduce speech recognition to thousands of physicians and transcribers on a regional level.

Castilla-La Mancha’s regional healthcare service (SESCAM) will implement speech recognition in all its radiology departments. This introduction is within the framework of project ‘Ykonos’, an initiative supported by the European Union, which aims to develop and introduce a digital image-based diagnosis system. The third phase of the Ykonos project draws upon 8.5 million euros and includes the installation of equipment for the digitisation, storage and display ofradiology images, as well as a series of support services.

According to Ambrosio Rodriguez, IT director at SESCAM, Ykonos will enable physicians to share and access medical patient information without delay, ensuring faster and more efficient quality of care. By capturing this information through a speech recognition system, physicians have a powerful tool that improves clinical documentation, as it facilitates the immediate and complete availability of a patient’s documents.

The Paris hospital network Assistance Publique - Hôpitaux de Paris (AP-HP) will also implement speech recognition integrated with the digital dictation workflow solution DictaPlus 5. Gérard Canadas, managing director of DictaPlus France, said that, when the installation period ends in 2010, Paris will have the world’s most advanced document creation system in healthcare and also the world’s largest deployment of hospital-wide in-house speech recognition, involving over 12,000 physicians, 4,000 medical secretaries, and 39 hospitals.

AP-HP aims to achieve a significant drop in report turnaround time, as experienced by the Hôpital Européen Georges-Pompidou, which is also part of the network. Using speech recognition in its radiology department, the hospital has reduced the turnaround time for medical reports from four days to a few hours.

Robert Thornton, commercial director at Philips Speech Recognition explained: ‘Modern speech recognition technology provides industrial-grade features, specifically designed to facilitate large-scale implementations in the healthcare sector.’ He sees the current region-wide implementations as clear proof of the healthcare sector’s commitment to increased efficiency and accuracy of medical documentation for better quality of care and improved patient service.

Philips recently announced the new version of SpeechMagic - which a Frost and Sullivan market analysis reported as the most widely-used speech recognition technology in European healthcare. SpeechMagic 6.4 is expected to boost speech recognition accuracy and its scalability has been raised to up to 15,000 users per cluster. The software architecture enables fully centralised administration and management, facilitating integration with medical IT systems such as electronic patients records (EMR) and hospital information systems (HIS).

To enhance the transcription workflow, SpeechMagic calculates the amount of correction a recognised text will require and intelligently routes the document to the most suitable transcriber. The new version is believed to further accelerate the spread of speech recognition-based medical reporting, because it reflects the needs of physicians and hospital administrators for higher efficiency, security and flexibility in medical document creation. It will be launched for integration to the Philips partners end of 2006 and is expected to be first implemented in 2007.

SpeechMagic™
Industrial grade speech recognition

Supporting 23 languages, integrated by more than 200 healthcare IT companies and deployed in over 8,000 installations in 45 countries, SpeechMagic has established itself as the standard in healthcare speech recognition. Whether deployed in a departmental, hospital-wide or regional setting, SpeechMagic provides highest flexibility and reliability to increase the efficiency of healthcare documentation.

Learn more about the market and technology leader™ in European healthcare speech recognition.

Visit www.philips.com/speechrecognition.

*Frost&Sullivan, European Healthcare Speech Recognition Study, 2005
TEST IDENTIFIES PATIENTS WHO Benefit from TARGETED CANCER DRUGS

Breast cancer

Preventing recurrence: 13 larger doses of radiotherapy offer as good a protection as the international standard 25 smaller doses

Giving breast cancer patients fewer but larger doses of radiotherapy may be as safe and as effective at reducing the risk of cancer returning, according to Cancer Research UK trial results published in Lancet Oncology on 30 May.

Led by Professor John Yarnold, of The Institute of Cancer Research and The Royal Marsden NHS Foundation Trust, a team of researchers at The Royal Marsden NHS Foundation Trust, the Gloucestershire Oncology Centre, The Institute of Cancer Research and the University of Wisconsin, tested an experimental schedule of 13 larger doses of radiotherapy to the breast to prevent cancer from returning without harming the patient’s healthy tissues, ‘said Prof. Yarnold. ‘However, we will have to wait for the results of our further trials that have followed this study before we can confirm that the strategy is more effective than the standard treatment in the long term.

Conversely, patients identified unfavourably for the drugs also responded well to them when receiving them. This compares with 76 days average survival among patients identified as unfavourable candidates and who did not receive a targeted therapy doses, compared to 131 days for patients identified by Dr Weisenthal as unfavourable candidates was therefore similar regardless of whether or not they received the targeted drugs.

Comparing the whole cell profiling approach with other types of tests Dr Weisenthal said: ‘Over the past few years, research has focused on enormous efforts into genetic profiling as a way of predicting patient response to targeted therapies. However, no gene-based test as been described that can discriminate differing levels of activity occurring among different targeted therapy drugs. Nor can an associated whole cell test identify situations in which it is advantageous to combine a targeted therapy drug with other types of cancer drugs. So far, only whole profiling has demonstrated this critical ability. The reason this is critical is because there is a growing array of targeted drugs to choose from. Also, most patients today are treated not with a targeted therapy drug alone but rather with a combination of chemotherapeutic drugs. Therefore, the existing DNA and RNA tests do not reflect the way cancer medicine is actually practiced today.

Several new, targeted drugs have been introduced in the last few years and dozens more are on the horizon, he pointed out. These ‘smart’ drugs focus their effects on specific, identifiable processes occurring within cancer cells. The new drugs are highly promising in that they sometimes provide benefit to patients who have failed traditional chemotherapy. However, they do not work for everyone, they often have unwanted side effects, and they are all extremely expensive: some cost patients and insurance carriers $5,000 to $7,000 or more per month of treatment.

Patients, physicians, insurance carriers, and the FDA are all calling for the discovery of predictive tests that allow for rational and cost-effective use of these drugs.’

Weisenthal Cancer Group is a clinical cancer testing laboratory and research facility based in Huntington Beach, California. Details: www.weisenthal.org

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Pharmacodynamics

Intergroup Exemestane Study (IES) results

Currently, five years of treatment with tamoxifen is considered the ‘gold-standard’ treatment for postmenopausal women with breast cancer. This drug blocks oestrogen, which can help fuel the growth of tumours in some cases.

Now, instead of tamoxifen, many women are now given (orally) aromatase inhibitors following breast surgery. Aromatase inhibitors inhibit the enzyme aromatase, thus blocking oestrogen production.

According to the Intergroup Exemestane Study (IES) results, presented at the annual meeting of the American Society of Clinical Oncology in June, the drug aromasin, generally known as exemestane, and other aromatase inhibitors, cut the risk of death among some postmenopausal women with hormone-sensitive primary breast cancer by 17% compared with the standard tamoxifen treatment.

The UK-led five-year study involved over 4,700 postmenopausal women with early-stage hormone-sensitive breast cancer, who were disease-free after taking tamoxifen for two to three years. Around 50% in the group remained on tamoxifen, whilst the rest were given aromasin (2,372 women). Their progress was then tracked for about two-and-a-half years after treatment ended.

The researchers reported that the women who switched to aromasin had a 17% lower risk of dying from the disease than those who continued on tamoxifen. Deaths: 215 in the aromasin group; 251 in the tamoxifen group. In addition, the rate of tumours appearing in the opposite breast reduced by 44%.

PHARMACOLOGICALS

Intergroup Exemestane Study (IES) results

Previously-quoted NSCLC Survival as Function of Cell Death Assay Results (as reported prospectively)

Dr Larry Weisenthal: ‘One of the unique features of our study is that it was based on a large and appropriately sized retrospective real life study in the patient population being based on a prospective study, with laboratory assays and data analysis (to determine whether the best cut off (less) does after the fact’.

Radiotherapy affects bone marrow cells, lowering production of white blood cells. New research, published in The Journal of Gene Medicine, suggests that pre-treatment with a gene medicine ‘shield’ could defend healthy bone marrow cells. Using an in vitro technique, a specifically engineered, non-harmful virus was designed to infect only bone marrow cells. The virus was further modified into a special gene that carries information on how to make the protein superoxide dismutase 2 (SOD2) - one of the body’s defensive mechanisms that clears up harmful free radicals, such as those caused by radiation damage. Bone marrow cells modified by the virus produced higher levels of SOD2 than usual.

The protein appeared to provide the cells with added protection against radiation, reducing the risk of bone death. The researchers identified stronger doses to be used. ‘There is still a great deal of work to be done before we can start trying it in patients,’ said researcher Dr Thomas Southgate. ‘But the prospects are potentially very exciting.’

The team, based at the Paterson Institute for Cancer Research at the University of Manchester, hopes that eventually the discovery will yield pre-treatment protection.

Bone marrow cells given gene therapy ‘shield’
The fundamental role of inflammation in almost all disease processes has been increasingly recognised over several years. An inflammatory response is the body’s attempt to restore and maintain homeostasis after injury; it is integral to body defence. Inflammation is essentially beneficial. However, excessive or prolonged inflammation can be harmful. Researchers and physicians have been redefining heart disease, Alzheimer’s, autoimmune diseases and obesity as inflammatory disorders.

Recent research indicates that the immune system and inflammatory reactions are governed and regulated by powerful neuronal mediators derived from the central and peripheral nervous system. Knowledge of the immune system has expanded dramatically in the last decades, not least due to enormous developments in molecular biology and biotechnology. However, the impact of immunology on clinical medicine is still not balanced by progress in our understanding of the immune system and the potential of immuno-intervention. Nonetheless, clinical immunology has evolved recently into a discipline that contributes to medicine, not only by bringing insight into the pathogenesis of many diseases, but also by offering huge possibilities for diagnosis and treatment of those diseases.

Immunology has invaded almost every field of medicine as a clinically relevant discipline. As immunology develops so rapidly, the clinical immunologist should be the bridge between immunology and clinical medicine, and translate those developments into daily clinical practice.

Following the successful first National Symposium Inflammation 2004, organised by the Romanian Society of Laboratory Medicine, the 2nd symposium was held in Poiana Brasov, Brasov County, under the auspices of the Romanian Academy of Medical Sciences. About 130 European and North American experts - working in medical biochemistry, molecular biology, genetics, immunology, pharmacology, thrombosis and haemostasis, molecular medicine and other related branches - discussed the relationship between inflammation and inflammatory diseases and provide up-to-date developments in research, diagnoses and therapies; new technologies and standards in laboratory medicine; the role of evidence-based laboratory medicine; the quality of analytic testing and requirements for competent laboratories for testing. Over 50 scientific papers were presented. In addition, a workshop was held on the quantitative analysis of serum-free immunoglobulin light chains by automated immunosassay, demonstrating the most recent advances.

Discussions also covered problems in pathophysiology of inflammation, inflammation/infection, inflammatory diseases as risk or trigger factors for human ischaemic stroke, markers of oxidative stress and redox modification in chronic inflammation in end-stage renal disease, evaluation of endothelial dysfunction in humans, the brain’s inflammatory response following cerebral ischaemia, cell volume regulation in relation to ischaemia and cell proliferation, the effect of NO synthase and lipoxygenase blockade on oxidative stress and experimental shock, etc.

Conclusion: Investigations during the past five decades and advances in molecular biology, biochemistry, and genetics have contributed to the formation of modern concepts of immunobiology in inflammation. A CD covering the 2nd Symposium will be available shortly.
1st 64-slice combined PET-VCT scanners go to work

GREATER DIAGNOSTIC ACCURACY PREDICTED FOR CARDIOLOGY, ONCOLOGY AND NEUROLOGY

During the annual meeting of the Society of Nuclear Medicine, in Columbus, this June, Health care announced the first installations of its new Discovery VCT - described as 'the world's first true 64-slice combination position emission tomography and volumetric computed tomography (PET/CT) system'. This combines the Discovery Dimension PET platform, the high-speed high- and resolution provided by GE's volumetric CT with the high-sensitivity motion imaging capabilities of its Discovery PET system - a combination of technologies that should enable physicians to more accurately diagnose and identify heart disease and cancer and neurological disorders etc.

Along with an installation in the USA, GE installed Discovery VCT in the molecular imaging research institution Turku PET Centre, in Finland, where Professor Juhani Knuuti studied and worked. 'PET and VCT imaging allows linking the anatomical findings of coronary angiography with the myocardial perfusion function and metabolism. That may improve the accuracy of the assessment of myocardial viability. Moreover, the greatest potential of Discovery VCT lies in future applications of molecular imaging, matched with precise anatomical detail in imaging the coronary arteries we will be pursuing, using the tools provided in Discovery Dimension motion PET imaging capabilities.'

Daniela Zimmermann, of European Hospital, spoke with Professor Knuuti about the scanner and its predicted potential for cancer and cardiac diagnoses. 'Our previous PET-CT (Discovery STE) produced some very nice oncology applications - of course, the major indication of a PET-CT. Now, with a fast multi-slice PET-CT we can expand usage to cardiac applications, particularly for coronarory diseases,' Professor Knuuti explained.

'We understand it, PET scans nucleides moving through the body - a procedure that takes time, whether combined with a 16-slice or 64-slice CT. Does the number of CT slices really matter? 'Yes. With a 64-slice CT we can perform a high quality coronary angiography for about six hours. With the fast multi-slice PET-CT complete cardiac perfusion studies are fused with a high quality CTA in one single examination that lasts under 30 minutes. Moreover, the system presents us with the possibility of working on future applications, such as imaging vulnerable plagues and stem cells.'

'A 64-slice CT needs more than half an hour. 'The difference is that, with a 64-slice CT, you get the entire patient cardiac angiography in five heartbeats when the heart is in a stable phase, resulting in an uninvaded sharp image. With a 16- slice CT (or 32- slice CT) it takes longer and we might require more patient preparation, investigation, and the success rate is lower. Then the 64-slice CT volume is faced with the same problem. 'Yes. For perfusion studies you typically start with the CTA. For normal patients with a normal coronary angiogram - thanks to the high negative values, you can conclude that the patient has no coronary disease and stop here. But, very often when you study patients with more likelihood of cardiac disease you will get positive findings, such as calcified plaques, which are difficult to interpret. These findings required follow-up with a PET study, another cardiac investigation. Now we can immediately perform cardiac PET studies and investigate the coronary artery disorder with the lack of perfusion.'

In one single examination we can provide a complete assessment of cardiac functional and coronary artery. Commonly PET-CT is used in oncology, to locate tumours. Has the new scanner has changed that usage? 'The staging of cancer patients is the prime use, because you can find metastasis that will influence treatment decisions. Not much has changed in the treatment of advanced cancer applications, on both the PET and CT sides, interest in using the new scanner in oncology becomes more obvious.'

'Does this mean diagnoses are more accurate for oncology? 'Clearly, the Discovery VCT gives us more confidence in our diagnoses. Cardinal application in PET-CT will become increasingly important with the development of new PET agents that will help in characterising coronary plaques, for example. In the Turku PET Centre, we are testing a couple of new tracers to image inflamed plaques and likely to rupture the so-called vulnerable plaques.'Without this new, hybrid scanner, we would not be able to detect that rush.'

German Congress of Radiology

Berlin became the venue for the German Congress of Radiology this May, for the second time, exhibiting showcased products on 4,900 square metres, and the event attracted 25,000 visitors from the fields of oncology, cardiology and radiodiagnostic examination.

'State-of-the-art CT produced excellent surgical and radiolog- ical outcomes,' said Professor Maximilian Reiser, President of the German Roentgen Society. 'During the ECR 2006 Congress President Prof. Reinhard Loose. 1,000 professionals attended semi- nars on vascular surgery, which featured excellent surgical and radiologi- cal contributions. The President of Professor Don Resnick's X-ray presentation on knee injuries.

'Speaking of the future of radiology, Professor Maximilian Reiser, President of the German Roentgen Society, said that, driven by the progress in equip- ment and computer technology, radiolog- ical procedures are on the move and will play an ever increasing role in healthcare. The development of the first two-tube CT scanner marks another quantum leap in computed tomog- raphy. He pointed out that the scanners allow whole-body scans with high field strength. Quick and precise diagnoses are critical above all in emer- gency medicine. Treatment of accident victims can be accelerated considerably with multi-detector CTs. 'Up to now we had to base our diagnoses on the results of different examinations. Today we can diagnose a patient in a single examination.'

Whole-body images in MRI and CT hybrid systems such as PET/CT already significantly contribute to therapy planning for systemic illnesses. In the future, these procedures could be extended to patients for selected diseases such as diabetes. In therapy control they are already well accepted. Computed tomography (CT) and magnetic resonance (MR) imaging will soon be regarded as essential parts of therapy planning.

Professor Don Resnick's X-ray presentation on knee injuries.

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Reducing anesthetic agent costs by up to 48% with Dräger Medical’s Target Controlled Anesthesia (TCA).

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* Prof. M. Struys, Gent, Poster Presentation, BJA 94 (3); 306 – 317 (2005)

** TCA is not yet available commercially in the US.

CERTIFIED WOUND MANAGEMENT

Registered nurse, Gerhard Kammerlander DGKP, founder and owner of the Academy for Wound Management Certification Kammerlander WFI, discusses a course that culminates in the copyrighted qualification 'Certified Wound Manager', as well as its European recognition and value

"The certification offered by the academy and the Healthcare Academy of Styria/Academy of the Austrian Care Association" is based on paragraphs 63 and 64 of the Austrian Healthcare Act, under which healthcare professionals are required to expand the knowledge they acquired during training at least every five years, through seminars that cover a minimum of 40 hours (para. 63 Abs. (1) S. 2. GuKG). According to para. 64 GuKG, healthcare professionals are entitled to participate in continuing education for at least four weeks (160 hours analogous to the continuing education requirement). The seminars must conclude with an examination and after passing this, the student can document this specialisation by adding the designation in parenthesis to his/her professional title (para. 12 GuKG).

The specialisation ‘Certified Wound Management’ (ZWM) - a title registered with the European Trademarks Office (OAMI) in Alicante - is recognised by the Austrian GuKG, which is also valid in Switzerland. Members of any healthcare profession to which wound management is relevant - including physicians - can acquire the exclusive title Weitergebildet nach ZWM by passing the examination only offered by The Academy of Wound Management Kammerlander-WFI. This procedure is entirely justified because the course - which was basically established in 1995 and has been ISO 9001:2000-certified for three years - sets high standards for both participants and teachers. The number of hours devoted to theory and practical training far exceeds the legal requirements.

In the future, the structure will be designed according to the curriculum and guidelines of the German Society for Wound Treatment (DGfW) based in Giessen, Germany. Additionally, this specialisation will soon lead to a BA degree at the Thames Valley University, London.

The certificate falls under the Council Directive of 27/6/1977 concerning the mutual recognition of diplomas, certificates and other evidence of the formal qualifications of nurses responsible for general care, including measures to facilitate the effective exercise of the right of establishment and freedom to provide services (77/452/EEC) and an amendment to the EU-Switzerland Agreement on the Free Movement of Persons. Whether the certification is recognised as a national diploma depends on the question of whether the individual country has introduced a specialisation in wound management. This issue could be discussed by the initiators of the 9. European Pressure Advisory Panel (EPUAP) from 31/8/2006 to 2/9/2006, in Berlin and be formulated as an international demand at the 16th Annual Meeting.

Course details: www.wfi.ch
Dr Thomas Aigner

WO UN D MANAGEMENT

Clinical success with autologous thrombocyte gel transfer*

nonetheless do not heal are a common

hospital, Austria

the Department of Plastic, Aesthetic and

surgeon Thomas Aigner, and F Weyer, of

20 EUROPEAN HOSPITAL

turn to move the development of the

conference - all this without stressing its

page and the organisation of next year's

the participants, including a WII web

infrastructure for further co-operation of

question, including: What advantages

does this diversity offer? How can we

work together in the future? What

exactly is an infection? What symptoms

indicate an infection? What therapies are

available and which is the most

recognised barrier to healing in full & partial thickness wounds.

Acticoad treatments rapidly kill a broad spectrum of bacteria in as little as 30 minutes (in-vitro) and are effective for at least three days. The Acticoad Range of dressings therefore help to protect a wound site from bacterial contamination to assist faster healing.

The latest addition to this offering is Acticoad Moisture Control, an absorbent antimicrobial dressing that provides antimicrobial protection synonymous with Acticoad & Silver's nanocrystalline+ silver, which can be left in place for up to seven days for cost effective wound management.*

Results - Within, at most, four weeks each patient's wound showed clear granu- lation and epithelialisation. After three months, in 60% of patients the wounds had entirely closed. After application of the autologous thrombocyte gel healing and epithelisation visibly accelerated and exudations, as well as pain, were notice- ably reduced. This led to a reduction in the number of dressings that could have been attributed to the autologous substance.

ASCOT-100, a study currently no litera- ture that assesses this new procedure. Therefore, it needs evaluation in clinical studies and indications should be defined both in terms of the optimal dosage and simple handling of this gel, which is now established procedure in our hospital for the same wounds.
BACTERIA DIE ON STAINLESS STEEL

To establish which materials allow pathogens to survive best, micro-organisms such as bacteria living in wet and dry environments, pathogenic fungi and the bacterium Escherichia coli, have been studied during comparative tests undertaken at the Hygiene Institute of the University of Leipzig. Led by Professor Wolfgang Wildfuhr and Dr Annerose Seidel, the researchers discovered that the survival rate of the bacteria under investigation was twice as high on plastics as on stainless steel or glass. The 99.21% mortality rate of E-coli bacteria - after 120 minutes on stainless steel - was particularly high compared with the other materials.

Markus Braun, Chairman of the German Healthcare Group, and a senior manager at Meiko responsible for hospital hygiene products (the ‘Top-Line’ range of bed-pan cleaners), said he is evidently convinced that stainless steel should be more widely used in all areas where large numbers of people are cared for, where inevitably human excreta must be removed. ‘Stainless steel has further advantages,’ he added. ‘It is easy to clean and easy to recycle when its useful life is over.’

Details: www.meiko.de

WHO’S SETTING THE STANDARD IN PATIENT INTERACTIVE VENTILATION?

NATURALLY MAQUET WITH SERVO-i

The human body is a remarkable machine, but sometimes nature needs a helping hand. At MAQUET we see SERVO-i as a natural extension of the lungs. I have been working with the SERVO ventilator for more than 20 years. During that time the needs of the patient have always driven development.

The breakthroughs we have made have pushed the boundaries of mechanical ventilation, from lung-protective strategies such as alveolar recruitment to spontaneous breathing. We aim to wean patients at the first opportunity because it is in their best interests.

I expect SERVO-i to offer the greatest sensitivity and fastest response time to patients’ ventilatory needs. My colleagues and I are constantly striving to improve the synchrony between ventilator and patient.

Anders Vaas, System Architect/ Technical Project Manager


EUROPEAN HOSPITAL Vol 15 Issue 3/06 21
Cleaning up the confusion over hand hygiene

The world's biggest hospital

According to the research results, drastically reduced in an age of risk infection worldwide, this is decisive news.'

Metsä Tissue adds that it always provides a range of well-suited dispensers to guarantee user-friendly and maintenance-free usage. In addition, the user should be able to choose a unit that suits and accentuates the surroundings. So, environmental hygiene and econ-
yomy are not reduced. One-stop paper handkerchief dispensers are touch-free; dispense a folded, single sheet and are easy to clean. The Katrina collection and a metal version are available in matte stainless steel or high quality white.

The Metsä paper handkerchief quality has been dermatologically tested and was also successful in an independent hypo-allergen test, the firm adds. 'Therefore the products are suitable also for people with sensitive skin' - a prerequisite for all users, because only acceptance will keep hands clean, even in a healthcare environment. Details: www.metsatissue.com

The Japanese firm Saraya, which for 50 years has successfully manufactured hand hygiene products and programmes for healthcare, facility management, and the food industry, has launched a touchless hand disinfection unit in Europe. According to Mr Toru Woert, General Manager, Saraya Europe, the company has already sold over 100,000 of these units in Asia & the USA.

The battery-powered Sensor Dispenser UD-7000, which can be installed to stand or hang anywhere, has infrared sensors that recognise hands then release an adjustable volume of disinfectant spray that hits nails and cuticles - areas where most bacteria could be.

The alcohol-based Saraya Hand & Skin Disinfectant, which is suitable for use in hospitals and other health care facilities, is a powerful disinfectant with a pH of 6.5, which is suitable for skin disinfection. It is also suitable for use in hospitals and other health care facilities. Its main active ingredients are ethyl alcohol (90%) and water (10%).

The company has also introduced a new handkerchief range of touchless dispensers that are suitable for use in hospitals and other health care facilities. The new handkerchief range, which is designed to be hygienic and easy to use, has been manufactured in Italy by Tecnimed srl. The new handkerchief range includes a range of touchless dispensers that are suitable for use in hospitals and other health care facilities. These dispensers are designed to be hygienic and easy to use, and have been manufactured in Italy by Tecnimed srl.

As a result of the research, the firm has estimated a potential financial saving from its use in a hospital of a maximum of 8,000 per annum. Details: www.metsatissue.com
Danube meets low to very large laundry requirements

France - Danube, one of the world’s biggest manufacturers of both flat-work dryer ironers, barrier washers, and tumble dryers, as well as front-loading washer extractors for the OPL market, has distributors in over 52 countries. The firm is now seeking to reinforce its international position in the laundry sector by signing agreements with even more distributors. ‘Those prepared to be proactive will be able to offer quality, innovative and competitive prices to OPL markets,’ the company emphasises, adding that it will fully invest to support distributors so they can use their local knowledge and contacts to the fullest to proactively market and promote these branded products as well as provide back-up for customers. ‘We are striving for a truly competitive market, has distributors in over 52 countries. The firm is now seeking to reinforce its international position in the laundry sector by signing agreements with even more distributors. ‘Those prepared to be proactive will be able to offer quality, innovation and competitive prices to OPL markets,’ the company emphasises, adding that it will fully invest to support distributors so they can use their local knowledge and contacts to the fullest to proactively market and promote these branded products as well as provide back-up for customers. ‘We are striving for a truly competitive market.’

The 15 kg medical pass thru washer, the Medical 15, can play a key role in preventing nosocomial infections because the dual opposed doors are separated by a sanitised partition, avoiding cross contamination. Danube reports: ‘With the Medical 15, the clinic and nursing home will have high tech quality at a very competitive price, because the cost of a Medical 15 is very close to the price of a basic front load washer extractor.’

Price throughout is extremely competitive,’ the company adds. Distributor’s service staff will be fully trained by a team of Danube’s own engineers (the company is a registered training centre in France). These engineers can also help with the commissioning of equipment where needed, e.g. big installations. Although the company’s full range of laundry equipment includes front loading washers from 6 to 55 kg, side loading washers (including gas heated washers) from 27 to 67 kg, tumble dryers from 6 to 65 kg and barrier washers from 15 to 67 kg. Finishing equipment includes dryer units with widths from 1.4 m to 3.2 m with cylinder diameters of 200 mm, 320 mm and 500 mm, and optional feeders, folders, cross folders and stackers. ‘The focus for distributors will be on washers and dryers – where the volume demand lies,’ Danube adds. State-of-the-art communication Videoconferences can be held with suppliers and sub-contractors, which also allows face-to-face advice for service engineers.

The website www.danube-international.com provides distributors with technical help in all areas, including spills, safety aspects and other data, and provides maintenance instructions, technical drawings, electrical diagrams, interactive 3D drawings and more. Design and sizing of laundries is another web service.

Certifications
The company has ISO 9001:2000 quality control approval. Products also carry the required country approvals, such as CE, CSA and ETL for the USA, etc.

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