# Focus on IT and administrators' needs

*By Brenda Marsh*

This year, *EUROPEAN HOSPITAL* has produced three separate issues for this, the world's largest medical trade fair, because medical developments and therefore exhibits continue to expand so we decided to take a divisional approach. In this issue, we highlight administrative and clinical organisational needs, as well as the efforts of IT specialist firms to meet their IT wants and wishes.

Those who have visited the *MEDICA meet.IT* section will already know its value. Hard- and software manufacturers are displaying and demonstrating their solutions and successes in this exciting but often difficult to tackle communications science. Among their exhibits are systems to help speed up or control workflow for hospital administration staff and medical teams, laboratory workers and, further up the scale, are the complex imaging systems and audio/visual recording equipment that aim to provide superb quality, while also ensuring data are readily and correctly gained, accessible, stored, and combined as far as possible, within today's advancement towards the electronic patient record and much else.

While much has been achieved, much remains to be learned for the future use of electronic communications in our hospitals.

To this end, the VHitG (Association of Manufacturers of IT Solutions for Healthcare) and Messe Dusseldorf again organised *MEDICA meet.IT – The Forum*. 'This concentrates on the presentation of products made by our member companies,' Dr Wolrad Rube, Chairman of the VhitG, explained. 'We are offering companies the chance to present themselves through a user or technical talk within the framework of the Forum.'

The forum focus in Hall 15:
● Health delivery control (e.g. patient management; sector-overlapping medical care; treatment directions; workflow support)
● IT for nursing care (e.g. diagnostics and care services records; case management; hospital organisation)
● IT for general practitioners (e.g. telematic applications in medical practices; introduction of the electronic health card)
● Interoperability/inter-sector communication.

Also for the first time, a joint presentation is being given on hospital information systems (HIS) and medical practice. And, of course, there's a broad array of other communications products, such as nurse-calling systems, dictation equipment and much else, in Hall 14.
Further details: www.vhitg.de and www.medica.de
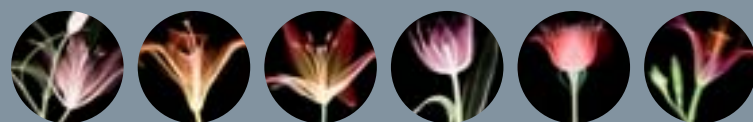
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**Medica 2006**
November 15-18th, Düsseldorf
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Medical Solutions from Sony

Despite budgetary and other pressures, hospitals are now perceived as 'businesses' that should raise overall quality standards in order to attract new 'clients' – the patients. The 3M Health Information software portfolio aims to support this quality drive by enabling hospitals to easily cull quality-relevant information from routinely recorded data sets. This September, 3M held a two-day event in Neuss, Germany, to discuss DRGs; the role of quality management as a strategic growth factor in the healthcare industry; how strategic quality management could be implemented in everyday clinical practice and how DRGs and quality management can be linked. In discussion with *Denise Hennig*, of *European Hospital*, **Marvin K Johnson**, International Manager for 3M Health Information Systems Division, **Yves Delcourte**, Business Manager Health Information Systems, Europe, and **Dr Thilo Köpfer**, 3M Health Information Systems Germany, outlined their concepts and international experiences in this field

# The 3M Healthcare Forum 2006

## DRG and quality management as a success factor in hospital management

From left: Denise Hennig, Marvin K Johnson, Dr Thilo Köpfer and Yves Delcourte

**DH**: *The introduction of DRG – with concomitant software tools – has enabled data analysis of every hospital department, in terms of costs, benefits, and quality. What is your experience with the reimbursement system?*

**Marvin Johnson:** Initially the system was received with strong reservations. Whilst DRGs are often perceived as a limitation, they also allow different aspects of healthcare to be measured. Hospitals must work economically. With the help of our analytical tools they can identify potentially avoidable complications and remedy them efficiently. With the DRG system we can improve a hospital's ability to manage costs and quality. In the US, for example, 30% of costs are incurred due to poor quality. Our software tools allow us to measure a wealth of hospital processes and results. With these data we can chart and analyse every department and identify sources of inefficiency that, in turn, can be remedied. As a result, costs are reduced, profits generated and the balance between quality and costs can be maintained.

*In Germany, it doesn't appear quite so simple to translate DRGs into profit. On the basis of DRG data, at the beginning of each year a hospital negotiates an individual budget with the health insurers. If, at that year's end, the hospital has indeed saved money, they encounter reimbursement problems.*

**Dr Thilo Köpfer**: The USA's healthcare system is different from that in Germany. The coin has two sides – one is the reimbursement a hospital receives from insurers, the other is its actual cost, which the hospital must manage. In Germany the discussion about budgeting versus a performance driven reimbursement system is not finished. On the basis of DRG data, hospital management should negotiate with the insurers a budget that reflects its medical performance. If the hospital is able to reduce cost it should benefit from those profits.

*And information management systems help in this?*

**TK**: Yes. Our billing system provides a comprehensive profile of a patient and his/her medical history. DRG case payments are based on averages computed from different patient data sets, which contain information on cases with – or without – complications.

**Yves Delcourte**: We have different DRG systems in different countries. What Germany is implementing is pretty unique. This is the only country in Europe where the financial impact on hospitals is so dependant on the DRG; that dependency is 100 percent. In other countries, for example Belgium, the DRGs only account for part of the hospital budget. I recommend separation of the funding system – your reimbursement system - from the classification. The incentive for hospitals to improve quality of care, and decrease costs, is seen everywhere. The driver could be different and the tools to manage the situation also might be different. From our perspective, we position the DRG as a good foundation to manage the situation, which means you don't have to have a specific DRG system for an entire hospital – you can have different systems, one for funding and another for quality. We saw this happen in Belgium and see it happening in Italy and Spain. The most sophisticated DRG system is the APR system (all-patient refined) because it provides risk adjustment

*Does that mean physicians will become case managers in the future? What is the advantage of APR?*

**YD**: The advantage lies in the risk-adjustment within patient groups, which makes the cost-spread more equitable. The grouping system computes a case payment based on diagnosis-, treatment- and demographic information. The coding software facilitates classification, which means it saves time. Our software tools take risk management into account. As an example, data analysis can show to the hospital manager how the costs are spread over the various departments. Moreover, it allows different hospitals to be compared in terms of performance taking into account the severity of illness of the patients. APR's make it possible to compare apples with apples. Our tools help hospitals to obtain their necessary data for quality management, costs management and efficiency. In short, we provide the basis for an individual hospital to be - and remain - successful in the market. Further details: www.mmm.com

**3M is at MEDICA.
Hall 15, booth B33**

## CONGRESSES

**10:00 – 13:00 hrs. Ground floor, room 01**
*Modern Imaging of the heart*
Moderation: Prof Hans Martin Hoffmeister (Solingen)
Organiser: Berufsverband Deutscher

*Internisten (BDI)/Section cardiology, echocardiography*: PD Dr Roger Marx (Essen)

*Magnetic resonance imaging*: Prof Udo Sechtem, Stuttgart

*Computed tomography*: Prof Sigmund Silber (Munich)

*Nuclear cardiology*: Prof Jürgen vom Dahl (Mönchengladbach)

**10:00 – 13:00 hrs. 1ˢᵗ floor, room 6**
*The digital hospital*
Moderation: Dr phil. Helga Kirchner (Düsseldorf)
Prof Marcus Siebolds (Köln)

**10:00 – 13:00 hrs. Second floor, room 28**
*Emergencies in older people*
Moderation: Prof Peter Sefrin, Wurzburg

*Particularities for the treatment of older people*:
Dr Dieter Lüttje (Osnabruck)

*Traumatic emergencies*: Dr Daniela Langner (Hanover)

*Neurological & psychiatric emergencies*:
Dr Michael Schwab (Wurzburg)

*Reanimation in older people*: Prof Peter Sefrin (Wurzburg)

**14.30 – 17.30 hrs. 1ˢᵗ floor, room 5**

*Co-operations in healthcare – current developments*
Moderation: RA Dr Bernd Halbe (Cologne)
Organiser: Dr Halbe Rechtsanwälte (Köln)
Introduction: RA Dr Bernd Halbe (Köln)
RA Dr Bernd Halbe (Köln)

*Questions on employment laws and regulations affecting new types of healthcare*:
RA Sven Rothfuß (Cologne)
Operational and management aspects – DRG, MVZ, IV, direct contracts, outpatient surgery – how will the hospital of the future be financed?: Prof Harald Schmitz (Düsseldorf)

# Networking cardiovascular imaging

*The digitisation of patient data and networking of workstations and departments are important topics at this year's MEDICA. There is no lack of IT and software solutions for putting digitisation and networks into practice; however, many hospitals wonder how the implementation will work in practice and whether the investment will prove successful.*

At the 6th eHealth Forum, held in Bonn this October, **Dr Jochen Textor**, Head of the Department for Radiology, Interventional Radiology and Neuroradiology of the Cardiovascular Centre at the Gemeinschafts hospital, Bonn, reported interdisciplinary developments that originated from the separate departments of radiology, cardiology and vascular surgery. Asked about this, by Meike Lerner, he explained:

"Normally, several different medical disciplines are involved in the treatment of cardiovascular disease patients. Beginning with the general practitioner's input, information must be focused and transparent across different medical fields and the care process.

Hospitals can achieve this by setting up electronic patient records (EPR) as well as digital image evaluation and distribution of all images taken inside or beyond the hospital.

The development of structured treatment procedures is also very important for setting up centralised treatment facilities. This means the development of individual specialist departments right down to work in areas such as disease management.

Such a development, which starts with networking individual work stations and individual departments, then culminates in networking individual hospitals, cannot be achieved in a day. The EPR, for example, was introduced at the Gemeinschafts hospital in 2002, to make patients' files available to doctors on all wards at all times. The EPR contains all diagnoses, scheduled examinations, laboratory results and doctor's letters and everything is linked with accounting and controlling systems. Two years later we started digitalising radiology. Since then we have been storing all images taken during examinations centrally on a server and send them simultaneously to all relevant work-stations where

they are required, such as to the radiology department, as well as wards and operating theatres.

A year after that we then developed an image archiving and communication system together with the Rheinische hospital. In the meantime, 40 other cooperative partners have become linked to this system. All patient data and images can be accessed from all locations - provided the doctor has been authorised in the system. The advantages are obvious: All images, results and diagnoses are available independent of time and location. This means that several doctors in different hospitals can simultaneously view images and results. The integration of imaging procedures into the system has significantly eased and improved the

# Software automatically converts data

**The DICOM Attribute Converter is a software module that solves even complex communication problems between DICOM devices, such as imaging equipment, archives and workstations. Placed between two devices it observes their communication. Messages are received, analysed, if necessary filtered or modified, then sent to the communication partner. This ensures the proper interpretation of all message elements, its developer Softgate GmbH reports. 'The rules for the required modifications are defined in a configuration file. The original software of the devices does not need to be**

changed, which saves time and cost for implementing the DICOM Attribute Converter and does not affect quality assurance and regulatory authority approvals of the devices.'

The converter is transparent to the communicating devices. It processes received messages online, almost without slow down of the communication, the company adds. 'The available functions cover numeric and string operations, filters, comparison, as well as auto-generation of messages.'

The converter runs on a stand alone PC in the DICOM network, thus solving existing problems in the DICOM connectivity between

# NEW MANAGEMENT

### Heads of departments 'sell' time and space, nurses 'sell' beds

Rapidly changing conditions, such as doctors' strikes, which affect patient throughput, require very quick reactions from hospital management. Management information systems have helped greatly in such circumstances, and now a totally new variation of the traditional IT system is currently making its way into the organisational processes of several hospitals, which aims to support the extremely complex reorganisation of clinical and administrative processes as well as improve cost management.

Hospital directors know how much a hospital will be paid by their insurance company for a patient suffering a stroke, a heart attack or cancer. How much these patients will actually cost the hospital, however, remains to be

seen. It is, however, becoming more and more important that hospital directors have this information at their fingertips. The introduction of flat-rate remuneration in hospitals means that an economic dimension is now added to the hospitals' medical and care duties, with modern IT becoming indispensable in itemising the costs or each patient's care.

**A three-factor modelling system**

Three factors are involved: case cost, insurer's reimbursement and the introduction of flat-rate remunerations. Therefore, an IT system is needed to dynamically link all three factors in multiple dimensions - an integrated database system, a 'data warehouse', capable of performing the extraordinary: modelling the costs of each

patient's hospital stay as a closed loop - accurately and in real-time. To do this, the hospital's existing data sources are used and are now linked dynamically. Hospitals therefore need multi-dimensional databases that will permit any number of parameter combinations.

The Deggendorf county hospital is among the first German hospitals to such an IT system to change its processes and determine the potential for cost-savings within its structures. Using simulation processes comparable with those in the virtual cockpit of a flight simulator, Deggendorf hospital staff entered 'What if' scenarios into the system - and found solutions.

The system proved its worth at management level when it helped the head of the Neurosurgery department to convert his department's one million euros deficit into a million euros surplus within two years.

**Internal cost allocation**

Deggendorf decided to define clear areas of responsibility in decen-

*Questions on reimbursement for outpatient treatment with the introduction of new healthcare structures*:
RA Stefan Kallenberg (Cologne)

*Tax aspects of new forms of co-operations and outsourcing of central supply areas within the hospital*:
Dipl Kfm Thomas Karch (Krefeld)

**14:30 – 17:30 hrs. 1ˢᵗ floor, room 16**

*New imaging procedures in preventive medicine*
Moderation: Prof Rainer Seibel, Mulheim/R
Prevention with the Dual Source CT: Prof Rainer M. Seibel (Mülheim)

*New treatment procedures for intracranial vascular obliteration*: Prof Ferdinand Brassel (Duisburg)

*Endoscopy in the prevention of colon cancer*:
Prof Guido Gerken (Essen)

*Results of the Heinz Nixdorf RECALL-Study*:
Prof Raimund Erbel (Essen)

*Consequences from the Heinz Nixdorf RECALL-Study for prevention*: PD Dr Stefan Möhlenkamp (Essen)

**11:00 hrs. Medica meet IT. Hall 15, stand G 48**
*Interoperability. IT-strategies in integrated care – reality & vision*
Dr Markus Müschenich, Medizinischer Vorstand, Verein zur Errichtung Evangelischer Krankenhäuser e.V.; Ulrike Schuster, Beraterin Medizinsysteme, T-Systems Enterprise Services GmbH

**12:30 hrs**
*Interoperability. Networking in healthcare – E-health in lower Austria – Connecting, networking, simplifying*
Gottfried Heider, Project Manager i.s.h.med, Internat. CC health Wien, T-Systems Austria GesmbH

## PRESS BRIEFINGS

**14.00 hrs. North entrance, room 201**

*TNI – Breathing therapy without a mask*
TNI Medical GmbH (Freiburg)

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diagnostic process. There is an added advantage for patients, in that there is no need for repeat examinations, and images now cannot get lost.

All in all, we are looking at a significant time saving, and therefore cost saving, for everyone involved. The processes between different specialist departments and different hospitals are substantially simplified. This made digitisation a significant building block in the formation of the interdepartmental and 'interhospital' Cardiovascular Centre at the Gemeinschafts hospital Bonn, which was recognised and certified by the German Society for Vascular Surgery in September 2006. The investment costs are definitely justified."

**Dr Jochen Textor**

# between devices

two devices, and for imaging equipment for which updates are no longer available, or only with difficulty. 'Alternatively,' the firm points out, 'the DICOM Attribute Converter may be preventatively placed in imaging devices by the manufacturer to have an easy to use tool for later problem solving.' Details: www.soft-gate.de or Dr Florian Höpfl: phone +49 9131 81270-64. medtech@soft-gate.de

**MEDICA: Hall 3, stand 3E83**

tralised structures. Each head of department is assigned economic responsibility for his/her department, thus becoming almost self-sufficient with the department's budget and far-reaching management responsibilities.

Nurses also 'sell' beds to the surgical departments by the day. The department head 'rents' beds from the head of the nursing station, thus eliminating the need for a dedicated surgical ward and enabling processes to run more smoothly.

Operating and anaesthesia time is purchased from the head of the surgical unit, and laboratory and radiology services are also accounted for internally. Clerical workers are paid by the number of letters produced; case managers according to their number of patients. The basic principle: those in responsible positions are assigned budgets within which they can work independently.

Without this new IT technology, this process would involve a great many delays.

**Reaching for a global network**

# 1ˢᵗ World of Health IT Exhibition and Conference

The World of health IT (WHIT) conference, the first event of its kind, drew a hundred vendors and around 1,500 visitors to Geneva, including leaders and experts in health IT from Europe, the Middle East and Africa (EMEA), Guido Gebhardt reports.

Addressing the perspectives of clinicians, directors and other healthcare professionals, the event provided educational sessions, trade exhibits, best practice exchange networking sessions and other professional development opportunities. It is designed to bridge the gap between public policy and the realities of day-to-day implementation.

To quote the European Commission: 'eHealth is all about better healthcare for less money and forms, the major challenge facing Europe's healthcare systems'. eHealth is already being flagged up as potentially the third largest industry in the healthcare sector and looks set to account for up to 5% of the EU´s healthcare budget by 2010.

Today, information and communication technologies are used by the full range of healthcare professionals. But among the challenges facing the industry are how to gain the best return on investment in a rapidly changing workplace, how to bring members of the healthcare community together – not just in Europe, but in the Middle East and Africa – to discuss best practice, and how to put users in touch with eHealth technology vendors so the latter can meet the needs of the former.

Backed by the EC, the WHO, and others, including Intel, Microsoft, Oracle, SAP, Siemens, Philips, Agfa and Kodak, the event showcased the cutting edge of eHealth technology.

WHIT is not designed to give information on, for example, digitising a hospital. It takes a far more pan-European or even worldwide perspective, to set up a global eHealthcare infrastructure for an international exchange of patient data, or bringing health information to people with no internet access. So the political topics might not be of interest for hospital CEOs. The WHIT appears more of a congress for healthcare lobbyists and strategists than of healthcare engineering.

CEOs are mainly interested in solutions tailored to the needs of their home country. And this is the big difference from the USA's view of HIMSS: The variety of languages and systems in Europe is too large, here one system doesn't fit all.

Close to 2,000 people attended the conference and exhibition, which featured 120 speakers including Baroness Emma Nicholson a Senior Member of the European Parliament, Michael Bainbridge of the UK National Health Service, Claudio Beretta, general director of health for the Lombardy region of Italy, Maria Jesus Montero, minister of health for the Andalusia region and the Kuwaiti health minister, Sheik Ahmad Al-Abdullah Al Ahmad Al Sabah.

**The University Hospitals Virgen del Rocío**

At the event, European healthcare organisations at the event surprised delegates with a number of high-profile IT projects aimed at increasing efficiency and improving patient care. In one presentation, Jaime Nieto Cervera, of the University Hospitals Virgen del Rocío, in Spain, demonstrated how his organisation had reduced report turnaround time by 50% by integrating speech recognition with the Electronic Patient Record. Since 2002, the hospitals have worked with speech recognition linked to the elaboration of reports in different specialities. 'In 2004, the idea emerged to develop and apply this technology to electronic records, to make its use accessible to professionals and improve patient relationships,' he explained. The main goal was to reduce the interaction time of physicians with IT systems. The hospitals also aimed to improve the information quality and achieve a considerable growth in understanding electronic patient records.

Financed by the Health Department of the Andalucian government, the project is powered by the speech recognition technology *SpeechMagic* from Philips. Focusing not only on transforming speech to text, but also on understanding voice commands, clinicians were put in a position to use their 'natural resource' to interact with the IT system. This feature, called Command and Control, differentiates dictation text from navigation commands. For example, by using macros, saying the words 'normal abdomen' would automatically type the complete description of a normal abdomen into the Electronic Patient Record, thus eliminating the need for repetition of a standard description during patient examination.

As a result of fastened and simplified documentation, physicians can direct most of their attention to the patient, Jaime Nieto Cervera said. Errors resulting from passing on information between professionals verbally, or in hand-written notes, have been eliminated. Also, due to fast availability and accessibility of medical information, treatment can continue more quickly.

## Also in Switzerland....

Along with most European countries, the Swiss healthcare system is undergoing change. Necessary investments are estimated to reach c. 55 billion francs (around 35 billion euros). At its 6th Swiss eHealthcare Congress held in Nottwill this September, received over 1,800 visitors and 95 companies showed their products. Although a Swiss event, it also attracted visitors from Germany and Austria. Over the last six years, the congress has grown from a small, specialised event to the largest interdisciplinary congress in the Swiss healthcare system.

In 34 symposiums, 161 national and international speakers gave insights into eHealth in Switzerland and the German-speaking areas of Europe, reporting on their own experiences with IT or, in the case of representatives from medical industries, about new trends, product developments and services.

The 7th eHealthcare.ch will be held at the GZI Congress Centre, in Nottwil, Lucerne from 27-28 September 2007.

Details: www.ehealthcare.ch

**2006@MEDICA**

# Electronic patient records

## Autonomy for the people

**UK** – The Health Minister Lord Warner has set out key details of what patients and the public can expect from the National Health Service (NHS) Care Records Service (electronic patient records). He announced that a Public Information Programme, with national roadshows and an explanatory leaflet, are to be sent to most households in England. 'Patients will be informed in advance about new ways in which their information will be held and shared, and will be told they have the right to dissent - or opt out - of having information shared,' he said. 'If they do not opt out, they will be deemed to have given implied consent to the sharing of their information, under strict controls between those legitimately treating them.' He also pointed out that they will be able to see their summary record and note any issues they wish to on an electronic healthspace.

The NHS Care Records Service will enable detailed patient records to be held locally, with a summary of the detailed record available nationally, so rigorous safeguards are being emplaced to protect patient confidentiality. Anyone who wants to access a record that identifies a patient will need a smartcard and passcode (chip and pin). The level of information that is seen will be determined by the role of the staff member. There will also be an audit trail of access to records and, in the caser of inappropriate access, alerts will be triggered.

A special NHS Care Records Taskforce has been set up to address concerns around electronic patients records.

Regarding the publication *NHS Care Record Guarantee for England*, Lord Warner said that it gives weight to people's autonomy over data sharing and control of what is shared, but balances this with clinicians' needs to keep good records, and for anonymised information to be used for audit, management and research.

On the subject of the NHS National Programme for IT(NPfIT), of which the NHS Care Records Service is a part, he said: 'The Government is committed to ensuring that NPfIT is fully implemented and delivered. We are not going to be deflected by naysayers from any quarter. We recognise that more needs to be done on articulating the benefits that the Programme will bring to patients and also to NHS staff.'

However, he emphasised that he does not support the 23 academics who have asked the House of Commons Health Select Committee to commission a review of NPfITs technical architecture: 'I want the programme's management and suppliers to concentrate on implementation, and not be diverted by attending to another review.'

Sony holds an increasingly important position within healthcare. The firm's products for medical professionals include diagnostic film imagers and video printers, recorders, LCD monitors and cameras and even complete medical imaging networks - all seamlessly integrating into the hospital environment, the company reports. 'Sony has a long heritage in healthcare, and is constantly innovating in the area of clinical AV and IT solutions that are not only at the forefront of medical technology but are also easy to use,' David Dowe, Director of Sony Healthcare said. 'Reliability, functionality and workflow optimisation are essentials in the healthcare environment and medical service providers are increasingly looking to Sony as a trusted name in the sector.'

The ever-increasing image data generated in hospitals has considerably influenced the firm's healthcare products development. This is very evident in its range of medical printers. At MEDICA, this range includes high-end diagnostic film imagers as well as paper products that enable fast printing. These are expected to attract not only those working in radiology, but also in endoscopy, microsurgery, pathology, ophthalmology and dentistry. Sony envisages healthy sales for these products during the coming year.

The printers provide high-contrast and high-density images with greater durability, the firm reports. Superior image quality provided by the UP-DF500 Sony Filmstation, for example, results from the 12-bit resolution and 4,096 shades of grey. The UP-DF500 - the only diagnostic imager that can be installed vertically or horizontally - features the world's smallest footprint.

Fully compatible with DICOM networks, this printer was designed to accommodate the workflow change introduced by networked modalities and allows de-centralized next-to-application printing, Sony reports.

# Sony's audio-visual portfolio at MEDICA

Recording surgical procedures
In previous issues of our journal *EUROPEAN HOSPITAL*, we have described Sony's systems installed in operating theatres and teaching hospitals in various countries. You will understand the value of these when visiting Sony's stand. For example, among them is the world's first and only medical recorder in full 1080i High Definition (HD) - the PDW-70MD. This was specifically designed to produce high-quality image hospital records, and this includes surgical procedures and endoscopy, HD video archiving using 'Professional Disc' and academic presentation material. This system can be linked with standard definition or HD endoscopes of leading manufacturers, such as Olympus, providing large audiences with images of such quality that

hitherto undefined intricacies of surgical operations are crystal clear.

Other Sony MEDICA highlights include the European-designed Sony BZMD-1 DICOM Capture Station, which enables surgeons, during surgery, to make comments and simultaneously acquire, display and archive high quality stills as well as moving images. The Capture Station can obtain visual material from most surgical cameras, including endoscopes and microscopes. The HD capable Capture Station is fully DICOM compliant for seamless integration into a hospital or clinic's DICOM network.

'The range of products Sony is showcasing at MEDICA not only demonstrates our ability to deliver innovation, but also our commitment to future-proofing our clients against the rapid technological advances being made in the healthcare market,' David Dowe pointed out.

Take a look at these products, and meet the Sony team to discuss customised needs, at **stand 825 in Hall 15**.

# Defining the Nationwide Health Information Network (NHIN) 'A network of networks'

**USA** - In line with the Federal Government's drive to progress IT for healthcare, nationwide, FCW Media Group, the publisher of *Federal Computer Week*, produces the magazine *Government Health IT* to provide a roundup of health IT news from the US and abroad, including policy, technology, business and financing issues. For example, its updates have highlighted difficulties in setting up a national healthcare IT network. One recent report informed that, after deliberating over 1,200 initial requirements to arrive at a framework for exchanging medical records among doctors, hospitals and other healthcare providers across the US, the *National Committee on Vital and Health Statistics* had voted to send its report, '*Minimum but Inclusive Functional Requirements Needed for the Initial Definition of a Nationwide Health Information Network*', to the US Department of Health and Human Services (DoHHS) – but first minor edits would have to be made.

The committee's discussion focused on the label 'minimum' would dictate an all-or-nothing approach to fielding portions of the (NHIN), dubbed 'a network of networks'.

Committee member Stanley Huff, a physician

and professor of medical informatics at the University of Utah, questioned whether it would preclude incremental implementation of the network. He said someone building a limited-purpose network, as an initial step, should not have to comply with all the requirements.

Dr Simon Cohn, the committee chairman, responded that the 'minimum' label was not intended to stifle movement toward the full implementation of the NHIN. The committee agreed to add a sentence clarifying this point.

The report calls for DoHHS to extend HIPAA-like privacy protections to all personal health records, regardless of who manages them. It also recommends that the DoHHS to provide those protections 'through enhancements and extensions to HIPAA or through other appropriate mechanisms'.

The report calls for the DoHHS to support standards that would allow a patient's or doctor's preferences concerning specific data to travel across the network in health information exchanges, which means, for example, that a patient's desire to keep confidential a record of mental health issues or HIV/AIDS would persist, no matter who had a copy of the record

## Eye software firm focuses on the US market

**UK/USA** - Digital Healthcare (DH), the UK's leading supplier of digital imaging software and electronic patient record systems for diabetic retinal screening programmes and ophthalmology, has appointed Marc Winchester as President, North America, Digital Healthcare Inc.

Headquartered in Cambridge, Digital Healthcare provides software solutions that combine high-quality digital imaging systems with fully-automated data programmes to handle millions of patient records. The UK's National Health Service (NHS) Trusts are using the company's flagship product OptoMize iP to monitor the condition of hundreds of thousands of diabetics in large scale community eye screening programmes currently underway across the country, because the Government's screening targets require 100% of the diabetic population to have had access to a digital eye scan by 2007.

In the US, over 100 private practices, hospitals and universities use DH's software to screen patients for diseases such as glaucoma, retinopathy, cataracts and macular degeneration, as well as for longitudinal studies that measure the impact of new healthcare treatments.

Mr Winchester joins DH as President and Board Director, assuming full operational and management responsibility to grow the business in North America, particularly in the key areas of messaging and high capacity imaging in chronic disease, clinical ophthalmology and clinical trials.

The *IMS 2007 Pharmaceutical Market Forecast* predicts a 5-6% international growth in the global pharmaceuticals market, compared with 6-7% in 2006, with global pharmaceutical sales expanding to US$665-685 billion next year. 'In 2007, the market will be still absorbing changes that have defined a new economic reality, one in which growth is shifting from mature markets to emerging ones; new product adoption is not keeping pace with the loss of patent protection by established products; specialty and niche products are playing a larger role, and regulators, payers and consumers are more carefully weighing the risk/benefit factors of pharmaceuticals,' said Murray Aitken, senior vice president, Corporate Strategy, IMS.

The geographic balance of the pharmaceutical market continues to shift away from the USA towards the world's emerging markets - countries with a per-capita Gross National Income of under $20,000. These countries currently represent 17% of the global market, but will contribute 30% of growth next year. In emerging markets, the availability of healthcare is expanding, and the need for treatments for chronic diseases more typically found in developed countries is rapidly increasing.

Growth in the emerging markets

# PHARMACEUTICALS
## DROP IN INTERNATIONAL GROWTH PREDICTED

is offsetting the slower growth coming from the US market, which will contribute about 36% of total market growth in 2007, significantly less than the 54% it contributed five years earlier.

The number of new product launches in 2007 expected to be between 25-35, comparable to this year's expected 30 launches. However, with pharmaceutical companies increasingly developing specialty products and treatments to serve niche markets, new products are contributing less to overall market expansion than previously. Moreover, market expansion from new products is not keeping pace with the loss of patent protection by older products. In 2007, marketed products with a value over $16 billion will likely lose patent protection, which comes on top of US$23 billion of products that lost protection in 2006.

Several sectors of the market are expected to register high levels of demand in 2007, particularly biotechnology, with estimated growth of 13-14%, specialist-initiated products with 10-11% growth, and the generics market with 13-14% growth. In the generics sector, growth is stemming from opportunities in several key therapeutic areas and increased volume driven by cost-control initiatives.

The total number of blockbuster products continues to grow and is expected to reach 112 in 2007, up from 94 in 2005. In 2007, the potential blockbuster products launched will be paliperidone for schizophrenia, desvenlafaxine for depression and vildagliptin for diabetes.

'Undoubtedly, the most powerful force rebalancing growth in the worldwide market is pressure from public/private payers to limit their expenditures on drugs,' Murray Aitken pointed out. 'Their influence is offsetting much of the growth that stems from rising demand and innovation. Manufacturers increasingly must strengthen the evidence that their therapies deliver *value for money* based on direct health outcomes.'

**Europe** - the top five markets (France, Germany, United Kingdom, Italy and Spain) combined are forecast to grow 3–4%, down from the 4-5% pace expected in 2006. While these countries see increased demand from an aging population, growth is being affected by cost-containment measures, incentives for using generics and increased scrutiny of the cost/benefit of drugs.

### Therapeutic classes

The demand for oncology treatments has increased and there has been a strong flow of innovation. Science has changed the face of the disease; survival rates are improving and some cancers are now considered chronic illnesses or even pre-

ventable conditions.

Pharmaceuticals to treat oncology are expected to reach US$40-45 billion in value in 2007, contributing nearly 20% of total market growth. 'Through 2007, this class will expand rapidly as more patients gain access to treatment from a growing range of therapies,' Murray Aitken pointed out, adding: 'But oncology products will eventually be subject to tighter pricing and usage parameters as payers deal with their mounting costs.'

Among other major therapy classes, the lipid-lowering class (including statins, Zetia and Vytorin) will grow to US$30-33 billion, reflecting an estimated 1-2% growth in 2007, down from 7-8% this year. While the 2006 patent losses for simvastatin (Zocor) and pravastatin (Pravachol) will continue to affect growth, increased public awareness of the efficacy of lipid-lowering agents, broader patient screening and new combination therapies will continue to drive demand, the report states.

### Implications for manufacturers

'Pharmaceutical companies have started to reinvent themselves in response to market challenges, and they look very different than just five years ago,' Murray Aitken said. 'But it is no longer enough just to be responsive. To succeed, companies need to get ahead of the dynamics that are rebalancing the market. This requires a greater reliance on scenario-based planning, a sharper focus on realising productivity gains from sales and marketing expenditures, and proving the value of medications as never before.'
Details: www.imshealth.com

# EU REGULATES TO MATCH MEDICINES TO CHILDREN

Although the way adults react to drugs is often not the same for children, currently there are no special trials to check the suitability of medicines for smaller size patients. This is set to change from 2007, because EU ministers for the environment have given the go-ahead for a regulation that stipulates that medicines will have to be tested for their particular risks and side effects in children. In return, drugs manufacturers will receive a six-month extension of patents for their products, to give them an advantage over manufacturers of cheaper, 'copy-cat' generic medications.

Once the regulation comes into force, all medicines already on the market will have to be retrospectively licensed for children's prescriptions..

The European Parliament has been asking for this new regulation for years. Up until now, many medicines have only been adapted to suit children by administering lower doses; however, many experts think there is an inherent risk of unforeseen side effects.

Peter Liese, a medic, and member of the European Parliament and the German Christian Democratic Union, said that, apart from medicines such as cough mixture, medications for serious illnesses, such as cancer or AIDS, have not yet been specifically licensed for children. Doctors often refrain from giving their small patients the necessary medication because they are concerned about unforeseen side effects. Scientifically-based recommendations from manufacturers could alleviate those fears.
Source: www.medical-tribune.de

## NEW CANCER DRUG HOPE

AstraZeneca has been collaborating with researchers who published a paper in 2003 that highlighted the potential success of targeting Aurora B, in the hope of developing a new class of drugs to inhibit this enzyme.

Aurora A and B are a type of enzyme known as protein kinases; they modify other proteins by chemically adding phosphate groups to them. In cancer, both these protein kinases are 'over-expressed'.

At the Faculty of Life Sciences, University of Manchester, researchers have been studying a chemical that blocks, or inhibits, the catalytic actions of Aurora B and it has effectively killed cancer cells in lab grown cultures. 'The first compounds were designed to inhibit a related enzyme called Aurora A,' said Dr Stephen Taylor, who leads the research team. 'Our research has shown that inhibiting Aurora B is a far more successful method of killing cancer cells. We've been strongly encouraged by these latest results.'

The research - published in the *Journal of Cell Science* - will be of interest to many other scientists looking at Aurora inhibitors (currently over 10 companies are involved in Aurora cancer research).

Although effective, many current cancer drugs are toxic. However, early clinical trials of Aurora-B drug's toxicity have shown mild but not major adverse effects to patients. The next stage of trials to test its effectiveness is likely to begin soon.

The first results from the Phase I clinical trials using Aurora inhibitors were presented at the *American Society for Clinical Oncology* conference in Atlanta, in June

## SOPRO ACQUIRES COMEG

The French firm Sopro, a subsidiary of the Acteon Group, has acquired the German company Comeg.

Sopro produces medical endoscopy equipment (cameras, light sources, insufflators, irrigators), as well as cameras and digital imaging devices for dentists. Comeg produces endoscopes for abdominal surgery, urology, arthroscopy, gynaecology and ENT. Their merger has resulted in Sopro-Comeg and will result in close cooper-

ation between the different R&D departments of both firms and the Acteon Group working in the five production sites, which benefit from about 60 engineers specialised in electronics, mechanics, computer engineering, chemists and biologists.

Sopro-Comeg places itself as a global leader in endoscopy and will specially

invest in R&D, in production capacity and service to its customers.

Sopro-Comeg is managed by Pierre Montillot, CEO of Sopro. The managers of Sopro-Comeg GmbH are Eugen Weimer, Managing Director of the Tuttlingen plant, and Bernd Seide, Sales & Marketing Director of the Sopro-Comeg Group.

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# CLOSING IN ON THE BRAIN

The *Nexstim Navigated Brain Stimulation system*, *eXimia NBS*, provides new tools for individual diagnosis and more efficient treatment – as well as a new way to see and understand the human brain.

The NBS is a novel brain stimulation technology. It provides individual measures of the health and functional capacity of the central nervous system, as well as of brain reactions to targeted magnetic pulses. Thanks to its advanced technology and proven clinical performance, the NBS system helps medical

instantly visible, the effects of the stimulus can be quickly determined. Since the eXimia NBS system also predicts and monitors the stimulus location and dose within the brain, it can detect and identify minor alterations in neuronal functioning.

In clinical work, the eXimia NBS Navigation system helps neurologists and neurosurgeons to diagnose and treat human brain diseases, trauma, and dysfunctions earlier and more accurately than before. NBS is not limited to structural alternatives – instead, it opens a new window to the functions of the human brain. The eXimia NBS provides solid platforms for new, advanced studies of the central nervous system.

professionals to focus on the issues that matter the most – and to find the shortest way to the core of non-invasive brain stimulation.

The eXimia NBS aligns the MR images with the subject's head real-time – targeting and timing the transcranial magnetic stimulation (TMS) pulses accurately. The direct muscle and brain responses (EMG and EEG) evoked by TMS stimulus can be recorded with high temporal resolution. The eXimia NBS system is fully compatible with Nexstim, Medtronic and Magstim TMS stimulators. As the activation of stimulated neuronal structures is

## CHEERING UP THE WARDS

The ecoVaas Care Concept promises to give hospitals a convenient, hygienic and environmentally friendly alternative to conventional containers.

While bringing friends and loved ones flowers can cheer them up, dealing with the vases can cause headaches for care professionals. The ecoVaas Care Concept uses single-serving clean paper vases, available from dispensers, so there's no need to handle sometimes broken or septic fragile containers. It also frees nurses from the cleaning, disinfecting, storing and giving out of returnable vases, allowing them to use their time more effectively.

ecoVaas products stay leakproof for three weeks because of their worldwide patented material, they are recyclable and easy to dispose of.

**Hall 6, Stand J33**

## Material solutions

Innovative materials and technologies for medical devices are on show by GE Plastics. These include new engineering thermoplastic material solutions with improved haemo-compatibility for use in blood contact applications and devices that require low protein binding, e.g. those found in several diagnostic or biopharmaceutical applications.

Estech's single-use ClearView MV Atrial Depressor utilises GE's advanced haemo-compatible Lexan for device reliability and biocompatibility in minimally invasive mitral valve repair and replacement procedures. Among other customers' devices are the Megadyne Electrosurgical E-Z Pen, GE Healthcare's Aisys Carestation anaesthesia delivery system and others.

'We have continued building capabilities to help our customers turn their innovative designs into application successes,' explained Clare Frissora, Marketing Director, Healthcare, GE Plastics. With continuing investment in new technical capabilities and materials technologies, developments in the last two years include higher flow and release autoclavable Lexan HPX resins; higher heat autoclavable Lexan 4504 resin; GE's lipid resistant Lexan HPS7 resin, and Noryl HNA resins to meet greater exposure to certain chemicals and higher heat autoclave temperatures.

**Hall 10, booth A56**

# Analysis made easier

The *Leica DMD108* has been designed to ease the growing workload in histopathology laboratories, and to make the sharing of data more efficient.

As the ability to diagnose disease through new technologies improves, the number of tissue sections a histopathologist needs to analyse each day increases. The new network imaging solution, designed by Leica Microsystems and tested extensively with pathologists, offers an innovative solution that increases physical comfort, speeds daily workflow without changing the process and provides an easy solution for sharing data.

Instead of looking through a microscope to analyse specimens - the Leica DMD108 system provides high-quality images directly onto a monitor using a high-resolution camera and powerful image-processing software, generating high-resolution images with brilliant colour. It can be used to photograph specimen details of interest or compare tissue sections and store the images. Size ratios are also calculated. The histopathologist can then audio-record the diagnosis directly onto the DMD108.

By using a second monitor or high-resolution data projector, the Leica DMD108 can be used for training, conferences and discussions. Images can even be emailed during the work.

# Creating the right image for hospital beds

A new range of hospital beds, developed with both the needs of patients and nursing staff in mind, meets the highest expectations of functionality and design.

The 'image' bed, by Wissner-Bosserhoff, is 223 cm long and 102 cm wide. The ergonomic mattress base ensures healthy positioning. The double pull-out for backrest (11 cm) and leg rest (7 cm) helps to prevent ulcers when the patient is in a seated position. The length of the satellite makes adjusting the bed settings easy for patients and staff. An accessible foot pedal allows for back-protecting, hands-free adjustment of the bed height and for setting a horizontal position used for examinations. A hoop guard prevents unintentional activation of the control keys, which can also be locked through the 'supervisor' user panel. Hand switch, user satellite and supervisor are fail-safe thanks to the GO safety key.

The new 'image' hospital bed, shown here in combination with bedside table 'stylo C3', impresses through high functionality and homely design. The bed, shown here in the maple version, is available in two further types of wood or in different, plain colours.

WISSNER-BOSSERHOFF

bed can be extended or shortened by 10 cm respectively and the rest for the lower thighs can be individually extended. Partitioning of the mattress base makes cleaning the bed easy, and now mattresses of various lengths and heights (up to 37 cm high) are compatible with the bed.

The side safety bar has flexible and continuous rails and can be operated with one hand. It can be set at four different levels, and the maximum side bar height of 59 cm ensures that patients are safe even when bigger mattresses are used with the bed.

A clear and ergonomic hand switch allows for easy adjustment of the backrest and upper thigh rest, for the auto contour setting as well as height adjustment of the bed. Alternatively, an easily accessible user

A 'mobi-lift', which can be fitted in an optimum position, helps the patient when getting up and out of the bed and also has an integrated function key, enabling the patient to adjust the height of the bed. 'Image' beds are made with stable lifting column construction that allows height adjustment between 39.5 cm and 78 cm through technology patented by Wissner-Bosserhoff. The bed can take a maximum weight of 230 kg, is fitted with smooth-running double casters of 150 mm diameter and is easy to manoeuvre in tight spaces, thanks to the option to fit a fifth caster.

The 'image' bed is available in warm wood tones, or plan colours, and a nightlight can be integrated under the bed for safe orientation in a dark room.

# Capturing the action

NEW

Brandon Medical has launched a new range of video camera systems for the operating theatre that use Sony Professional technology. The cameras, with a new remote control unit, have an 18x optical zoom ideal for intricate procedures.

They can be mounted on their own individual ceiling arm or inside a Galaxy Ultra lamp head. When given their own arm, the cameras are easy to position and offer 360º head rotation, achieved by running all connectors directly up through the arm.

By incorporating the camera into the lamp head it can be pointed at the area where the light beam is most focused, removing the need to position the camera separately. This is a popular option used in conjunction with a flatscreen monitor, which can be mounted to the same ceiling fixing as the lamp head. This creates a single integrated lighting/recording/display unit.

'Cameras are becoming central to modern surgical practices,' said **Graeme Hall**, Brandon Medical's Managing Director. 'But until now they have often been too expensive for some of the smaller hospitals. With our new design, we have made camera systems available to everyone.'

## ALSO FROM BRANDON MEDICAL

A new integrated medical video makes archiving quicker and easier. Every operation that takes place in a theatre equipped with this new system is recorded in full – 24 hours a day, seven days a week. Archiving is completely automated, taking the form of a 'virtual loop' recording system. The recording loop can be as large as the hospital requires, a month being the typical length of time, and the video stream is automatically stored and archived at a secure location.

Records can be recalled easily and video clips can be saved onto hard disk, CD-ROM or DVD-R for use by medical practitioners. All video records are in a secure format that cannot be adulterated, which means it can be used to investigate incidents and the company reports it is admissible in a court of law as evidence to show proper procedures have been followed.

The system uses standard IT hardware for archiving and recall, making it a cost-effective tool for teaching and research.

# SHARING THE LOAD

New to MEDICA this year is MLR, whose automated guided vehicles (AGV) have been radically modified and optimised to transport containers in hospitals.

Because essential items such food, medication, laundry, sterile items, medical equipment and waste need to reach their destination quickly and safely, this technology has become increasingly important in hospitals.

The underride tractors are based on MLR's CAESAR range of AGVs, and are built entirely of stainless steel. All cover panels and the lift unit are completely sealed (IP54), so vehicles can be disinfected using hot steam jets from all sides – even underneath – in compliance with hygiene standards and can withstand temperatures of up to 85°C.

The AC drive systems are fully encapsulated to keep noise levels down and the drive technology is engineered to allow the AGVs to move forwards and backwards equally fast (maximum speed 1.7 m/s). Laser scanners at the front and rear of each vehicle ensure safety in both directions.

The first installation of the new vehicles in the Nye Ahus Hospital near Oslo, Norway, will be completed by early 2008.

**Hall 16, Stand E41**

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Weitere Informationen finden Sie unter: **www.agfa.de/healthcare**

Besuchen Sie uns auf der MEDICA,
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