Hospital

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INFORMATION TECHNOLOGY

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EUROPEAN DIRECTIVE ON CROSS-BORDER HEALTHCARE: A MILESTONE FOR PATIENTS AS WELL?

Willy Heuschen

The title of the Directive 2001/24, published on 4th of April 2011 in the Official Journal of the European Union, already says it all: The issue at hand is the 'exercise of patient rights in cross-border healthcare'. It took the Commission, the EU-Parliament and the Council of Ministers – the health ministers of the 27 EU member states in particular – almost three years to reach a compromise and fine-tune legal intricacies.

First of all it is important to say that in whatever way the Directive will be applied with regard to the patients' interpretation, this guideline has long been overdue. It all started in the mid-90s, after the European Court of Justice (ECJ) awarded two Luxembourg citizens, Kohll and Decker, the right to be reimbursed by their health insurance for their visual aids and dental prosthesis respectively, which they had bought in neighbouring European countries. This decision by the ECJ has its source in the free movement of goods within the single market, which is firmly embedded within European Law. Many other decisions by the ECJ have since joined the European judicature.

As noted in this journal before, due to the lack of an existing Directive in healthcare, the ECJ has taken over a job that in any democracy should be in the hands of the legislative bodies, in this case the European Parliament. The newly adopted directive puts an end to this shortcoming, even if the verdicts and other regulations adopted so far (such as the continuity of the EU-regulation No. 883/2004) were taken over or slightly honed as an integral part of the new Directive. This is certainly not likely to increase the patients' understanding of the modalities of reimbursement for healthcare services within the EU.

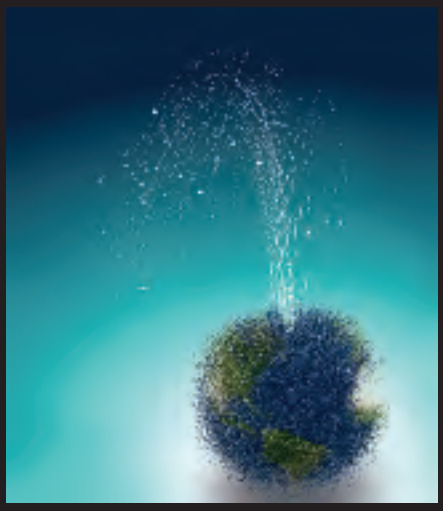
The relevance of this Directive however, far expands the questions of reimbursement for mobile patients. Even if the attempt to create a legal basis for healthcare fails to secure a high level of healthcare (TFEU Art 168) and it is the legal basis for the improvement of the function of the single market (free movement of people and goods) that prevails, this would still be the first time that a basic legal principle for a European heath system has been passed. This includes the patients' rights already existing in some countries as well as quality and safety standards. It is probably safe to assume that it was the intention of the European Commission to use these standards as a basis for the reliability of healthcare in other EU countries; without mutual trust a close cooperation would indeed seem highly unlikely.

The European Association of Hospital Managers (EAHM) has been pleading for years to draft and develop such standards of safety and quality. Even if the Directive states that such norms are to be installed autonomously by the member states and not, as would have been our wish, on a European level, a further development towards European alignment can hardly be avoided. This is all the more true since patients and organisations will receive their information at their respective points of contact, which every member state will have to establish. Moreover, exchanges and mutual assistance between the contact points are explicitly demanded. A similar interface between national healthcare systems is also sure to emerge by setting up cross-national reference centres and networks.

In our view hospitals, or rather their management boards, must certainly engage in this process of a European health market, in the domestic development as within a European exchange. The old adage of learning from each other applies to this situation as well. In order to correctly use the scope of the Directive and to illustrate its potential, our Advisory Board for European Affairs is hosting a major event. Together with other top European associations in the health sector we will use the occasion of the MEDICA on 18th November 2011 in Dusseldorf to set the right course – in order that this Directive can be a milestone of improved European cooperation for patients too.

Willy Heuschen
EAHM Secretary General and Editor-in-Chief

The editorials in *(E)Hospital* are written by leading members of the EAHM. However, the contributions published here only reflect the opinion of the author and do not, in any way, represent the official position of the European Association of Hospital Managers.



Information Technology

This issue's cover story tackles the important topic of information technology. Increasingly important in the healthcare sector, IT is playing a bigger and bigger role in the provision of healthcare in our hospitals. EAHM recognises the importance of this sector and through the Working Party IT Hospital Managers will be hosting seminars for both CEOs and CIOs on ensuring a successful IT contribution in hospitals (see page 4 for more details). Our three articles focus on three very different aspects of IT, each beneficial for the smooth running of a hospital. The first article discusses data centres and the merits of both on- and off-site data storage. T.E Jayapradha introduces us to asset management systems and illustrates their merits as a tool to keep track of your hospital's resources. The final article is from the winner of the IT @ Networking Awards 2011. Prachi Shukla gives us a great example of how telemedicine is making strides in the developing world.

Infections

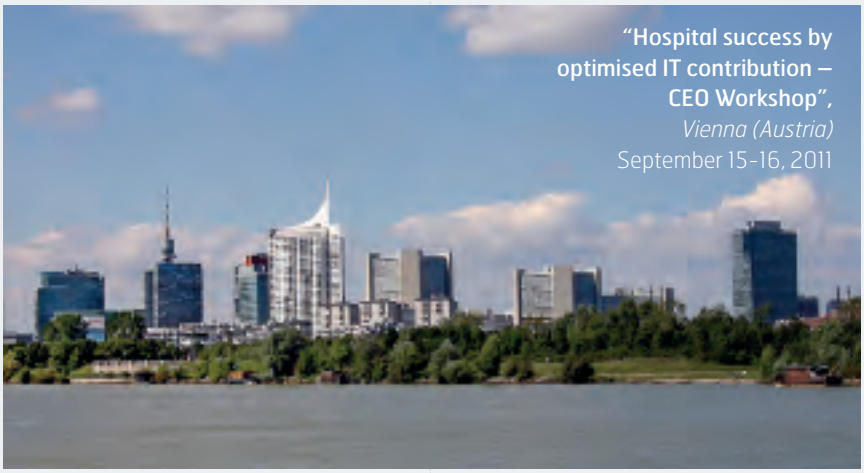
Infection control will always be a key objective in hospitals and other healthcare institutions. This issue our dossier on infections presents two very different, yet effective, approaches to infection control. The first article, from the University of Strathclyde in Scotland introduces us to a new method for the continuous disinfection of the hospital environment: High-Intensity Narrow-Spectrum Light (HINS-light). The second article focuses on one particular infection: Clostridium Difficile. Dr. Orenstein believes his three-step approach may help reduce acquisition and transmission.

Focus: BELGIUM

The Belgian healthcare system has three key features. Firstly, compulsory health insurance, managed jointly by the major stakeholders of the sector (insurers, healthcare providers and public authorities). Secondly, principles of therapeutic freedom for physicians and liberal ideas on medicine (majority of providers are self employed, with predominantly fee-for-service payment). And thirdly, freedom for patients to choose both their healthcare provider and their hospital.

IT WORKING PARTY SPRINGS INTO ACTION

EAHM's "Working Party Hospital IT-Managers" has sprung into action. Members met recently in Brussels and finalised arrangements for IT workshops to take place in September. These actions are the first direct result of last year's reflection process, where the association realised the increasing importance and potential of IT in the healthcare sector.



"Hospital success by optimised IT contribution – CEO Workshop",
Vienna (Austria)
September 15-16, 2011

Quality through sharing experiences and best practice was one of the four main topics put forward during the reflection process, not only on the top level of Europe but all around Europe through regional activities. For some time, members within EAHM observed that information technology (IT) is advancing in hospitals, its importance is growing and its impact is getting more and more crucial on all levels in the hospital. But for many hospital managers, IT experts can sound like they are speaking another language. And vice versa, understanding the needs of a hospital and the processes running a hospital is a challenge for IT staff. In order to make the right decisions on the information sources and services in their hospitals, hospital managers need to be more informed. Sharing experiences and best practice in this field and bridging the gap between general hospital management and IT, this is where the "Working Party IT-Managers" and the organised workshops come in.

The official aim of the Working Party is to aid the EAHM in the realisation of its objectives in the field of information management and technology. It is within the association's mandate to promote the professional competence and responsibility of managers and senior employees in hospital and public health management in European countries, including IT.

IT in this sense means information and medical technology for inpatient and outpatient services. This includes areas such as IT facility management, interfacing medical technology, security policies, training and standardisation.

An important strategy to realise the bridge between the world of hospital management and IT is "business IT alignment in hospitals", says Dr. Pierre-Michael Meier, President of the Working Party.

And in realising this bridge, Chief Information Officers (CIOs) play an important role. For this reason, activities are targeting both Chief Executive Officers (CEOs) and Chief Information Officers (CIOs) in European Hospitals.

For CEOs, the goals of the Working Party are to promote the transition from hospital strategies to IT strategies, on the development of IT master plans and ensuring that the objectives of the IT master plan are obtained.

For CIOs the focus is on the promotion of knowledge about management methods and practices and human resources management. From a technological point of view, the focus lies on interoperability within intra- and inter- organisational IT landscapes and on the integration of medical devices into IT-landscapes, including managerial aspects like risk management.

EAHM is pleased to announce that the first regional seminar for CEOs will take place on September 15-16 in Vienna (in German). Seminars in French and English will follow at a later date. The workshop for CIOs will take place on 29-30 September in Brussels. This workshop will be on a European level and will take place in English.

Members of the Working Party Hospital IT-Managers
President: Pierre-Michael Meier (DE)
Mik Horswell (UK)
Gunther Kostka (BE)
Christian Marolt (BE)
Christophe Nardin (LU)
Irenijus Puotkalis (LT)
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To Note/Coming Activities

September 15-16, 2011:
"Hospital success by optimised IT contribution – CEO Workshop"
Vienna (Austria)
September 29-30, 2011:
"Hospital success by optimised IT contribution – CIO Workshop "
Brussels (Belgium)

LOGISTICS FOR HOSPITALS

> AUTOMATED MATERIALS TRANSPORT
> PHARMACY AUTOMATION

PNEUMATIC TUBE SYSTEMS
> for lab, pharmacy and other urgent items, on-demand transport up to 3 kg

ELECTRIC TRACK VEHICLES
> for sterile goods, records and bulk items, transport up to 25 kg

AUTOMATED GUIDED VEHICLES
> for food, linen and waste, scheduled transport up to 450 kg

AUTOMATED DRUG MANAGEMENT SYSTEMS
> for storage and distribution of drugs and medical devices
> for packaging in unit dose bags with barcode

FACING TOUGH LOGISTICS CHALLENGES?

- Need to reduce costs by optimizing processes
- Need to improve safety for patients and employees
- Need to fulfill infection control requirements
- Need to accelerate services by better workflow

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Belgium

"Europa and Care Institutions: What's in it for you?"

"Europa and care institutions: What's in it for you?" was the thought-provoking title of a conference organised by Zorgnet Vlaanderen, the Federation of Flemish Private Care Institutions. Held in January of this year, the main topic was "what can Europe mean to daily management of care institutions?"

The goal of the conference was to highlight the three opportunities of the EU internal market for directors of hospitals and other healthcare institutions:

1. The employment of foreign care personnel;
2. The treatment of foreign patients; and
3. Applying for EU funding (structural funds, loans from the European Investment Bank).

As well as the traditional presentations, attendees were treated to documentaries featuring Zorgnet Vlaanderen members. During the short videos, members talked about their experiences in recruiting foreign personnel and treating foreign patients, providing a list of "do's" and "don'ts".

Speakers included Jonathan Watson (on structural funds) and Chris Blades from the European Investment Bank. Representatives from the key European organisations also shared their views on the topic including our Secretary General, Willy Heuschen, Pascal Garel (HOPE) and Willy Palm (European Observatory on Health Systems and Policies).

Germany/Austria/Switzerland

Golden Helix Award: Call For Entries

The Golden Helix Award has been awarded annually since 1992 and entries for 2011 are now open. Organised by the German Association of Hospital Directors (VKD), the Golden Helix awards projects in healthcare from Germany, Austria and Switzerland that limit costs and raise quality standards bringing benefits to both patients and healthcare facilities. The award winners must demonstrate quantitatively the improvements their project brings.

Participation is open to all individuals or teams who work in Germany, Austria or Switzerland in private or public healthcare establishments. Consultants or suppliers may not participate. The deadline for submission to the Golden Helix Award 2011 is the first of July and the finalists will present their project on the competition date 28 October 2011 in Berlin or Vienna.

For more information, please visit: **www.vkd-online.de**

Denmark

Annual Meeting: Education, Research and Innovation in Tomorrow's Healthcare

The Danish Association of Hospital Managers' annual meeting takes place on 12-13 May 2011. The seminar is interdisciplinary and directed to politicians, health leaders and managers at all levels. The presentations are applicable to hospitals, primary care, GPs, regions and municipalities.

While many hospitals and healthcare institutions place most importance on clinical tasks, the conference will highlight that research and education are of equal importance. Research and education ensure we maintain modern and efficient healthcare. Research and innovation must also continue to be strengthened in Denmark, especially considering the development and design of new hospitals. This is true on municipal, regional, hospital and ward levels.

Speakers will include representatives from the Minstry of Health and many key players in the Danish healthcare sector.

For more information, please visit: **www.dssnet.dk**

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Commissioner Dali Believes Innovation is Key for the Hospitals of Tomorrow

John Dalli, European Commissioner for Health and Consumer Policy spoke recently at a dinner debate hosted by COCIR, the European Coordination Committee of the Radiological, Electromedical and Healthcare IT Industry and HOPE, the European Hospital and Healthcare Federation.

The theme of the evening was "Hospitals of Tomorrow" and the discussion centred on how to develop efficient and sustainable hospitals in the future. Addressing the invitees, Dalli emphasised the current healthcare conundrum of the need for cost-effectiveness at a time when more health services are required with limited means. He believes that "rather than spending more, we need to spend better" and use innovative solutions to "deliver better healthcare, to more people, in a more efficient manner in the long term".

Innovation should come from how hospitals are designed, organised and managed. For the Commissioner, coordination is of upmost importance, whether this is the coordination of staff within hospitals or coordination with primary and tertiary care establishments.

Health technology is a key area where Dalli believes hospitals can become more efficient and he celebrates the fact that progress is being made with electronic health records and e-prescribing. However, he expressed concern over the limited use of telemedicine in European hospitals, "very few European Hospitals - not more than eight percent - exploit the potential of telemedicine and telemonitoring". The use of telemedicine can allow hospitals to pool vital resources and go some way into solving the escalating problem of staff shortages.

For Commissioner Dalli the time has come to "unlock the potential" of health technology and develop "intelligent hospitals". Intelligent hospitals are those where patients have access to their own medical data; where doctors and nurses can access medical data and work closely with colleagues and patients regardless of their location; and hospitals that use telemedicine to provide home care or connect to other hospitals.

But how do we do this? How do we create intelligent, innovative hospitals? Dalli recognises that although important, political will is not sufficient. Smart investments are also needed. He discussed the merits of public-private partnerships as innovative financing solutions and stressed that investment is not just a cost but also an investment in the future by investing in people's health today. He encouraged the use of EU structural funds in the reform of national health systems and recognised that there is no "one-size-fits-all" approach but that investments should respond to both national and local needs.

Full speech available at:
http://ec/europa.eu/dgs/health_consumer/dyna/dalli/speeches_en.cfm

European Commission Seeks Views on Improving Healthcare by Applying ICT

The European Commission is seeking citizens' and other interested parties' views on how the EU can help to deliver widespread benefits to the quality and efficiency of healthcare by applying information and communication technologies (ICT) otherwise know as e-health.

Promoting e-health is a key objective of the Digital Agenda for Europe. The online public consultation runs until 25 May. The answers will feed into the preparation of the eHealth Action Plan 2012-2020 that the Commission is due to present before the end of 2011.

Neelie Kroes, European Commission Vice President for the Digital Agenda, said: "At a time when individuals and governments need to watch every euro, e-health can help to improve the efficiency of healthcare systems and boost the economy as well as empowering patients. I welcome everybody's views on how e-health can best be used for the benefit of all."

The Commission is inviting all interested parties, including healthcare professionals and patients, to give their feedback on the main benefits of e-health, the main barriers preventing large-scale deployment, and the actions the European Commission should take to overcome them. In addition, stakeholders can provide their views on the best ways to improve interoperability, on how the Commission should address legal issues related to e-health and on the best ways to support innovation.

Specifically, the questionnaire seeks feedback on the following goals:

- To increase awareness of the benefits and opportunities of e-health;
- To address the problems of interoperability of e-health technologies;
- To improve legal certainty for e-health; and
- To support innovation and research in e-health.

The forthcoming 2012-2020 eHealth Action Plan will be an opportunity to build on the actions of the first such Action Plan (see IP/04/580) which was launched in 2004. It will aim to take these actions a step further and provide a longer-term vision for e-health in Europe, in the context of the Digital Agenda for Europe as well as the Innovation Union and European Innovation Partnership on Active and Healthy Ageing.

The answers must be submitted by 25 May and they will feed into the eHealth Action Plan for 2012-2020.

For more information, please visit:
http://ec.europa.eu/information_society/digitalagenda/index_en.htm

Hochtaunus Kliniken
Germany

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Healthcare's Moment of Truth.

In healthcare today, change is everywhere.

An aging population, an increasingly knowledgeable consumer, a growing sophistication in technology... not to mention a wave of legislation and fiscal restraint that is redefining how facilities are delivered, operated and maintained. Every point of the cycle demands singular expertise, and every point is a moment of truth—for operators, investors, clinicians, consumers.

At ARCADIS, we know the only constant is change, especially when it comes to an industry as complex and as challenging as healthcare and healthcare technologies. That's why our mission is to direct a new trajectory for today's healthcare model, from the earliest stages of strategy through design, construction and operations.

Along with our architecture subsidiary RTKL, we are a truly global partnership committed to enriching lives and designing sustainable solutions to the complex issues of our time. With our combined strengths, ARCADIS and RTKL provide an integrated range of services across the full building cycle—from strategic facilities planning, project management and cost consultancy, design, engineering and medical equipment planning to ongoing facilities management.

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We think it's an approach that adds value as much as it enriches lives.

CROSS-BORDER

By Rory Watson

By 2013, a new system of cross-border healthcare will be in place throughout the European Union. This will enable patients to receive reimbursable healthcare in another EU country, provided the costs would normally have been covered if they had been treated at home.

Although only one percent of national heath budgets are currently spent on cross-border healthcare, patients facing the prospect of long waiting lists at home will now enjoy other options.

The European Parliament and EU governments finally reached agreement on the legislation earlier this year. The new rules follow a series of judgements from the European Court of Justice. For more than a decade, these have confirmed that EU citizens have the right to be treated abroad and have the costs reimbursed. The legislation is designed to ensure clarity for patients and health services alike. All EU countries will now have to establish one or more national contact points where prospective patients can turn to for advice. The information centres will have to cooperate closely with each other, the European Commission, patient organisations, healthcare providers and insurers. When contacted, they must supply relevant information on the supervision and assessment of healthcare providers and the standards and guidelines that apply in the country where the treatment will take place.

The legislation places clearly identifiable responsibilities both on a patient's home country and on the member state providing the treatment. The latter must ensure that healthcare providers supply full details on the availability, quality and safety of the services they offer so patients can make an informed choice on the potential treatment available.

The same scale of fees must be applied to patients from other member states as for nationals in a similar medical situation. If there is no comparable price for domestic patients, the fee must be based on objective, non-discriminatory criteria. Individuals' personal data must be protected and a transparent complaints procedure in place to enable a patient to seek a suitable remedy in the country where the treatment was carried out if they suffer any harm from the healthcare they receive.

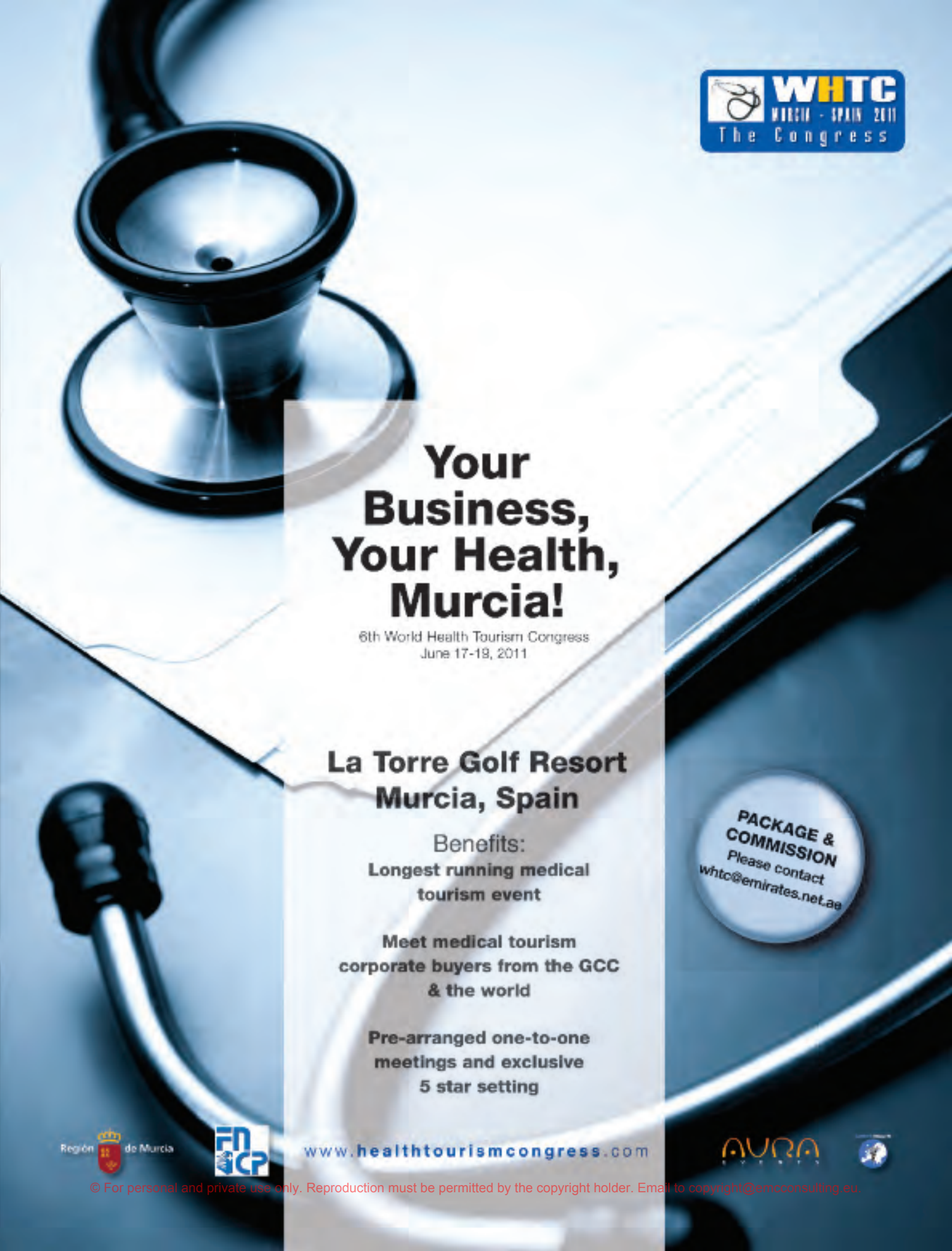
Member states may apply measures limiting access to their healthcare system to citizens living elsewhere in the Union, but these must be proportionate, limited to what is necessary and be publicly available in advance. They must be justified by overriding reasons of general interest such as the need to ensure sufficient and permanent access to a balanced range of high quality treatment, to control costs or to avoid any waste of financial, technical and human resources.

In general terms, a patient's own member state must ensure that the costs of any treatment received abroad are reimbursed, if the healthcare in question is among the benefits provided in their own country. While the level of reimbursement is generally limited to the cost of similar treatment at home, it is possible for higher costs, including travel and accommodation expenses, to be refunded, if the health insurance company or authority decides to do so. The payment may also be made directly to the health provider, sparing patients the need to use their own money and then reclaim.

There are clear limits to this new right. The legislation does not apply to long-term care where patients require assistance to carry out routine, everyday tasks. Nor does it cover organ transplants or public vaccination programmes. As a principle, a patient wishing to be treated abroad does not require prior authorisation from the authority that will cover the costs. However, to ensure that national authorities can retain control over their health expenditure, this can be insisted on in certain circumstances provided it does "not constitute a means of arbitrary discrimination or an unjustified obstacle to the free movement of patients".

Member states can use a general provision to insist on prior authorisation if they consider it necessary to ensure "sufficient and permanent access to a balanced range of high-quality treatment", to control costs or to avoid any waste of financial, technical and human resources. More specifically, it can be required for any treatment involving an overnight hospital stay or specialised healthcare. However, any refusal will have to be fully justified and limited to a restrictive list of reasons, such as possible risks to the patient or general public.

The legislation clarifies responsibility for follow-up medical treatment if this is required after a patient returns home. This must be provided by the patient's own health authority as if the original healthcare had taken place in that country.



DATA CENTRE TRENDS IN THE HEALTHCARE SECTOR

Balancing Growth, Budget and Compliance

By Robert Forsyth and Bruno Raeymaekers

Growing IT applications are taking a central position in the functioning of any healthcare facility. Existing sites are commonly relying on older IT and technical facilities, unable to support the new and demanding requirements of tomorrow's organisations. Cooperation with other similar healthcare companies allows for optimised investment and operational budgets, whilst this differentiated on-site/off-site approach ensures required speed and reliability for critical services.

Identifying Trends

The healthcare sector has, over the past few years, seen an unprecedented evolution towards electronic applications. As broad a range of services as one can think of are currently in use, or being rolled-out on a large scale.

To list only a few significant applications run through local and larger networks:

- Electronic Patient Records (EPR);
- PACS Server & Storage;
- Nurse Call Stations;
- Patient and ICS Monitoring;
- Pharmacy Information & Recip-e;
- Patient Bedside Entertainment;
- Remote Applications;
- Geolocation Services; and
- Veterinary Practices.

Reference healthcare projects in the US have shown a 300 percent growth in power, and a 200 percent growth in IT space over the last three years. The impact the immense growth of these services has on the required facilities to manage and maintain such operations is staggering. This article aims at identifying some key challenges and attempts to suggest a few (out of many different) solutions that could offer means to address these challenges. To conclude this introduction, some examples of specific applications which have made international press coverage throughout Europe recently:

- Finland expects to have its National Medical Archives grown to a capacity of 550 PB by 2025;
- UZ of Leuven, Belgium, is introducing patient bedside terminals to offer monitoring, as well as entertainment stations;
- SMS alerting patients to take critical medications;
- Remote telepresence services cutting out the doctor to patient distance; and
- The training of aspiring surgical students with the Wii.

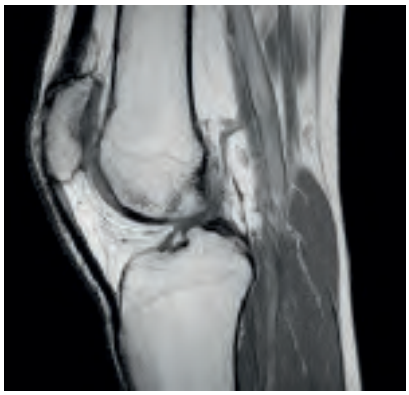


Figure 1. Imaging of a knee.
One diagnosis: 110MB of data files

Challenge: IT and Applications

Applications that have grown out of different perspectives are increasingly expected to communicate with each other; or even to offer a single platform for all healthcare services. From the EPR archive to the imaging databases to hospital administrative services, these applications are becoming more and more integrated. A considerable effort in software and systems is needed to transfer existing single services into fully integrated application platforms.

Data can be critical, sizeable, "living" or dormant in archives. To correctly identify the required application's handling, one must assess the nature of the data and allocate the required resources.

- Critical data ("life or death"), like intensive care monitoring, imaging databases and medication management services need to be readily available. Speed and reliability are paramount.
- EPR archives and storage can be bulky, but needn't be kept in such critical environments as the critical data.
- Patient entertainment systems could be considered "obsolete" in the case of system failure, but when integrated into patient monitoring systems, are immediately upgraded to semi-critical applications.

As far as IT related services are concerned, these critical requirements can be translated into bandwidth (processing the data as fast as possible), redundancy (allowing for timely and secure backups), and disaster recovery solutions. In any case, the strategy for each of these is to be nested deep in the overall site's business continuity plan.

Would you invest all your capital in a single stock?

When applying this to significant medical infrastructures (hospitals, doctor/specialist co-ops, etc), the way forward is on one hand to maintain a relatively small, but very critical facility on-site or on-campus, and a second, larger and maybe even shared off-site data warehouse. The on-site facility, with minimal latency delays to the end-users, manages critical data (intensive care, op-

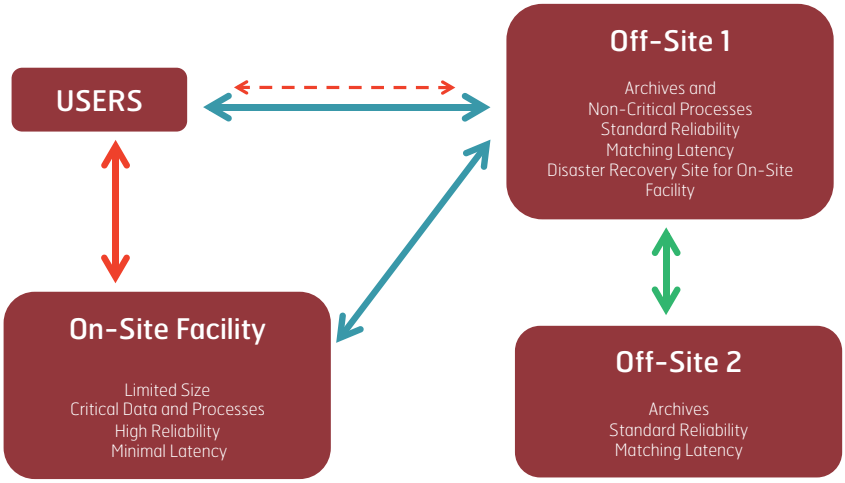


Figure 2. Different sites with specific objectives each have their own resiliency, size and communication requirements

erating rooms, active patient records) being built for speed and reliability.

The off-site facility is mainly focused on archiving dormant patient records and medical information. Sharing the burden on campus, regional, national or even international level allows for optimal allocation of resources, reducing shared costs and outsourcing specialised services. This is where National Medical Archive type projects come into view. This off-site facility is also setup as a disaster recovery site, able to take over critical processes should the primary on-site facility fail. Required latencies/bandwidth for such scenarios is to be evaluated.

Taking it one step further, an even more diversified approach is adviseable. Duplicating archives over different sites (nationally, or why not, internationally diverse), mitigates many technical, natural and regional risks, and although perhaps counter-intuitive, can significantly reduce investment costs and operational expenses.

Looking toward private cloud-type solutions could very well be the final step, but, as further discussed, will raise significant data security and compliance concerns.

Challenge: Facilities

The cumulative effect of the identified trends is placing an ever-greater demand on healthcare facilities to provide more data centre space, capacity and fit-for-purpose infrastructure. Space is at a premium, and where core-business is of a medical nature, supporting services are often driven underground.

In existing sites, one can spend days in the basement, hopping from one department's "IT shed" to the next. None are designed for function, none are efficient in either space or energy consumption and more often than not, significant vulnerabilities to accidental mishandling can be quickly identified. Expanding and upgrading these legacy housings is challenging, costly, if not downright impossible, posing significant threat for the site to manage current and future evolutions.

The proposed solution as highlighted above, is relevant here as well. Integrating all critical applications at a site-wide level into a single designed-for-purpose location reduces operational costs, combines investment efforts and better manages current and future needs.

The key challenge for this to work lies with the company's CFO. All too often, budgets are spread out over different departments and it is difficult to identify available budgets for IT-related systems, let alone to get these departments get to see eye-to-eye when it comes down to the Money Talk. The care and management for the IT infrastructure needs to be centralised and must not be segregated between a number of departments.

Returning to the on-site facility, one would expect a high-power density, very efficiently operated (electrically and mechanically) installation, built for speed and reliability. As mentioned, the off-site facility/facilities can be outsourced to specialised companies, providing infrastructure with relevant service level agreements.

Challenge: What Does the Future Bring?

Barring scientific breakthroughs in the research field of space and time, it is impossible to predict what the current evolution of e-services will look like in five, ten, let alone 20 years. Accurately predicting growth for a 5-20 year period will remain, for the foreseeable future, a fool's errand.

Building massively oversized installations, both in space, power, cooling and communications is costly, inefficient, and downright bad for business. Though looking back a couple of years can prove helpful to understand what could happen, pinpointing what will happen is not possible. Therefore, it is imperative to design facilities to requirements and allow for quick and safe expansions in future. Modular data centres and scalable installations are buzzwords of the IT facilities sector, and are certainly worth looking into. The advantages are clear:

- Reduced investment costs;
- Improved efficiency; and
- Optimal use of space and resources.

There are however dangers for scalable sites too. Again, the IT strategy needs to be controlled centrally, and any changes, upgrades or expansions of installations need to be well considered, and must not adversely impact future flexibility. A critical site needs to be thoroughly commissioned before release. How will you commission future expansion on, an at that point, live data centre? It's certainly not impossible, but it can be quickly made impossible.

Challenge: Legal and Security

When integrating critical and confidential patient records, security and privacy must not be overlooked. Many national governments have implemented privacy and data protection acts. European regulations are also coming into view, such as:

- The Data Retention Directive;
- The Personal Data Processing Directive; and
- European Medicines Agency Guidelines.

But apart from these market-specific guidelines, other issues need to be scrutinised as well. Local criminal law and law enforcement specifications can force your medical database facility to open its doors during investigation procedures.

Figure 3. Cramped, inefficient data IT shed.

Joining all data into a single medical archive raises further concerns. One advantage would seem that all emergency rooms possess full and relevant patient records, but do we allow all doctors to access all patient records? Weighing quick accessibility in emergencies against patient record security and privacy will be a difficult hurdle to take. How is privacy aligned to the installment of medical databanks? This is certainly an issue to liven up legal debate in coming years. More on this has been previously addressed in the 2009 Issue 1 and 2011 Issue 1 of *(E)Hospital*.

Conclusions

The explosive growth in e-health applications puts significant strain on IT departments, supporting facilities and allocated budgets. A diverse approach to managing medical data and other related services has proven a valid model.

The healthcare facility data centre is no longer a mere supporting element but has become the very core of the operations of the healthcare sector. An effort needs to be made to get the IT shed out of the basement and give it the status and reliability it needs. However, integrating many sources and types of medical data requires significant thought to protect patient privacy.

An integrated solution calls for an integrated approach, where the central management office play a crucial role: Requirements need to be detected at centralised level, budgets need to be allocated at centralised level, and the IT infrastructure and facility needs to be managed and operated at a centralised level.

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KEEPING TRACK **OF YOUR HOSPITAL'S RESOURCES**

Asset Management Systems

By T.E Jayapradha

The greatest expenditure of hospitals today is on mobile medical devices, starting from patient beds to other technologically advanced diagnostic systems. The efficiency of a healthcare organisation largely depends on its ability to know where things are and on how efficiently these resources are used by the hospital staff and patients.

Asset Management Systems: An Overview

Hospital IT systems have been an integral part of healthcare for the past few years and are witnessing advancements in diagnostic and disease management technologies such as CTs, MRI machines etc. When it comes to the usage of the right technology to track and manage their assets, the hospital industry lags behind other industries. This leads to the over-utilisation or under-utilisation of their inventory assets.

In spite of the fact that an average hospital spends 15 percent more on maintaining their equipment, the main focus of European healthcare organisations rests principally on improving the quality of care and patient safety. This pushes the investment on asset management systems (AMS) down their priority chart.

Major Drivers for Asset Management Systems

Cost ξ Productivity Benefits

Equipment financing is squeezing all hospitals in Europe. It is not only incongruous but also difficult to spend huge amounts of money, time and resources in searching for misplaced, lost or stolen equipment. It has to be noted that to perform planned maintenance and repair, which entails high cost, many hospitals in Europe rely on Original Equipment Manager (OEM) and distributor/suppliers of medical equipments. Asset management's automated collection of asset information such as date of manufacture, location, maintenance status etc., leads to cost and productivity benefits. Moreover, governments

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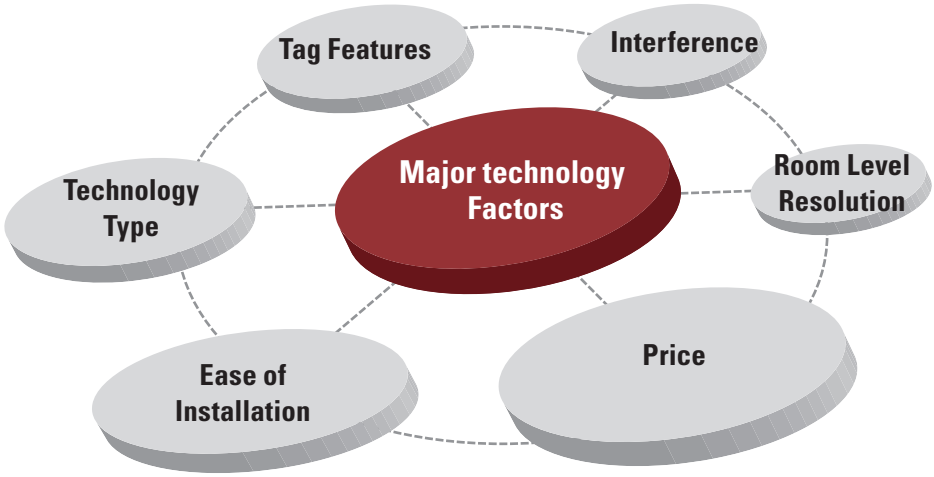
Figure 1. Major technology factors of healthcare asset management systems



Price
Lowering the product cost with improved quality is one of the major product strategies followed by most of the vendors. For this reason manufacturers are adopting a "one box fits all" multiparameter approach to save cost and time.

Ease of Installation
Most of the AMS provided today have ease of installation. This is because it is provided along with other IT solutions by the same provider.

Technology Type
The technology type provided by various vendors are IR/RF, RF (Zigbee), RF (Wi-Fi). RF is the most common.

Tag Features
The tag features include button, tamper, LED, etc. Most vendors provide all the tag features which is their competitive advantage.

Interference
Since data transmission is done at a variety of frequencies, the product should be capable of avoiding interferences.

Room Level Resolution
This feature is still not fully available with many systems. Vendors such as GE and Aeroscout have its advantage.

Note: Size of the bubble represents the level of importance

are finding it increasingly difficult to keep track of the assets in public hospitals. It is essential for a government to account for taxpayers' money and also submit an account of value obtained from it. This requires proof for investments in assets.

Added Value of Wireless LAN

One of the major advantages of wireless LAN technology is that once adopted for AMS, it can also be used for other healthcare IT solutions such as disease management, e-prescription, EMR etc. Thus, once an initial outlay is invested in building the basic infrastructure, there is a fall in follow-on investment requirements for the future.

Asset Management Applications

The key asset management applications include asset tracking, asset identification and authentication, data collection, data transfer and sensing. Asset tracking has the highest priority, followed by identification of assets in relation to patients and authentication. Apart from its application to assets, data collection and transfer are also performed in relation to staff and during clinical trials in patients. Asset sensing, which has the most minimal priority, has major potential for both assets and patients in hospitals.

Offerings at Departmental Level Remains a Priority

Given the relatively low number of AMS providers, it is evident that the European market is still not mature and the level of competition is low. Often, the services of AMS are provided to hospitals only as a part of a larger IT implementation project. In most of the cases, it is taken up by large Tier-1 companies who have an international presence or by Tier-2 companies who have a strong local presence and are often referred as system integrators.

Previous studies show that almost 95 percent of all healthcare AMS installed until 2009 were performed and initiated only at departmental level. Many vendors have recognised this demand ceiling and continue to initiate projects at the department level, albeit with a long-term goal of providing AMS service to the whole hospital setting.

Challenges: From Cost Factor and Lack of Quantitative Data to Other Technology Related Factors

Not all hospitals in Europe are equipped with the infrastructure for wireless technology. The time and money involved in shifting from wired to wireless technology is very high and deters many hospitals from adopting it. Public funds are insufficient for this. Hence, hospital managers and CIOs are facing an investment dilemma in wireless technology. In such a scenario, it is important for the AMS vendors to emphasise patient safety and security, a subject to which the European healthcare system is already sensitive, and use this as a stepping stone to promote the initial installation at departmental level.

Another challenge which is facing the adoption of AMS is the fact that there is little if any data to quantify the ROI that it can deliver. In addition, the market for AMS is at the initial stage and only slowly progressing towards a growth stage, with less than two percent of hospitals in Europe having adopted this technology. As a result, there is little user experience to make a convincing case for AMS. Given this lack of analytical, evidence-based data, it is difficult for hospital staff to clearly understand the technology and merits of AMS.

In addition, on the technical side, depending on the source and distance, data transmission by wireless networks uses a variety of frequencies. There are widespread concerns about interference problems arising when multiple emitters are used within the same spectrum.

The market for AMS also lacks standards that can promote its integration with other hospital management systems. The CE Mark is the only certification that vendors need to possess while selling an AMS. However, this does not describe the quality and relative effectiveness of a solution and hence vendors are finding it difficult to convince customers about the accuracy of the information provided by their products.

Moreover, hospitals are not able to adapt to the landscape of fast evolving technologies, owing to the usually tight financial budg-

ets for healthcare IT in Europe. Shifting from wired to wireless LAN consumes a lot of time and is a complex, sometimes cumbersome, process. Due to the lack of standards and lack of quantitative proof, it becomes difficult for vendors to convince the CIO and head of each department within the hospital. By the time a decision is made, it can be too late – with the adopted technology already outdated.

Electronic and Wireless Economy: Finding a Set of New Opportunities

The potential for wireless healthcare technology demands mobility in today's healthcare environment. When the market for other technologies in healthcare IT has already matured, it is the precise time to forge ahead and accommodate wireless technology in hospitals. Wi-Fi (wireless fidelity) and active RFID (radio frequency identification) are the two major technologies which are dominant within the AMS market. The two technologies are ideally used within a Real Time Location Systems (RTLS). They are also combined with other wireless technologies such as infrared (IR), ultra-wideband (UWB) for different purposes.

In the broadest terms, Internet technology is reorienting the way healthcare organisations function. The open and scalable nature of Web-based technology and services allows easy addition of applications, provided they are compatible with Internet protocols. Integration of mobile devices, such as PDAs and hand held computers to support real-time information capture, is becoming a norm today. The electronic economy is finding itself a new set of opportunities, challenges, and restraints in the healthcare environment in Europe. When it comes to the usage of information systems/information technology (IS/IT) in healthcare management, it is finding itself in a state of turbulence and flux.

Though the current entry cost of RTL tags is high, market growth is translating into a trend of decreasing unit costs, and is expected to make RTL increasingly affordable over the years, along with an improvement in the battery life. This will have a positive influence in the demand for Wi-Fi based RTLS.

Moreover, the loss and misplacement of high value assets such as wheelchairs and ventilators, the growth in technology savvy patients as well as healthcare regulations like the Healthcare Information Portability and Accountability Act (HIPAA) will converge to justify the value of the tags. It is still critical for healthcare organisations to be very clear of where the RFID and Wi-Fi technologies are to be used, as its application can extend from simple location of wheel chairs or pump to matching up patient records and connecting them to equipment maintenance records.

An Integrated Approach to Provide a Better Customised Service

Choosing the right vendor helps healthcare organisations avoid confusion, as a result of multiple components purchased from different vendors. Given this factor, vendors should remain capable and committed to providing high quality patient care in a more cost effective way to their customers.

This requires solutions to be more customised with an inbuilt capability to progressively remove the complexity and risk, which they are otherwise associated with.

New customers often specify both general and customised features they expect from a product as well as special value-adding features such as scalability. Since the importance of providing a customised solution as a part of a major project keeps growing with time, there is a clear need for more strategic alliances and partnerships among infrastructure vendors and software vendors who have already made a mark in the industry. An integrated approach by vendors is likely to help demonstrate an innovative product offering with advanced technology across a variety of geographic regions.

Key Factors to Jumpstart the Asset Management Systems Market

The benefits of mobile technology in healthcare for its users are often underestimated. Healthcare workers, especially in Europe, often resist change that a technology brings. This is yet another problem for most vendors. Such resistance can be broken by establishing a better rapport with existing clients. Loyalty and trust held by each vendor should be maintained by concentrating on the response time for all inquiries raised by hospital staff. Frequent meetings and brainstorming sessions should be held with the administrative and management staff to address new technology updates, issues and latent concerns related to the technology should be actively solicited. It is also important to provide advance notice on any major, impending upgrades.

Whenever such an upgrade is made, it is very important to organise sessions involving customer participation and obtain feedback from them. Vendors could jumpstart the AMS market by systematically addressing questions on compatibility, added value, the maintaining of data ownership, issues about file distribution and synchronisation, and above all, the ability to improve patient safety through timely updates and recall management.

Finding information on Healthcare Asset Management Systems

Reference Points: Since AMS today are mostly accepted at the departmental level, it becomes essential to convince the CIOs, administrative and various department heads. With a relationship built on the bases of proven trust and quality, references for expanding to other departments can be obtained.

Conferences: Since the market for AMS is emerging and relatively new, conferences can prove to be a very useful basis for sharing information and knowledge on the technology. Such an approach may be essential in today's competitive healthcare environment as it helps to send the right message to the customers and drives the growth of value added offerings. In many cases, more than two vendors could partner to hold conferences. In such situations, technology benchmarking is well accepted.

Newsletters: Vendors use newsletters as a medium to promote their products by highlighting their AMS product features and advertising how it can improve a customer's profit and service. It is also an opportunity to cite previous experiences, which can act as a proof of performance. The customers also get to compare various products by different vendors and learn about upgrades, innovations and new product launches.

To summarise, the future of asset management systems market looks bright. Companies providing more accurate and reliable solutions are sure to have a high level of demand and will be best positioned to capture more contracts in the future.

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HEALTHCARE FOR THE RURAL POOR

Telemedicine in the Developing World

By Prachi Shukla

A crucial challenge facing the development sector is the inability of communities living in rural and hinterland areas, which often account for 75 percent of the population in developing countries, to access vital health and reproductive health services. For over 60 years, the focus was on strengthening the public sector for this responsibility. In countries where this has worked—Iran, Cuba, Vietnam to name a few—the results were immediate and effective. Even in India, states like Himachal Pradesh, Goa, and Tamil Nadu have used the public sector effectively.

There are, however, many other areas where the public sector has not been successful. In India, states such as Bihar and Uttar Pradesh (UP) are prime examples; services and technologies that are more than two generations old do not reach the rural poor in these states. Immunisation coverage in UP, for example, is less than 30 percent even though other parts of the country benefited from these vaccines 30 years ago.

In 2008, World Health Partners (WHP) was founded to harness the growing dynamism and energy around entrepreneurship in our globalised world to provide health and family planning goods and services to the poor. Grounded in basic economic principles, WHP drew on private-sector capacity through social franchising, innovations in management of labour and low-cost technologies to develop a scalable and sustainable health service delivery model to bring the benefits of modern health and reproductive healthcare to those most in need.

Calibrated Resources Within an Operational Framework

The operational strategy of WHP divides skills, resources and competencies on the basis of location, and interconnects them to either provide care or facilitate care by a sister network provider. Both provision and facilitation entitle the provider to an income which ensures the sustainability of operations. Services delivered cover a whole range- curative care, which is favoured by private providers, gives financial viability and serves as the main commercial anchor- but the provision of a minimum level of preventive care provision is a non-negotiable part of the service package. The WHP model draws its lessons from Janani which organised skilled and semi-skilled providers into an operational framework for delivering family planning care. (Janani currently accounts for 20 percent of family planning across Bihar).

Female members drawn from the families of makeshift pharmacies, rural health practitioners or informal paramedics are the resource pool despite their educational qualifications often being far below par. However, they are effective managers and exhibit innate business and social skills that produce quick response from the community; training provided to these informal providers enhances their knowledge in technology and healthcare provision.

Local communities are mobilised through advocacy-building and other social mobilisation measures, word-of-mouth publicity, a responsible mix of mass-media and infotainment, and the social marketing of user-friendly health services.

Bundling of Preventative and Curative Services

Part of WHP's strategy is to bundle traditionally separate preventative and curative services and ensure both are provided at its centres. While most rural clinics earn profits from curative services and by referring more serious cases to high levels of care, WHP structures its network in a way that incentivises the incorporation of preventive services. The provision of curative services allows the rural provider to ensure a basis of profit. As a quid pro quo, however, a pre-determined volume of preventive care has to be delivered if the providers want to continue in the networks.

Local communities are mobilised through advocacy-building and other social mobilisation measures, word-of-mouth publicity, a responsible mix of mass-media and infotainment, and the social marketing of user-friendly health services. This unique and innovative model is not only designed to serve those in need but also offers business opportunities to WHP's partners and stakeholders.

Uttar Pradesh Pilot Project

In late 2008, WHP launched a pilot project to provide services to over 1,000 villages in three underserved districts of Uttar Pradesh (UP), home to an estimated 3.6 million people, of whom more than three million live in rural villages.

The WHP provider network in UP included 1,100 rural providers linked to 102 telemedicine centres, 14 urban medical clinics and nine pathology labs. The telemedicine centres, branded Sky Health Centres, connect with general practitioners at a central facility through a closed telecommunication system called ReMeDi, developed by Neurosynaptic Communications (www.neurosynaptic.com). This comprehensive system allows doctors to examine patients visually, to perform sophisticated diagnostic tests, and to provide therapeutic recommendations. ReMeDi has been specifically designed for rural settings, keeping in mind problems posed by unreliable power supply and inaccessibility, on the one hand, and the need for durability and ease of use on the other hand. Many of the applications have also been customised specially for WHP to suit the service delivery network.

A supply chain that makes products, including medicines and contraceptives, avail-

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Figure 1. Clients can consult with a doctor in privacy if they so desire. The project manages a supply chain that ensures prescribed medicines are readily available.

able across the project area caters to all providers aside from 1,800 pharmacies. A nurse-midwife from the public sector also visits the rural centres once a month to provide paramedical contraceptive services (such as IUDs and DMPA) and, in tele-consultation with the doctors, gynaecological services.

A strong advertising campaign promotes the network provider and services. Clients are informed about quality benchmarks, which force the providers to adhere to quality norms. While the project currently caters to the section immediately above the poverty line, the same infrastructure will be used to deliver services to the below poverty line sections. Financial instruments, including coupons, insurance and vouchers, with accreditation and validation processes on a biometric platform, will be integrated.

Impact

The WHP programme in Uttar Pradesh achieved instant and dramatic results. Within six months of its launch, the project started delivering family planning results, which were a third of what the public sector provides in the project districts. The impact is equally high for healthcare delivery, which is primarily to women and children (over 57 percent of healthcare clientele are women) and people of reproductive age. By providing preventive care such as family planning, ante-natal care or immunisation with adjacent aspects of curative care, the impact is up to seven times the famous Janani programme in Bihar which the team members were administering before joining WHP.

Since inception, the project has provided over 31,000 tele-consultations with qualified physicians to villagers, in addition to 188,401 couple years of protection (CYP) through the project's family planning services, averting an estimated 107,650 unwanted pregnancies. This increased couple protection by 37 percent, from 28 to 38.3.

Moving Forward: Targeting the Poorest of the Poor, Expansion to Bihar and Incorporation of More Innovative Technologies

The current project structure provides care to clients who can pay; prices are kept low through high volumes and donor subsidies. The project will work towards the use of coupons, vouchers, insurance, and tap into government subsidies to deliver care to poor families living below the poverty line. WHP is also currently developing a telephone hotline as another avenue to increase clients' access to the WHP network while simultaneously giving providers in the network a way to reach out to the target population.

WHP sees its prime function as an integrator of a variety of skills and technologies available in various parts of the world. The project has benefited significantly through partnerships that are set up for long-term rather than on turnkey basis. Besides Neurosynaptic Communications (telemedicine), the project also partners with iWeb (financial and data warehousing systems), University of Berkeley, California (microscopy), University of Colorado (rural lighting), Intel (low energy laptops) and many others to help deliver quality health services to the rural poor. Additional point of care diagnostic devices currently in exploration includes oximeter, otoscope, dermascope and ultrasound.

WHP just began its expansion to Bihar, India, the third most populous state in India. Fifty-five percent of these 100 million people live below the poverty line and 85 percent live in rural communities. The project will focus on leveraging the WHP service delivery model to improving disease management of several infectious diseases: Tuberculosis, visceral leishmaniasis, diarrhoea and pneumonia. In addition to Internet-based telemedicine, the project will also incorporate the use of mobile phones for collecting patient information, disseminating health information, streamlining financial transactions, and monitoring providers and patients.

Conclusion

The WHP model is designed to be implemented on a large scale, and to deliver a wide range of services. This approach not only allows us to reach a greater population and have a greater impact, but also leverages the economies of scale to increase bargaining power and to reduce costs. The model is designed not only to serve those in need but also to offer business opportunities to all partners and stakeholders, creating viability for providers in the network - a key to building sustainability. WHP has made enormous strides in remote rural healthcare provision over the past two years. With the integration of mHealth, mPayments and low cost point of care diagnostics, along with replication of the model in Bihar, the WHP model is moving closer towards becoming an efficient and powerful model for serving the rural poor in other parts of the world.

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CONTINUOUS DISINFECTION OF THE HOSPITAL ENVIRONMENT USING HIGH-INTENSITY NARROW-SPECTRUM LIGHT (HINS-LIGHT)

Balancing Growth, Budget and Compliance

By Prof Scott J. MacGregor, Prof John G. Anderson, Prof Gerry Woolsey and Dr Michelle Maclean

Increased awareness of the importance of the hospital environment as a potential source of nosocomial pathogens has led to an upsurge of interest in hospital cleaning and decontamination procedures and technologies. It is now known that certain pathogens, such as MRSA and Acinetobacter can survive for many months on environmental surfaces within the hospital environment. Although conventional surface cleaning and disinfection will always be essential for both aesthetic and functional reasons, many current practices and procedures have limited effectiveness for pathogen removal.

Inevitably there will be some areas that are either not cleaned or only ineffectively cleaned. Also, because microorganisms are continuously shed and dispersed from patients and staff, routine cleaning procedures may not be sufficiently frequent to effect timely removal. It is also the case that some of the most frequently touched and heavily contaminated surfaces are those least frequently cleaned. Domestic cleaning staff are not allowed to clean electronic equipment or items attached to patients and these cleaning tasks may be left to nurses who are often too busy. These limitations have led to calls for enhanced investment in more effective conventional cleaning as well to encourage the development of new technologies that might be used to supplement conventional cleaning and disinfection procedures.

A new technology, developed at The Robertson Trust Laboratory for Electronic Sterilisation Technologies (ROLEST) at the University of Strathclyde, has been introduced to provide a unique new approach to help address these problems. This is a new light-based disinfection method based on the use of what the ROLEST research group have termed "High Intensity Narrow Spectrum Light (HINS-light)" which is a violet coloured light from within the visible spectrum that is highly bactericidal. This has formed the basis for the development of the High-Intensity Narrow-Spectrum Light Environmental Decontamination System (HINS-light EDS) specifically designed for the reduction of environmental bacterial contamination in hospitals and other areas of the healthcare environment.

The High Intensity Narrow Spectrum (HINS) light is a narrow bandwidth of high-intensity visible violet light with peak output at 405nm. These specific light wavelengths exploited by the HINS-light EDS technology photo-excite molecules which induce the production of free radical molecules, such as the highly reactive singlet oxygen, within the exposed bacteria. This photodynamic reaction ultimately leads to irreversible inactivation of bacterial cells. This approach to antimicrobial treatment is effective against a wide range of bacterial pathogens including those that are commonly associated with HAIs. The disinfection treatment can be continuously applied to air and all exposed surfaces.

Deployment to Inactivate Hospital Bacteria

The HINS-light EDS units are ceiling mounted light sources that are typically operated continuously during daylight hours (in

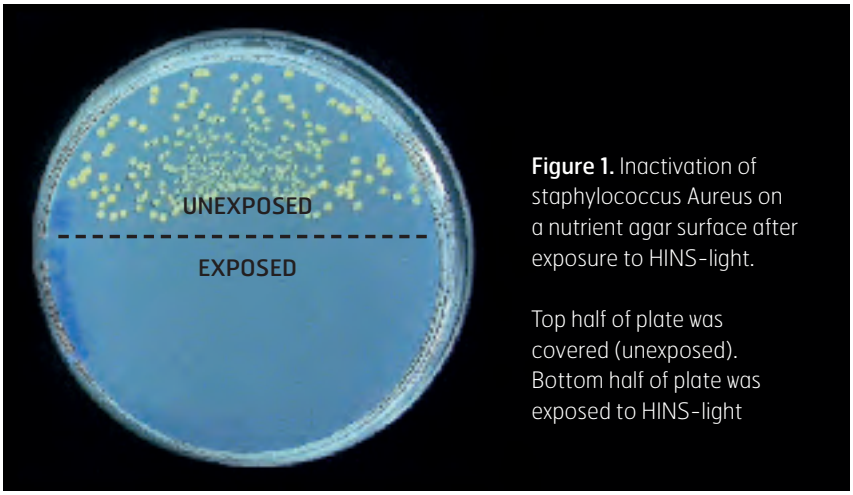

Figure 1. Inactivation of staphylococcus Aureus on a nutrient agar surface after exposure to HINS-light.

Top half of plate was covered (unexposed). Bottom half of plate was exposed to HINS-light

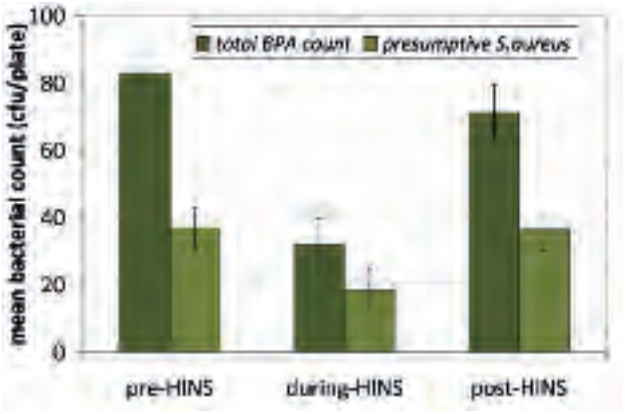

Figure 2. Environmental bacterial levels in an occupied isolation room were successfully reduced during use of the HINS-light EDS

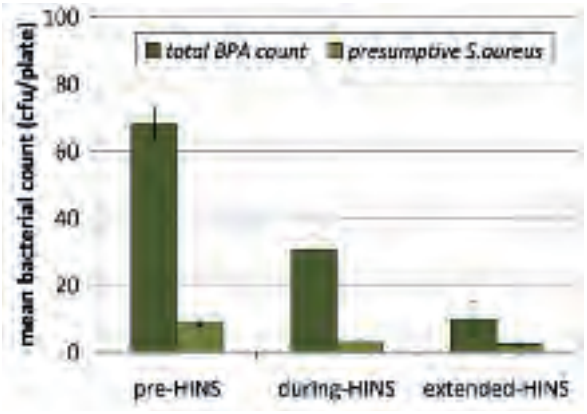

Figure 3. Environmental bacterial levels in an occupied isolation room were reduced to very low levels after extended use of the HINS-light EDS

synchrony with hospital lighting) within the ward or isolation room to provide ongoing environmental decontamination with no disruption of normal day-to-day hospital procedures. Whilst HINS-light is highly bactericidal, safety analysis of the complete wavelength emission spectrum of the light from the HINS-light EDS, with reference to relevant international guidelines, confirms the safety of the HINS-light EDS sources for clinical use.

Operational benefits of the HINS-light EDS include:

- Continuous disinfection;
- Treats the visible environment (air and surfaces);
- Safe for use in the presence of people;
- Effective against a wide range of pathogens;
- Little/no operational requirements;
- No user training;
- No problems with staff/patient compliance; and
- No chemicals or chemical pre-treatments.

Clinical Evaluation Results

Since mid 2008, the ROLEST Group in collaboration with infection control experts from Glasgow Royal Infirmary (GRI), have been engaged in clinical evaluation of the HINS-light EDS. Most of this work has been funded by a substantial Scottish Enterprise Proof of Concept Award that enabled the ROLEST researchers to develop the HINS-light EDS from concept to practical application, culminating in its clinical evaluation.

The clinical evaluation was designed to assess the effectiveness of the HINS-light EDS for the reduction of environmental bacterial contamination on surfaces at various sites in hospital isolation rooms within the Vascular Ward, the Burns Unit and the Intensive Treatment Unit (ITU). Within the isolation rooms, the HINS-light EDS units were installed as ceiling mounted LED lighting systems, with the output level of the HINS-light EDS being set to provide effective environmental decontamination whilst being non-disturbing to patients and staff. During the evaluations the HINS-light EDS was used as a complementary disinfection procedure, being operated continuously during daylight hours in occupied rooms, under conditions where normal clinical care and infection control measures were implemented.

The effect of HINS-light EDS was assessed through contact-plate sampling of bacterial levels on a wide range of frequently touched contact surfaces (e.g. bedside locker, bed table, bed rails, chair, bin lids, light switches and door handles). In each of these studies the principal objective was to assess the percentage change in bacterial contamination level in the isolation room, and whether it significantly increased or decreased following switching on or switching off the HINS-light EDS.

The findings of the clinical evaluations show clear evidence that HINS-light EDS treatment causes a reduction in bacterial counts, and that when the HINS-light EDS treatment is withdrawn, bacterial counts increase. The mean percentage reduction in total staphylococcal counts and presumptive s. aureus counts arising from the use of HINS-EDS was 57 percent with 95 percent confidence interval (45 to 69 percent), and 60 percent with 95 percent confidence interval (50 to 70 percent), respectively. The mean percentage increase in total staphylococcal counts and presumptive s. aureus counts arising from withdrawal of the HINS-light EDS treatment was 162 percent with 95 percent confidence interval (46 to 278 percent), and 168 percent with 95 percent confidence interval (-2 to 339 percent), respectively.

Additional studies carried out to further validate the efficacy of the HINS-light EDS included a study on an unoccupied isolation room in which the total staphylococcal environmental contamination level was reduced by more than 90 percent, and a study which used the HINS-light EDS over an extended period in an occupied isolation room, resulting in 86 percent reduction in staphylococcal contamination. Further studies have continued to generate convincing evidence of the decontamination efficacy of the HINS-light EDS in both isolation room settings, and additionally in out-patient clinic settings.

The study results and associated statistical analyses show clear evidence that use of the HINS-light EDS causes a reduction in environmental bacterial contamination and that the benefit derived from the treatment is lost after the HINS-light EDS treatment is withdrawn, with the bacterial contamination levels increasing over time to at least the pre-treatment values. It should be borne in mind that these results were achieved under a range of clinical conditions within a busy city hospital environment, and it is important to stress that the bacterial reductions obtained were over and above those achieved by the hospital's normal stringent infection control procedures which remained fully in place throughout the study. Results from some of the studies representative of this clinical evaluation have recently been published in The Journal of Hos-

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Brussels, 26 may 2011

The First European Influenza Summit is a one-day meeting of leading organizations and institutes in the field of influenza. The Summit offers them an informal platform to discuss ways to better protect the European population against influenza.

Dr. Gabriele Andersen, chief occupational health doctor at the University Hospital of Hamburg-Eppendorf, will highlight the role of hospital managers in the vaccination of healthcare providers.

Attendance of the summit is free of charge. Registration via **www.flusummit.org** is necessary.

PROGRAMME

09:00-09:20	Coffee / welcome
09:20-09:30	Opening of the Summit
09:30-09:50	**Why is influenza a dangerous disease and why should it be of interest to the stakeholders?** *Prof A.D.M.E Osterhaus, head department of Virology, Erasmus MC Rotterdam, The Netherlands / ESWI chair*
09:50-10:00	Q&A
10:00-10:20	**Council recommendations on seasonal influenza vaccination** *Mr. John T. Ryan, Head of the Health Threats Unit, DG Directorate-General for Health and Consumers*
10:20-10:30	Q&A
10:30-10:50	**Vaccination of Healthcare Providers: the Role of Hospital Managers** *Dr. Carmen Andersen, chief occupational health doctor at University Hospital Hamburg-Eppendorf*
10:50-11:00	Q&A
11:00-11:15	Coffee Break
11:15-11:35	**Vaccination strategies in the Netherlands** *Dr. Tjo van Essen, General Practitioner - advisor to the Dutch Health Council*
11:35-11:45	Q&A
11:45-12:05	**The role of hospital pharmacists in prevention and treatment of influenza** *Prof Arnold Vulto, Erasmus MC Rotterdam, The Netherlands*
12:05-12:15	Q&A
12:15-12:35	**The role of pharmacists in vaccination strategies** *Mrs Susete Costa, National Association of Pharmacists, Portugal*
12:35-12:45	Q&A
12:45-13:30	Lunch
13:30-13:50	**Influenza vaccine manufacturers committed to supporting national flu vaccination programmes** *Richard Stebbing, chair UK Vaccine industry Group*
13:50-14:00	Q&A
14:00-14:20	**Raising the public's awareness about influenza in France** *Prof Bruno Lina - chair scientific advisory board of the Groupe d'Expertise et d'Information sur la Grippe (GEIG)*
14:20-14:30	Q&A
14:30-14:50	**WHO-Europe: assisting countries to obtain influenza surveillance and burden data** *Dr. Caroline Brown, Programme Manager 2.1. Influenza & other Respiratory Pathogens, WHO Regional Office for Europe*
14:50-15:00	Q&A
15:00-15:15	Coffee Break
15:15-15:35	**Changing influenza policy: the US perspective** *Dr Ilyas Tas, American Medical Association, co-chair National Influenza Vaccine Summit*
15:35-15:45	Q&A
15:45-16:10	**The role of communication and media** *Hans-Joachim Neubert, President European Union of Science Journalists' Associations (EUSJA)*
16:10-16:15	Q&A
16:15-16:45	Exchange of views and opinions
16:45-17:00	End of the Meeting - Main outcomes
17:00-17:30	Closing drink

pital Infection (Maclean et al, Environmental decontamination of a hospital isolation room using high-intensity narrow-spectrum light, 76, p247-251, 2010).

It is also important to note that whilst the studies described focused on the reduction of staphylococcal bacteria, levels of other contaminant bacteria will also have been concurrently reduced due to the broad spectrum bactericidal effects of HINS-light. Extensive laboratory studies by the ROLEST group have established that the HINS-light EDS is an effective technology for the inactivation of a wide range of bacterial pathogens. Staphylococcal bacteria were chosen as "efficacy indicator" bacteria because of both their importance as a cause of HAI as well as the availability of an accepted and well-tested contact agar evaluation protocol that could be applied for the accurate assessment of levels of these organisms on contact surfaces in the clinical environment. In more recent testing of the microbiocidal efficacy of HINS-light it has been established that, in addition to broad spectrum bactericidal effects, HINS-light also has biocidal effects on mould and yeast type fungi, organisms which can also cause serious problems in the clinical environment.

Conclusions

Findings of the clinical evaluations have provided rigorous evidence that HINS-light EDS used in the treatment of occupied hospital rooms reduces total staphylococcal and presumptive staphylococcus aureus contamination levels. The findings reflect consistency across the different studies and are robust to a range of statistical analyses. In view of the studies having been conducted under hospital management conditions, where contamination levels are variable and are constantly being driven down by normal infection control procedures, the HINS-light EDS findings are externally valid and indicate that HINS-light EDS can make an additional significant contribution to bacterial decontamination in clinical environments.

A particular advantage associated with the use of HINS-light EDS is that it can be used continuously in the presence of patients and staff including during periods of high bacterial dispersion as can be associated with activities such as bed making and bandage changing. The pervasive nature of light permits treatment of all exposed surfaces and these are surfaces that are most likely to be contaminated through aerial dispersal and hand touch. The facility for continuous application is also advantageous since technologies such as deep cleaning procedures which, although highly appropriate for terminal cleaning operations, are ineffective as a means of continuous decontamination as rapid re-contamination of the environment follows within several days after deep cleaning.

Whilst the results achieved with the HINS-light EDS are highly promising it has still to be established, as is the case with all other environmental decontamination procedures, whether long-term use of the HINS-light EDS can have a significant impact on clinical outcomes such as infection and colonisation rates.

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PROTECTING PATIENTS **FROM CLOSTRIDIUM DIFFICILE INFECTION**

By Robert Orenstein

Protecting patients from acquiring Clostridium difficile infection has become a major challenge for healthcare institutions worldwide. Antimicrobial stewardship, early isolation, accurate diagnosis, and environmental disinfection are the key steps to prevention.

Clostridium difficile infection (CDI) is an increasing menace across the entire healthcare spectrum. It is now the leading healthcare acquired pathogen and accounts for over 165,000 cases which have their onset in US hospitals. The downstream impact of this is enormous, affecting another 50,000 persons after discharge and over 263 million nursing home residents. The costs in dollars, deaths and loss of independence are staggering. This all comes at a time of an aging population with a higher risk of acquiring and developing complications of this disease.

There are two principal modifiable factors, which may mitigate risk, reducing antimicrobial exposure and reducing the acquisition of C. difficile. Nationally recommended strategies have focused on enhanced isolation practices (contact isolation), hand hygiene compliance, an early alert system of notification of lab results and more recently, antimicrobial stewardship and environmental cleaning (Cohen et al. 2010).

Clostridium difficile is an anaerobic toxin producing organism, which colonises the lower gastrointestinal tract. The frequency of colonisation is dependent upon healthcare and antimicrobial exposures, the host's immune state and the competitive faecal biome. Disruption of any one of these factors may enhance the risk of acquisition and disease due to this organism. There are several potential approaches to prevention:

1. Preventing acquisition from the environment;

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2. Preventing colonisation of the gut;
3. Enhancing host immune defenses; and
4. Providing early, effective treatment.

The Three-Step Approach

A simple three-step approach may help reduce acquisition and transmission.

The initial step for clinicians is to think C. difficile when planning a course of therapy for a patient. Physicians should consider the risk of CDI associated with a particular antimicrobial and its duration of use. Specific factors to consider are older age >60, recent healthcare exposure, long duration of hospitalisation, severe underlying illness, and the use of acid lowering medicines.

The second step is early isolation and rapid testing of suspected CDI cases. Hospitalised patients with diarrhoea should be placed in contact isolation pre-emptively until the diagnosis is excluded by a sensitive C. difficile toxin test. Many of the currently used EIA assays for toxins A and B may miss significant portions of cases (Sloan et al 2008). The use of a sensitive assay allows more rapid initiation of therapy and limits unnecessary isolation. Immediate phone notification of clinicians of a positive C. difficile toxin assay markedly reduces the time to initiation of treatment (Verdoorn et al 2009). Early treatment also may reduce the duration of their symptoms and risk for nosocomial transfer. Oral vancomycin reduces diarrhoea and improves symptoms faster than oral metronidazole and may be another strategy employed to reduce healthcare transmission (Al Nassir et al 2008).

The third step is the prevention of transmission from colonised and infected patients and their environment to healthcare personnel and other patients. Barriers such as gowns and gloves, and dedicated patient equipment (rectal thermometers, blood pressure cuffs, stethoscopes) have been shown to reduce transmission.

Patients infected with C. difficile continue to shed organisms into the environment even after their diarrhoea has ceased. We recommend that patients remain in contact isolation throughout their hospital stay. Isolation may reduce transmission if compliance is high but fails when healthcare workers contact contaminated surfaces and fail to remove C. difficile from their hands. Thus, reducing environmental contamination is important. This is accomplished by ensuring adequate cleaning of high touch surfaces and monitoring its effectiveness. Audit and feedback to housekeepers engages them in the process of protecting patients from harm. A well-cleaned hospital room reduces bioburden but cannot eradicate C. difficile spores which requires cleaning with sporicidal agents such as bleach. The targeted rooms and frequency with which they should be cleaned with sporicidal agents, remains unanswered.

Targeted Intervention: Germicidal Bleach Wipes

In our hospital, despite high compliance with isolation practices and all the other measures previously noted, nosocomial rates remained elevated. We identified units with the highest endemic rates of nosocomial C. difficile and introduced a targeted intervention to wipe out C. difficile using germicidal bleach wipes. Three published studies (and several unpublished) have shown hypochlorite disinfection to reduce rates of CDI, particularly in the setting of high colonisation pressure (Mayfield 2000, Wilcox 2003). These studies have shown a 1:10 dilution of household bleach to be an effective sporicide against C. difficile. Recently, several manufacturers have produced germicidal bleach wipes for use in cleaning hospital rooms. These are easier to use and need to be left to dry to achieve the ten minute wet contact time to kill C. difficile spores. The cleaned surfaces often have a salt residue and if visible this should be wiped with wet cloth to improve appearance.

At our institution we identified two medical units with the highest nosocomial rates of CDI. These units cared for patients with chronic gastrointestinal and pulmonary diseases and had an incident rate of CDI tenfold above the institutional rate, reflecting a high colonisation pressure.

Prior to the intervention we monitored the effectiveness of room cleaning with audits and use of Clean Trace. All rooms on these units were determined to have been effectively cleaned. We then met with the unit nursing, clinical and environmental services staff and outlined our vision of how to wipe out C. difficile by eliminating spores from the patient and work environment. The intervention consisted of housekeeping staff cleaning each room on these two units every day using Clorox brand germicidal bleach wipes 6.15%-5,200 ppm active chlorine. The bleach wipes were used on all high touch surfaces and allowed to dry to achieve the recommended ten minute contact time. Surfaces that showed salt residue were re-wiped with a water-dampened cloth to eliminate any concerns that the surfaces were dirty. We explained the rationale to housekeeping and advised them of the potential irritant side effects from the bleach product. Like any bleach product, the odour was noticeable at low concentrations. The wipes have a masking agent but we found that cleaning in a closed non-ventilated space was irritating to the environmental services staff. Mitigation was provided for those bothered by the irritant effects in the form of a plain surgical mask and ensuring adequate ventilation of the area.

The product was well tolerated by patients, even those with respiratory ailments and by nursing staff. No equipment damage was reported during the trial. We continued to monitor cleaning effectiveness and surveyed patients and staff regarding their acceptance of the new product. As CDI rates became available each month we met with housekeepers to review the survey data and rates to show them how effective their work was at reducing CDI and to address any of their concerns.

Daily and terminal cleaning of all rooms on the affected units with the germicidal bleach wipes resulted in a 92 percent decline in hospital-acquired CDI on these two high risk units over a six month period. The intervention and its results have been sustained now for over eight months.

This reduction in clinical cases of C. difficile infection was achieved in the absence of any other interventions, in rooms known to be effectively cleaned and with no change in hand hygiene practices. Rates elsewhere in the institution on non-targeted units did not decline. The change was easily implemented with education of environmental service staff and is exportable to other high-risk units.

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DIALECTICS AND LEADERSHIP

Getting Ahead by Getting Along

By Stephen R. Baker

A cornerstone of leadership is the mastery of techniques for convincing people to pursue your vision. Sometimes, provided you imbue those who report to you with a sense of urgency and shared passion, your ministrations will be enthusiastically supported. But most of the time such unanimity of purpose is lacking. Some of those you direct will actively dispute you, while others will be passively aggressive. Still others will be diffident or confused about what you mean and what they should do. And among your staff there will inevitably be rivalries, petty jealousies yet also productive teamwork. So how do you manage such a variety of attitudes, questions, initiatives and complaints, each of which is, in either a small or large way, a test of your capabilities as an executive?

Dialectics: Inducing Respect and Harmony

There is a range of personal styles you can bring to the task, many of them ultimately deleterious to your success. You can be overbearing or standoffish, over-forgiving or hypercritical. But one approach I have found that more often than not engenders respect and augments harmony is to couch discussion in dialectic terms.

What is "dialectics"? I am not referring here to the term dialectic materialism, a tenet of Marxist ideology. Rather I use the word in an apolitical context, defined as a dialogue between two or more people who may hold differing views, yet wish to pursue truth by seeking agreement with one another. Dialectic must be strenuously distinguished from debate, which could be defined as a dialogue in which two or more people who hold differing views wish to persuade or prove the other wrong. Characteristically, if not always formally, a debate ends in a decision. There is a loser and a winner as decided by individuals deputised for the occasion. In a debate the object is victory, whereas in a dialectic interchange the object is accommodation, consensus and acknowledgement of the legitimacy of differing positions if not the establishment of agreement.

> In a dialectic interchange the object is accommodation, consensus and acknowledgement

Applying Dialectics in the Hospital

Technique one:

Distinguish between deliberate intention and accidental consequence

How does dialectics play out in the day-to-day work of a department head or manager in a hospital or any organisation for that matter? Let me give some examples. Consider the terms unfair and unfortunate. They are often used interchangeably by an aggrieved petitioner. A tendency is for a bad outcome to be designated as unfair. Therefore it is to be rectified by an exaction of some sort, often in the form of blame or the issuance of a penalty. But frequently what actually went wrong is a consequence of bad luck and not mean-spiritedness. In an unfortunate circumstance, the adverse consequence is not directly a result of purposive human activity or intention but of factors inherently beyond conscious direction or manipulation. Making such a distinction is crucial in reaching agreement or at least reducing tension.

The role of the chairman is to elucidate this distinction when discord is about to be sowed so that potential combatants seeking redress come to realise that an unpleasant condition or outcome is no one's fault even if it is everyone's concern. In this situation the dialectic interjection moves the dialogue forward, avoiding unnecessarily persistent or recurrent recriminations.

Technique two:

Downplay destructive hyperbole

Another technique of dialectic correction concerns the management of metaphor. This imposition of responsive and responsible leadership is used to manage arguments specifically to downplay the destructive intrusion of hyperbole. How many of you have heard an event characterised as a "disaster" or a "nightmare" when in fact it was only an annoyance readily endured and often correctible and corrected. But if you allow the inflammatory metaphor to be accepted not as merely referential for narrative effect but as a representative articulation of truth, then all further deliberations will be based on its supposed veracity in defining the tenor of the discussion.

Metaphor management is crucial for the focusing of ensuing exchanges because it encloses and delimits the terms of engagement. Reminding one that his or her use of such an arresting but invidious metaphor is a rhetorical extravagance that is inappropriate to form the basis of bargaining, will catch its articulator off guard. Almost always he or she will reluctantly but assuredly acknowledge that the hyperbolic reference is not a reflection of reality but instead just an emphatic statement of position. And by delegitimising the melodramatic metaphor, the discussion can pro-

ceed along a less contentious path. And by dampening the emotional byplay through an insistence on "unembroidered" claims, perhaps an understanding between the parties in dispute may be easier to achieve and a sense of congeniality more easily restored.

Technique three:
Offer thoughtful responses rather than abrupt declarations

A third example of the gentle introduction of a dialectic modus operandi upon which structured understandings can be erected is the purposeful management of conversations in which you are the protagonist. It can be accomplished by a progression of tenses in your sequential responses. The choice of verb can be vital for a productive give and take between leader and staff.

Often a Chair will not be perceived to provide full attention or adequate time to respond to entreaties and suggestions either earnestly or deviously offered by trainees, faculty or staff. Some of these proposals may be truly innovative whereas others seem helpful but are really only self-serving and still others are just ridiculous. A temptation of the Chair is to make definitive pronouncements on the spot, typically in a declarative mode. Mostly, such abruptness makes the leader seem to be brusquely dismissive or less often uncritically receptive. A frequent result is that when a proposal is given short shrift it discourages the petitioner unnecessarily and when approved hurriedly, careful thought is not given to an estimation of its unintended consequences. Physicians are typically very good at rapid decision-making with little information but often not very good when measured deliberation is called for so that a novel suggestion is given its due dispassionately. How can one avoid the pitfall of rash judgment using dialectics as an argumentative device?

First instead of declaring approval or rejection outright, cast your replies in the subjunctive tense. For example if you say: "If I do what you say, then what would happen?" is a more inviting and less threatening response than the categorical decree "No, I do not like it and that's that!" The proponent seeking your favour is not offended by the need to develop a concept further. Moreover continued discussion might engender ideas neither of you had thought about initially. And if some merit is elucidated through these subjunctive musings, then it might be profitable to move to sentences rendered in the conditional sense. For instance the next step in the evaluation may be "this notion could result in such and such" or "we should consider its anticipated and hidden eventualities." And if the examination of the initial proposal is still promising, then hortatory statements are in order in which the effort for continued development of the idea is joined but still contingent on further activity. The key words now are "let us", as in "let us investigate it some more".

Careful Phrasing Means Greater Accord

Along such a "path of tenses", an ultimate decision on merit may be delayed but the rhetorical paradigm is no longer so disconcerting or devastating as an outright rejection or as reckless as an immediate acceptance. Amity is maintained through this progressive analytic process navigated with the use of the key words such as "if then" followed by "could or would" and then by "let us". Under this schema the Chair becomes respected for his empathy, if not his eventual agreement. In this way the dialectic process helps you all get along and sometimes even get ahead.

Dialectics, of course, is not a panacea or even an anodyne for the pain of confrontation between your staff and you or between employees under your charge with you as mediator. Yet it is often a good way to avoid the destructive effects of immediate discord and prolonged resentment. Moreover, it is an effective way to get your points across while leaving your ethos as leader intact or even enhanced.

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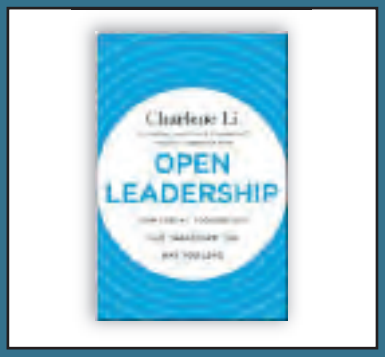
***Books** in Review

Open Leadership: How Social Technology Can Transform the Way You Lead

Charlene Li, John Wiley and Sons, 2010



"Open Leadership: How Social Technology Can Transform the Way You Lead" is an essential guide for leaders who want to use social media to be "open" while maintaining control.

"Be Open, Be Transparent, Be Authentic" are the current leadership mantras-but companies often push back. Business is premised on the concept of control and yet the new world order demands openness. Leaders do not know how to be open and be in control. This must-have resource will help the modern leader understand how to lead in the new open world ßwhere blogging, twittering, facebooking, and digging are becoming the norm. The author lays out the steps that leaders must take to transform their organisations and themselves into being "open" -and exactly what that will mean.

- Shows how to use social media to become an open organisation
- Offers basic advice for leaders who are adapting to the new era of openness in the marketplace
- The author Charlene Li is one of the foremost experts on social media and technologies.

In easy-to-understand language, this book will help leaders orient themselves to social networking and other technological advances. The book is divided into two sections. The first section, "The Upside of Giving Up Control", explains why being "open" is becoming inevitable and how to develop your openness strategy. The second section, "Open Leadership: Redefining Relationships" focuses on how to practice open leadership and how this can transform organisations.

ATRIAL FIBRILLATION: HOW AWARE ARE YOU?

Findings and Conclusions from the Rapid Evidence Review

By Kathryn Taubert

Atrial fibrillation (AF) is a debilitating heart condition, caused by abnormal electrical activity in the heart, which results in a cardiac arrhythmia. AF can be a sustained condition or it can come and go. The impact and consequences of AF are substantial: Those with AF are five times more likely to have a stroke than those without AF, and are at an increased risk of hospitalisation, morbidity and mortality. As a result, AF is a fast growing public health concern, and hospitals have a vital role to play in its management via correct diagnosis and early treatment.

The Impact of AF

Across Europe, six million people have AF, and this number is expected to more than double by 2050. Patients with AF may experience palpitations, shortness of breath, chest pain, tiredness or even loss of consciousness. AF can impact physical functioning, psychological well-being and social functioning meaning patients may experience a poor quality of life. AF is also associated with an increased risk of stroke, heart failure, and mortality, and increased rates of hospitalisation.

Despite these serious consequences, a 2010 independent study which draws upon a rapid evidence review and a survey of patient organisations found that there is a lack of comparable AF information and data across Europe. Commissioned by the Stroke Alliance for Europe (SAFE) and supported by the World Heart Federation, the "How AWARE are you?" report concludes that AF prevalence is likely to be underestimated and that we are missing opportunities to successfully manage AF. Such sub-optimal management negatively impacts both patients and healthcare systems: Patients in terms of preventable morbidity and mortality; and healthcare systems in terms of higher cost.

The report highlights the high costs of AF and the significant resources across both primary and secondary care it uses. Hospitalisations in particular are expensive. Based upon the French estimate of total average cost per patient of 3,220 euro, the total cost for AF can be calculated as 10 billion euro for the European Union. Indirect costs of AF are also of significance as patients may also be limited in their ability to work or may retire early. Appropriate management of AF can however lead to reduced costs.

At the front-line of healthcare delivery, the impact of hospital services on the successful management of AF is considerable. For hospital managers, interventions in the areas of:

- Data collection;
- Healthcare system response; and
- Patient information.

could aid the successful management of AF.

Data Collection

The "How AWARE are you?" report suggests that AF prevalence data may not include all cases, since AF is not always symptomatic and can be 'silent', but also because data collection is variable. An accurate understanding of AF incidence and prevalence is however vital to those hospital managers with responsibility for the planning of the provision of cardiac services. AF prevalence must be accurately estimated so the correct number of staff can be allocated for clinical consultations, and the cost of medical therapy and intervention be accurately calculated and budgeted for.

Disease registries are often utilised within other therapy areas, with identified benefits ranging from better aggregation of patient data for practice assessment or quality improvement to the facilitation of clinical research. However, AF disease registries are few and far between across Europe. More are being planned which should help meet some informational gaps. Taking a lead by establishing and using a disease registry within your hospital will aid the collection of important and useful data.

Further data collection to understand the effect of AF on a patient's quality of life, for example their ability to stay in work, is also important for multidisciplinary and cross-agency reporting on wider disease context, to input into healthcare policy and contribute to AF's priority setting. Surveying your patients, or collaborating with a national patient group to secure patient insights into the effects of the disease, may therefore be a worthwhile activity for your cardiac team to assess the true burden of the disease in your area and to make the best use of resources for managing patients.

Healthcare System Response

AF is a complex disease to diagnose and manage; patients' symptoms can vary greatly, and a wide range of diagnostic and treatment options are often provided across a range of settings from primary to secondary care. Due to the involvement of a multidisciplinary team, adherence to guidelines is important to ensure the delivery of comprehensive patient care and to contribute to improved patient outcomes, and to reduce demand on healthcare systems.

However, it is recognised that the diversifying nature of medical care within Europe, including differences in the availability of therapies, delivery of care and varying patient characteristics, makes it difficult to formulate guidelines that are valid throughout Europe. Therefore, where possible, hospital managers are encouraged to align services with national guidelines; if following European guidelines, you may wish to consider applying modifications according to your local patient population needs.

Country	Incidence and prevalence	Source
Denmark	Prevalence: 198 per 100,000 individuals aged 40–89 years (1980) 438 per 100,000 individuals aged 40–89 years (1999)	Frost, Vestergaard, Mosekilde et al 2005
Italy	Prevalence: 7.4% those aged 65+	Bilato, Corti, Baggio et al 2009
Italy	Prevalence: 9% of primary care patients of which 63% had chronic AF, 37% newly diagnosed AF	Scalvini, Piepoli, Zanelli et al 2005
Italy	Prevalence: 21.4% of heart failure patients in Heart Failure Clinics in hospitals	De Ferrari, Klersy, Ferrero et al 2007
Italy	Prevalence: 3.9–3.0 cases, and 3.6–3.0 cases per 1,000 person-years in males and females respectively in primary care	Mazzaglia, Filippi, Alacqua et al 2010
Lithuania	Prevalence: 3.8% at age 60 and 9.8 % at age 80	Survey respondent
Netherlands	Prevalence: 5.5% of those aged 55+ Incidence: 9.9/1000 person–years	Heeringa, van der Kuip, Hofman et al 2006
Norway	Prevalence: 10% of those aged over 75	Tveit, Abdelnoor, Enger et al 2008
Portugal	Prevalence: 2.5% in those aged 40 and over	Bonhorst, Mendes, Adrago et al (2010)
Scotland (UK)	Prevalence: 9.4/1000 in men and 7.9/1000 in women Incidence: 1/1000 in men and .09/1000 in women (2001/2)	Murphy, Simpson, Jhund, et al 2007
Spain	Incidence: 3.1 per 100 patient-years in those with haemodialysis	Vázquez-Ruiz de Castroviejoa, Sánchez-Perales, Lozano-Cabezas et al 2006
Spain	Prevalence: 8.5% of those 60+	Cea-Calvo, Redón, Lozano et al (2006)
UK	Prevalence: 0.84% in men and 0.83% in women in primary care (1994) 1.49% in men and 1.29% in women in primary care (2003)	DeWilde, Carey, Emmas et al (2006)
UK	Prevalence: 1%	BJHM (2009)

Figure 1. Estimates of incidence and prevalence of AF by country

Despite the existence of a range of both national and European guidelines, the "How AWARE are you?" report reveals that adherence to guidelines is variable. The reasons for this discordance are not well understood; you may wish to explore barriers to adherence within your hospital to establish resolutions. These could include education for clinicians and the provision of information on guidelines to patients.

Patient Information

According to the report, the availability of patient information varies across Europe. In some countries very little is available, while in others there is a variety of patient information including websites and leaflets; there is even a telephone helpline available in the UK. However, what is available tends to be insufficient to meet patient needs. The report also reveals a gap in the understanding of patient preferences, and that patients do not have the information they need to be able to 'partner' with their clinician in their treatment decisions.

Providing training to clinicians on patient-physician partnerships may assist in ensuring an open dialogue regarding the full range of AF treatment options. Conducting an audit in collaboration with patients of the printed or online patient materials available at your hospital may help to ensure that the information is suitable, and presented and disseminated appropriately.

Conclusion

The successful management of AF requires multidisciplinary teams to work together with patients. The AF AWARE campaign calls for European-wide improvements to AF management and urges hospital managers to improve data collection, which will in turn enhance planning and ensure the appropriate allocation of resources to AF prevention, diagnosis, treatment and the provision of patient information. Providing the right services will improve patient outcomes, and reduce the substantial cost of illness both by reducing indirect costs (for example by allowing AF patients to stay in work) and by reducing demand for expensive hospital care.

The "How AWARE are you?" author recognises that the report is not a systematic review or definitive international overview of AF, but rather provides a snapshot and a starting point for further research on this condition across Europe. The AF AWARE campaign aims to expose the poor understanding of AF and to help healthcare professionals, patients, policy makers and the general public understand that comprehensive management of AF should address its multiple impacts.

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AN AMERICAN PERSPECTIVE: CURRENT TRENDS IN LABORATORY MANAGEMENT

By Anthony Kurec

For most laboratory and healthcare professionals, management training is not included in their scientific-based educational curriculum. The ability to manage and lead people successfully is a long-term learning experience. The need to motivate staff members to complete tasks successfully requires good leaders who become good managers.

In the United States, laboratory medicine has become integral to the diagnosis, treatment, and management of patients. Its rather meagre start began around the 1900s, slowly evolving over the twentieth century. Advances in understanding human biochemistry and physiology have spurred the development of the technology needed to evaluate patient specimens creating the foundation for laboratory medicine.

The first clinical laboratories were no more than a corner of a physician's office with the physician performing the laboratory work. It is only in the last 50 to 60 years that the need for skilled laboratory staff with special training became evident, evolving into today's clinical laboratory scientists (CLS). It also has become clear that good managers are needed to lead these individuals.

Education

In the last few years, staffing concerns have reached a high point. The number of NAACLS' accredited medical technology/clinical laboratory science programmes dedicated to training CLS have decreased from almost 800 in the 1970s to the current 551 programmes. Because of fewer programmes, there are fewer students graduating resulting in a smaller selection pool. In addition, many baby boomers are looking at early retirement, thus creating even more vacancies. The US Bureau of Labor Statistics has estimated a 14 percent growth rate for laboratory professionals in the next eight to ten years, yet the ability to fill those positions with qualified individuals raises concern.

The need to support education programmes and entice potential students is critical to meeting these deficiencies. Many laboratory managers have actively worked with their local universities, high schools, and even grade schools to encourage an interest in laboratory medicine. Managers have had to become creative in developing ways to attract individuals into this profession to meet future staffing needs. In light of the current economic downturn with many unemployed, resurgence in the number of applicants to these programmes has been encouraging and offers cautious optimism about securing future laboratory professionals.

Technology

Over the past 20 years, clinical laboratory in vitro diagnostics (IVD) has seen significant advances due in part to enhanced computer technology. The days of manually completing laboratory tests has fortunately been replaced with compact, highly precise instrumentation that offers fast throughput. Most instruments interface with a robust laboratory information system (LIS) that provides a platform to record data, preserve it, and report it in a timely and accurate manner. Integration with an electronic medical record (EMR) system has further enhanced the laboratory's ability to provide results in a dynamic manner. Laboratory test results that used to take days or weeks to get to the patient's physician can now be provided promptly.

Growing interest in establishing totally automated laboratories grew in the last decade. Yet today, only a few laboratories utilise totally automated systems due to cost, concerns with the inflexibility of adjusting to specific workflow activities, and the high test volume needed to sustain such a system. Most laboratories have focused more on less expensive modalities by implementing a combination of timesaving systems: Pneumatic tubes, bar coding, automated tube de-cappers, automated centrifuging and aliquotting stations, and work cells. While not considered fully automated, these laboratories enjoy improved test processing accuracy, smoother workflow, and better staff utilisation.

To further assist tying equipment technology with information technology is the emergence of middleware, or software that bridges operational systems with computer applications. This rapidly growing area is providing the needed connectivity between laboratory instruments and the LIS.

Quality Management Systems

Quality control, testing validations, and other time-consuming activities to collect and analyse can now be done quickly and efficiently using the analyser's interfaced computer system. Since the publication of the now famous Institute of Medicine's (IOM's) report (To Err is Human) that declared 44,000 to 98,000 Americans die each year from medical errors, a reinvigorated commitment to improving quality management has been undertaken. The report identified laboratory errors such as ordering the wrong test (50 percent), failure to act on test results (32 percent), and delays in timely reporting (55 percent). In addition, concerted efforts by the various regulatory agencies focus on establishing stringent guidelines modeled after ISO 15189 standards and in part creating what is now termed quality management systems.

Laboratory Design

Consolidation of laboratory services has become the norm. Traditionally, laboratories were broken into specific sections based on the type of testing conducted, i.e., chemistry, haematology, microbiology, virology, urinalysis, etc. Most modern laboratories now use 'open' laboratory design by removing walls that would have separated these various disciplines. Where segregation of certain laboratory services are still needed in areas such as microbiology, blood bank, or PCR clean/dirty rooms, other sections have melded into a core laboratory.

Automation and multi-platform instrumentation has allowed the laboratory to unify certain sections based on common test modalities. Haematology, chemistry, and urinalysis are often placed in one section, as are immunology and serology. Many of these tests can be performed in the core laboratory because of common instrumentation platforms. These efforts offer better use of staff, decrease need for redundant equipment, and improve overall efficiency.

As new laboratories are built or old ones renovated, the open laboratory concept is generally adopted. In addition, environmental and ergonomic concerns are also addressed. Appropriate ventilation, temperature/humidity control, and environmentally friendly venues also are considered. It not only provides a safe and environmentally responsible work place, but also improves staff morale, efficiency, and overall productivity.

Point-of-Care Testing

An area that has seen significant growth and improvement over the last decade is point-of-care testing (POCT). POCT brings certain laboratory tests to the patient's bedside or treatment area. It has served as a powerful tool in dealing with immediate care situations as seen in the emergency department, during surgeries, certain outpatient settings, home testing, screening at health fairs and emergency disaster scenes. These handheld devices are designed for ease of use with minimal training required and strict quality control protocols using a wireless interface with the LIS, thus ensuring a high level of accuracy and timely test results.

Telepathology

A number of disciplines, including pathology, have taken advantage of telemedicine technology. While slow to be integrated into standard practice, telepathology has gained some momentum with the improved computer capacity, greater Internet bandwidth, and the use of high colour resolution digital imaging. This has been particularly helpful for those healthcare providers who have limited access to pathologic consultations especially when time is of the essence. Intra-operative consultations during surgery utilising frozen tissue section evaluations are often requested by the surgeon. Access to an expert pathologist utilising telepathology is quick and cost effective, in addition to best utilising the pathologist's time. Use of telepathology in the immediate assessment of fine needle aspirations (FNAs) has also proven useful by providing preliminary diagnosis and/or specimen adequacy.

Molecular Diagnostics

Molecular diagnostics has become a multi-billion dollar market growing at a rate of 35 to 40 percent annually. Molecular testing has become standard practice when testing for various genetic diseases (cystic fibrosis, hereditary haemochomotosis), sexually transmitted diseases (HPV & chlamydia), hepatitis and HIV viral loads, coagulation tests (Factor V Leiden & Prothrombin G20210A), and in the diagnosis of leukemias/lymphomas (B&T cell rearrangements, JAK). These highly accurate tests have proven invaluable in diagnosis and treatment of patients.

A new procedure added to the molecular testing toolbox is the microarray assay used to measure gene expression. Target DNA samples are embedded on a matrix (silicon chip, nylon membrane, or glass slide) containing from a few to hundreds of thousands of genes or gene sequences. Known probes are hybridised with the target samples to eventually reveal the complementary gene nucleotides. The inclusion of this tool in clinical practice has yet to be fully established but holds great potential for the future.

While there are numerous advantages in utilising molecular testing, there are also some limitations due to availability of specific test probes, cost of equipment and materials, access to trained personnel, and certain legal restrictions (in test ordering and result follow up). However, it is clear that molecular testing will continue to grow as clinical applications become more accessible and applicable to the diagnosis and management of patients.

Business

The effort to push patient treatment and follow up to an outpatient setting has continued forcing laboratories to look at outreach laboratory testing as part of their business plan. Historically such testing was a function of large national reference laboratories. Yet as technology became more accessible, compact and affordable, more hospital-based laboratories accepted this as an opportunity to grow their laboratory. Today, many laboratories have included outreach testing into their customer base. Laboratory tests that were once too complex to routinely perform have now been automated and/or simplified so they might be incorporated into standard test menus. Hospital laboratories that relied solely on in-patient work found that it was very limited as a revenue source. As reimbursement payments for these tests continue to decrease, it has become clear that increasing test volume can improve the bottom line.

Conclusion

While there are many challenges facing today's clinical laboratory, there are also many rewards. The importance of the laboratory has gained recognition in its ability to contribute significantly to patient management. It is now well established that 70 to 80 percent of all medical decisions can be attributed to laboratory data.

It is with this optimistic approach that laboratorians look forward to playing an even bigger part in healthcare and to be recognised for the skills we bring to the table. Advances in technology will continue to influence laboratory practices and how we educate our future laboratory scientists. By embracing these advances, we will be able to implement this technology into everyday practice, thus providing a higher level of patient care.

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OVERVIEW OF THE BELGIAN HEALTHCARE SYSTEM

By Jos Vanlanduyt

Total population	10646804	(2009) *
GNP per capita	44570 USD	(2008) *
Life expectancy (m/f)	76, 25 (75,74) / 81,85 (81,69)	(2008) **
Infant mortality / 1000	3,4 (4,3)	(2009) **
Birth rate / 1000	11,8 (10,7)	(2009) *
Total health expenditure per capita USD	3392 USD (3281)	(2008) *
Total health expenditure as a % of GDP	9,7 (9,56)	(2008) *
Share of public financing of health system	74,3 (77,09)	(2008) *
Doctors	31727	
Hospital doctors	15,16 %	(2005) *
Doctors per 1,000 inhabitant	2,98 (3,42)	(2008) *
Nurses per 1,000 inhabitant	37,1	(2005) ***
Hospitals/100.000	1,99 (2,64)	(2008) *
Hospital beds/100.000	671,83 (541,56)	(2008) *

* WHO – Health for All Database, ** Eurostat, *** OECD

Main Characteristics

The Belgian healthcare system has the following key features:

1) Compulsory health insurance, managed jointly by the major stakeholders of the sector (insurers, healthcare providers and public authorities)
2) Principles of therapeutic freedom for physicians and liberal ideas on medicine (majority of providers are self employed, with predominantly fee-for-service payment)
3) Freedom for patients to choose both their healthcare provider and their hospital.

Organisation

Being a Kingdom since 1831, Belgium evolved through five state reforms to a federal structure. It has three levels of government: Federal, regional (three regions and three communities) and local (provinces and municipalities). Since the early 1980s, responsibility for healthcare has been partly devolved to a regional level. The devolution is however limited, especially for curative medicine, for which the federal authorities remain responsible.

The regional level is assigned specific competences: The communities are responsible for person-related matters like education while the regions are responsible for territorial matters like economic policy. The remaining competences belong to the federal government. The regional governments are responsible for preventive care and health promotion, maternity and child healthcare and social services, different aspects of community care, implementation of accreditation standards (and determination of additional criteria) and financing of infrastructure. As an example, the French community is responsible for competences in public health while the Walloon region is responsible for healthcare policy.

The federal government is responsible for regulating the compulsory health insurance, determining the accreditation criteria (minimum standards) for healthcare facilities, financing of hospital budgets, legislation covering different professional qualification and the registration and price control of pharmaceuticals.

Several inter-ministerial conferences are regularly organised to facilitate the cooperation between the different government levels. Decision-making in the Belgian health system relies mainly on negotiations between several stakeholders like government, sickness funds, representatives of employers and employees.

Healthcare Provision

In 1997, the federal government decided on a supply planning system for physicians (at the moment of application for a GP or specialist), dentists and other healthcare personnel (at the moment of application for recognition) in order to control healthcare costs and to ensure the income of the professional, but also to guarantee a sufficient health workforce. In 2004 the numerus clausus became effective. The Flemish Community limited the number of students entering medical schools. The French Community limited after entrance after the 1st year, which was annihilated by a court judgment in 2008. This year, the (federal) Chamber of Deputies decided to reduce the basic training of physicians to six years like in most other European countries. Furthermore there is since 2004 a growing inflow of foreign physicians (430 in 2008). This will put the pressure on the numerus clausus. In the meantime hospitals are worried about growing shortages in several medical disciplines.

Delivery of ambulatory care in Belgium is mainly private. The vast majority of physicians work as independent, self-employed health professionals. Medical specialists can work in health institutions (mostly hospitals) and/or on an ambulatory basis in private practice. GPs mostly work in private practice. GPs do not serve a gatekeeping role in Belgium. As there is no referral system, every citizen has free access to medical specialists and hospital care, even as the first point of contact with the health system. But several actions have been taken to strengthen primary care (Glob-

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al Medical File (1999) such as discouraging the use of emergency services (2003) and the creation of primary care outposts.

Hospital care is provided either by private non-profit or by public hospitals. The hospital legislation and financing mechanisms are the same in both sectors. In 2008, there were 207 hospitals, of which 112 acute, 19 specialised, eight geriatric and 68 psychiatric.

Patient pathways are gaining interest. Started in Flemish hospitals in 2000, the Network Clinical Pathways has now spread out to Walloon and Dutch hospitals. In 2009, care pathways for the treatment and follow-up of certain chronic diseases were developed and implemented. Intermediary structures and services (e.g. day hospitalisations, long-term care centres) have been developed as an alternative to hospitalisation.

Healthcare Financing and Expenditure

Compulsory health insurance is financed through employer and employee income contributions (76 percent, 2009) as well as through taxation. It covers almost the whole population and has a very broad benefits package. The National Institute for Sickness and Disability Insurance (RIZIV/INAMI) is charged with the implementation and control of the compulsory insurance scheme. All individuals entitled to health insurance must register with one of the six (four not-for profit, two public) health insurance funds. Private for-profit health insurance companies account for only a small part of the non-compulsory health insurance market. Since 1995, Belgian health insurance funds are held financially accountable for a proportion of any discrepancy between their actual spending and their normative risk-adjusted, healthcare expenditures.

Patients participate in healthcare financing via official co-payments and diverse supplements. For ambulatory care, patients pay the full costs of services to service providers and afterwards receive a refund from the health insurance fund. For ambulatory pharmaceuticals and inpatient care, there is a third-party payer system: The health insurance fund directly pays the provider, leaving the patient only to pay the co-payment or co-insurance. The basic feature of Belgian hospital financing is its dual remuneration structure according to the type of services provided:

1) Services of accommodation costs, nursing activity in nursing units, operating room sterilisation are financed via a fixed prospective budget system based on diagnosis-related groups (DRGs);
2) While medical and medico-technical services (consultations, laboratories, medical imaging and technical procedures), polyclinics and paramedical activities (physiotherapy) are predominantly remunerated via a fee-for-service system to the service provider. The general hospital revenue for 2007 (aggregated average) is distributed as follows: 1) Hospital budget (38.8 percent) 2) Physicians' fees (40 percent), 3) Sale of inpatient and outpatient pharmaceutical products (15,3 percent) 4) Other (5,9 percent).

Recent Measures and Reforms

Several actions have been taken in the past years to improve the performance of the healthcare system. Recent reforms include the extension of the compulsory coverage of self-employed to minor risks (2008), several extensions of Maximum Billing as well as the fixed payment systems to ensure equal access to high-quality healthcare.

Actions have been taken to ensure the availability of the appropriate healthcare workforce, especially regarding the shortage of GPs and the attractiveness of the nursing profession.

Beside many specific prevention measures (cancer plan, national health and nutrition plan, actions against measles and rubella, national action plan for alcohol), a protocol agreement providing a general framework on prevention has been adopted.

To ensure the financial sustainability of the health system, a fund for the future of healthcare (2007) and provisional fund for pharmaceutical products (2006, 2008) was created. In 2010 a new remuneration system for pharmacists was introduced to reinforce their intellectual role and partly disconnect their remuneration from the price of drugs.

In 2008, a Belgian e-health digital platform was created for the secure electronic exchange of data between all health actors with the necessary guarantees regarding patient security, the privacy protection of patient and caregiver as well as respect for medical confidentiality.

Following the Tallin Charter on Health Systems (WHO European Region), efforts have been made to assess the performance of the health system by promoting transparency and accountability through, for example, feedback reports to and peer review of providers. In 1994, the sickness funds were made more accountable for health expenditure while being compensated for differences in risk structure. In order to address significant differences in medical practice between hospitals, which cannot be explained medically, a system of reference amounts for standard interventions was introduced in 2002 and refined in 2009. Furthermore, lump sum financing for hospital pharmaceuticals was introduced in 2006.

In 2007, the first contracts for the coordination of quality and patient safety in Belgian hospitals were approved. Between 2008-2012, hospitals must follow a pluri-annual plan focused on the structure, process and results regarding quality and safety of care. For the 2009–2010 contract, the participation of hospitals has reached 90 percent.

Strengths, Weaknesses and the Future

The overall strength of the Belgian health system is that care is highly accessible and responsive to patients. The drawbacks of the Belgian system are its (administrative) cost and complexity.

In comparison with other European countries the Belgian healthcare system is a hybrid system. It has a universal and compulsory insurance system, financed mainly through income-related contributions and taxes, typical for Beveridge systems (UK, Italy, Spain, Scandinavia). At the same time, the provider markets are very liberal, providers are mostly remunerated through fee-for-service and the sickness funds act as third-party payers and intermediaries between patients and health professionals, typical for Bismarck systems (Netherlands, Germany, Switzerland).

For the moment, Belgian politicians are rethinking the federal structure. A wide spectrum of ideas has been pronounced, from regionalising health insurance to bringing the regional authorities on board of the National Institute for Sickness and Disability Insurance. The Belgian hybrid can develop in many directions. It will be important to choose from those directions that are strengthening the values and principles of the healthcare system like solidarity, quality, accessibility, sustainability and equity as also mentioned in the declaration of the Council of the European Union (1-2 June 2006).

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THE BELGIAN ASSOCIATION OF HOSPITAL MANAGERS: AN ACTIVE ASSOCIATION

Interview: Freddy Iemants

Freddy Iemants works for Iris Hospitals, which groups public health institutions in Brussels. This group controls five institutions on 11 sites, with 2,300 hospital beds and employs nearly 9,000 people. Mr. Iemants has represented the Belgian Association of Hospital Managers (ABDH/ BVZD/ BVKD) on the Executive Committee of the European Association of Hospital Managers (EAHM) for many years now and is also part of the subcommittee on European affairs. *(E)Hospital* met with Mr. Iemants (FI) to talk about the activities of the Belgian association over the past few years.

(E)Hospital: **Mr. Iemants, in the last presentation of the Belgian association in the journal, your President underlined the diversity of members in that they belong to three different linguistic groups (NL, FR, D) and different regions of Belgium. Is this diversity still apparent despite the growing fragmentation of Belgium currently being reported by the international press? Some speak of more autonomy for the regional authorities with a self-management of the healthcare system, including hospitals, while others evoke even the separation of the country.**

FI: First of all, the Belgian Association of Hospital Managers remains a professional association independent of political objectives and in this respect it is not our role to interfere in the present discussion between political parties in view of the formation of a federal government. Whatever the political level and structure that will be placed upon the healthcare system and Belgian hospitals, the exchange of knowledge and experiences will always be beneficial for hospital managers. This ties in with the primary objective of our association, which is the level of help and support that we offer to our members, regardless of which language they speak. To assist our colleagues, fellow hospital managers, by helping them to maintain or improve their management skills, is our core concern. We do this by organising seminars on different themes such as the evolution of hospital legislation, risk management and prevention, new methods of medical laboratory management, etc.

(E)Hospital: **In other European Countries, the national associations of hospital managers often remark a decrease in the number of people attending their seminars and study days, mainly due to the number of other initiatives on offer from other organisations. Is this also the case in Belgium?**

FI: Although the number of our affiliates stays around 150 members for just over 100 hospitals, the attendance rate remains quite stable at around 25 percent. 15 percent attend regularly while the other 10 percent make up a changeable group. I must also say that another 10 percent is made up of our associate members. These are mainly companies who work with the hospital sector on a daily basis and are interested in participating in our study days to learn what exactly the main challenges and concerns for hospital managers are and to find solutions for these problems.

The number of participants of course depends on the particular topic proposed but also on other events organised. Like in other countries, we also have to compete with other events on offer from hospital federations, universities and private organisations. Without wanting to belittle the merit and quality of the other initiatives on offer in the hospital sector, the approach ABDH takes is often different.

(E)Hospital: **So what is different about the formations offered by the Belgian association?**

FI: To properly understand, it must be noted that Belgian hospital legislation is very laconic concerning the task entrusted upon hospital managers by the administrator. It can be summed in a vague, single phrase as the daily management of the hospital. In addition, the hospital administrator must assume general and final responsibility for the hospital. Between these two definitions, the problem of governance comes into question. Who defines the hospital strategy? Who determines its priorities? Who appoints staff and allocates resources? Who is held responsible if the hospital goes over its budget...? These are just a few of the fundamental questions to which we need answers. It is in the interest of the hospital manager that the answers are clear and non-ambiguous so that he does not risk to be held responsible and to suffer the consequences.

(E)Hospital: **Is this a real risk?**

FI: If hospital legislation remains silent on these different questions of management and responsibilities, jurisprudence increasingly considers the hospital manager as responsible for risks and physical and material damages which could harm a patient. This is even true if this occurs within the medical domain. So it is not uncommon that a Belgian hospital manager must respond as the accused in a Belgian court and in the name of his institution. Although civil responsibility is guaranteed by an insurance contract, the hospital manager can be taken to the penal court in cases where the judgement and sanction are in a private capacity. Outside of legal questions, it is happens more and more that the hospital manager is accused by the administrator of bad management and is fired.

(E)Hospital: **How does the association help its members protect themselves from such risks?**

FI: Firstly by offering them examples of good management and hospital best practices which allow, in applying them, to illustrate the correct and efficient way management should be assumed. This is a prerequisite. Nonetheless a hospital manager can also make professional mistakes or be the victim of circumstances he could not prevent. Thus, we find that sometimes the organising power, that is to say, the administrator does not follow the measures proposed by the management but afterwards holds them responsible for the consequences that follow. For these cases the association proposes members to take out a collective contract of legal assistance. This is done in a personal capacity and allows colleagues to receive assistance and be defended in court or to appeal a decision.

(E)Hospital: **So it is about a personal defence, no matter which way the manager assumed his responsibilities? Do you also intervene in questions of the remuneration of the manager?**

FI: Legal assistance is provided at the discretion of the association, no other colleagues know of the particular problem that has arisen. Nonetheless it is also our duty to promote in the formations we propose, a code of ethics for the profession. The hospital manager holds, through his profession, a heavy responsibility with regards to patients and society. It would be useful to have a code of ethics which indicates in what way we want him to assume his responsibility. Such a project should also be undertaken on a European level. Concerning the remuneration of hospital managers, there is no unique salary scale. There are however different reference schemes used in our association, which we fixed 20 years ago. The discussion concerning a hospital manager's contract is the initiative of the manager himself. Salary references can be used as an indication but the association does not intervene in any way.

LA DIRECTIVE EUROPÉENNE SUR LES SOINS DE SANTÉ TRANSFRONTALIERS EST-ELLE UNE ÉTAPE IMPORTANTE POUR LES PATIENTS ?

Willy Heuschen

La directive 2001/24 a été publiée le 4 avril 2011 dans le Journal officiel de l'Union européenne. Elle concerne l'application des droits des patients dans les soins de santé transfrontaliers. Il a fallu près de trois ans d'échanges et de lutte entre la Commission, le Parlement européen et le Conseil des ministres, principalement liés aux ministres de la Santé des 27 États membres, pour effectuer des compromis et affiner les subtilités juridiques.

Cette directive était attendue depuis longtemps. Son histoire a même commencé dans le milieu des années 90, suite à une décision de la Cour de justice européenne qui avait donné raison aux Luxembourgeois Kohll et Decker pour le remboursement de leurs lunettes ou de leurs prothèses dentaires – qu'ils avaient acquises dans le pays voisin européen – par leur couverture d'assurance maladie. La décision de la Cour s'appuyait sur la législation européenne concernant la libre circulation des marchandises dans le marché intérieur. Depuis lors, de nombreux arrêts de la Cour de justice européenne sont passés dans la jurisprudence européenne. Comme on l'a souvent constaté, en l'absence d'une politique existante en matière de soins de santé par le corps législatif (dont c'est la tâche, comme dans toute démocratie), la Cour de justice a rempli la fonction qui était allouée au Parlement européen.

L'adoption récente de la directive fixe un terme à cette lacune, même si elle a repris intégralement ou légèrement affiné les jugements et autres réglementations énoncées précédemment, comme la continuation du règlement (CE) 883/2004. Cela ne facilite certainement pas la compréhension des patients en ce qui concerne les modalités de remboursement des services de soins de santé dans les pays de l'Union européenne. Mais l'importance de cette directive va bien au-delà des questions de remboursement et de la mobilité des patients. Même si la tentative de créer une base juridique distincte des soins de santé afin d'assurer un niveau élevé de protection de la santé (article 168 TFUE) a échoué, et que cela a consolidé le fonctionnement du marché intérieur (libre circulation des personnes et libre circulation des marchandises), pour la première fois néanmoins une règle de base pour le système de santé européen a été adoptée.

Elle concerne les droits des patients mais également les normes de qualité et de sécurité qui sont déjà en application dans certains pays. Il est probable que la Commission européenne voulait instaurer ces normes en tant que bases pour la fiabilité des soins de santé dans d'autres États de l'Union, car il ne peut y avoir de confiance mutuelle sans coopération.

L'AEDH a plaidé pendant des années pour le développement de ces normes de sécurité et de qualité. Même si les normes sont fixées de manière indépendante conformément à la directive par chaque État membre et non pas, comme nous l'avions souhaité, au niveau européen, son extension vers une harmonisation européenne semble inévitable. D'autant plus que les organisations et les patients doivent recevoir ces informations dans les points de contact nationauxl respectifs que chaque pays membre a le devoir de mettre en place. En outre, les échanges et l'assistance mutuelle entre les points de contact seront explicitement nécessaires. La création de centres de référence internationaux ou de réseaux devrait assurer la rencontre, de façon similaire, entre les systèmes de santé nationaux.

Nous croyons qu'il est nécessaire que les hôpitaux engagent leurs directions dans un processus progressif pour un marché européen de la santé, tant au niveau national qu'européen. Dans la plupart des cas, on peut apprendre les uns des autres. Pour comprendre la portée de cette directive et éclairer son potentiel d'action, notre conseil consultatif pour les affaires européennes a organisé un événement majeur. Nous voulons, à l'occasion de MEDICA le 18 novembre 2011 à Düsseldorf, et en collaboration avec d'autres grandes associations européennes du secteur de la santé, poser les jalons adéquats afin que cette directive soit, pour les patients également, une étape importante vers une meilleure coopération européenne.

Willy Heuschen
Rédacteur en chef de l'AEDH

Les éditoriaux d'*(E)Hospital* sont rédigés par des membres des instances dirigeantes de l'AEDH. Les contributions publiées ici ne reflètent cependant que l'opinion de leur auteur et ne représentent en aucune façon la position officielle de l'AEDH.

LE GROUPE DE TRAVAIL INFORMATIQUE ENTRE EN ACTION

Le groupe de travail de l'AEDH « Hospital IT-Managers » est passé à l'action. Ses membres se sont réunis récemment à Bruxelles afin de définir les activités qui se dérouleront durant ses ateliers, les « IT workshops », en septembre prochain. Ces initiatives découlent directement du processus de réflexion amorcé l'année dernière, après que l'association eut réalisé l'importance grandissante et le potentiel de l'informatique dans le secteur de la santé.

Des processus de réflexion ont été engagés au niveau central européen et partout en Europe grâce à des initiatives régionales. L'un des quatre principaux thèmes avancés a été la qualité à travers le partage des expériences et des meilleures pratiques. Depuis quelque temps, les membres de l'AEDH observent la progression de l'informatique dans les hôpitaux : son importance est croissante et son impact est de plus en plus déterminant à tous les niveaux. Pourtant, de nombreux gestionnaires d'hôpitaux ont l'impression que les experts en informatique parlent une autre langue. Et de la même manière, la compréhension des besoins et des processus de fonctionnement d'un hôpital n'est pas si aisée pour le personnel informatique. Afin de prendre les bonnes décisions, les directeurs ont besoin d'être mieux informés. Le Groupe de travail « Hospital IT-Managers » et les ateliers qui seront prochainement organisés souhaitent permettre le partage des expériences et des meilleures pratiques dans ce domaine et combler le fossé entre les gestionnaires des hôpitaux et les experts en informatique.

L'objectif officiel du groupe de travail est d'aider l'AEDH dans la réalisation de ses objectifs dans le domaine des technologies et de la gestion de l'information. Il s'inscrit dans le mandat de l'association qui est de promouvoir la compétence professionnelle et la responsabilité des gestionnaires et des cadres à l'hôpital ainsi que la gestion de la santé publique dans les pays européens, sans oublier les technologies de l'information. Cela comprend les technologies de l'information et les technologies médicales, qu'elles concernent les services fournis pour les patients hospitalisés ou en ambulatoire, et inclut des services de gestion des installations informatiques, la technologies d'interface médicale, les politiques de sécurité, la formation et la standardisation.

Afin de construire un pont entre le monde de la gestion hospitalière et celui de l'informatique, le « business IT alignment in hospitals » – ou regroupement des questions informatiques dans les hôpitaux – est une stratégie intéressante, explique le Dr Pierre-Michel Meier, président du groupe de travail. Les responsables des technologies de l'information et de la communication (Chief Information Officers, CIOS) y jouent un rôle de première importance. Pour cette raison, les activités s'adressent à la fois aux directeurs (Chief Executive Officers, CEO) et aux responsables des technologies de l'information et de la communication des hôpitaux européens.

Pour les directeurs, les objectifs du groupe de travail sont de promouvoir la transformation d'une stratégie hospitalière en une stratégie informatique par l'élaboration de plans directeurs en informatique. Il faut également s'assurer que les objectifs du schéma directeur informatique seront réalisés.

Les responsables des technologies de l'information et de la communication mettent l'accent sur la promotion des connaissances des méthodes et des pratiques de gestion, ainsi que sur la gestion des ressources humaines. D'un point de vue technologique, on peut dire que priment l'interopérabilité au sein des paysages informatiques intra et inter organisationnels et l'intégration des dispositifs médicaux dans l'informatique – y compris les aspects managérials comme la gestion des risques.

L'AEDH est heureux d'annoncer que le premier séminaire régional destiné aux chefs d'entreprises aura lieu les 15 et 16 Septembre à Vienne (en allemand). Les séminaires en français et en anglais prendront place à une date ultérieure. L'atelier destiné aux responsables des technologies de l'information et de la communication se tiendra les 29 et 30 Septembre à Bruxelles. Il se déroulera au niveau européen et en anglais.

Les membres du groupe de travail « Hospital IT-Managers » sont :
Pierre-Michel Meier (DE), président
Mik Horswell (UK)
Gunther Kostka (BE)
Christian Marolt (BE)
Christophe Nardin (LU)
Irenijus Puotkalis (LT)
Willy Heuschen
Jos Vanlanduyt

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Pour Note / prochaines activités :

15 et 16 septembre 2011:
« Hospital success by optimised IT contribution – CEO Workshop »
Vienne (Autriche)

29 et 30 septembre 2011:
« Hospital success by optimised IT contribution – CIO Workshop »
Bruxelles (Belgique)

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Les capacités des centre de données dans le secteur des soins de santé

Par Robert Forsyth, Bruno Raeymaekers

Les nouvelles applications informatiques sont devenues capitales pour le fonctionnement des établissement de santé. Les sites doivent souvent s'appuyer sur des installations et des techniques plus anciennes qui ne sont pas en mesure de soutenir les engagements plus exigeantes des nouvelles sollicitations. La coopération avec d'autres structures hospitalières permet une optimisation de l'investissement et des budgets de fonctionnement, alors qu'une démarche différenciée sur place et en dehors du site permet une plus grande rapidité et fiabilité des principaux services.

La direction doit superviser une approche de pointe capable d'évaluer correctement les besoins et d'allouer les budgets nécessaires. Il est le plus souvent plus efficaces de combiner les budgets et ressources en un seul projet spécifique que de les distribuer dans les différents services. La gestion à la fois informatique, de l'installation et financière devrait définir une stratégie pluriannuelle pour le site.

Tout site intégré est soumis à un certain nombre de règlements de la protection des données et de la vie privée qui doivent être étudiés consciencieusement afin de trouver le juste équilibre entre les avantages d'un site partagé (données médicales des patients rapidement accessibles) et les dangers qui en découlent (accès trop facile aux données médicales).

Le suivi des ressources de votre hôpital : les systèmes de gestion d'actifs

Par T.E Jayapradha

Les systèmes informatiques des hôpitaux font partie intégrante des soins de santé depuis plusieurs années. Ils ont accompagné les progrès des technologies diagnostiques et thérapeutiques comme, entre autres, le scanner et l'IRM. Le secteur hospitalier est pourtant en retard par rapport à d'autres industries en ce qui concerne l'utilisation de la technologie la plus appropriée pour suivre et gérer leurs actifs. Cela conduit à la surexploitation ou la sous-utilisation des ressources.

Les principales applications de gestion d'actifs comprennent le suivi des actifs, leur identification et authentification, la collecte de données, leur transfert et leur détection. La collecte automatisée des informations concernant les actifs comme, par exemple, la date de fabrication, de location, le statut de maintenance, conduit à des bénéfices en coûts et en productivité.

Télémédecine en Inde : « Healthcare for the Rural Poor », des soins de santé destinés aux pauvres résidant en milieu rural

Par Prachi Shukla

Fin 2008, « World Health Partners » a lancé un projet pilote visant à fournir des services à plus de 1 000 villages dans trois districts mal desservis de Uttar Pradesh, qui abrite environ 3,6 millions de personnes. Plus de trois millions d'entre eux vivent dans les villages ruraux. Le réseau « World Health Partners » de Uttar Pradesh incluait 1 100 fournisseurs ruraux reliés à 102 centres de télémédecine, quatorze cliniques médicales en milieu urbain et neuf laboratoires d'anatomo-pathologie. Les centres de télémédecine, « Sky Health Centres », communiquent avec les médecins généralistes situés dans un établissement de santé central grâce à un système de télécommunication fermé appelé ReMeDi, qui a été développé par Neurosynaptic Communications (www.neurosynaptic.com). Ce système permet aux médecins d'examiner les patients visuellement, d'effectuer des tests de diagnostic élaborés et de recommander un ligne thérapeutique. ReMeDi a été spécialement conçu pour les besoins en milieu rural : il est très important, d'une part, de passer outre les problèmes posés par la non fiabilité de l'alimentation électrique et même son inaccessibilité tout en gardant à l'esprit, d'autre part, la nécessité d'une durabilité et d'une facilité d'utilisation.

Une désinfection hospitalière continue grâce à l'utilisation de la lumière HINS

Par Scott J. MacGregor, John G. Anderson, Gerry Woolsey, Michelle Maclean

La lumière HINS (High-Intensity Narrow-Spectrum) ou HINS-light Environmental Decontamination System (HINS-light EDS) est une nouvelle technologie pour la décontamination de l'air et des surfaces en milieu médical. L'efficacité du système a été démontrée par des études en laboratoire et par une expertise globale en milieu hospitalier. La technologie utilise un spectre étroit de longueurs d'onde de lumière visible. La lumière HINS tue un large éventail de bactéries pathogènes en stimulant la production photodynamique de substances chimiques très réactives à l'intérieur des bactéries qui y sont exposées. Bien que très bactéricide, la lumière HINS est sans danger pour les patients et le personnel, ce qui permet son utilisation en continu dans les hôpitaux et en milieu médical. Le « HINS-light Environmental Decontamination System » se présente comme un plafonnier qui fournit une lumière bactéricide à la fois sûre et confortable pour les patients et le personnel. Cette technologie devrait, lorsqu'elle est utilisée conjointement à des procédures classiques de contrôle des infections, contribuer à une désinfection plus efficace en milieu hospitalier et par conséquent à réduire la transmission d'agents pathogènes.

La protection des patients contre l'infection au Clostridium difficile

Par Robert Orenstein

Protéger les patients contre les infections à Clostridium difficile est devenue un défi majeur pour les établissements de santé dans le monde. Les principales étapes de la prévention sont la gestion des antimicrobiens, l'isolement précoce, le diagnostic précis, et la désinfection de l'environnement. Une approche simple en trois étapes pourrait aider à en réduire l'acquisition et la transmission. La première étape pour les médecins est de penser au Clostridium difficile quand ils planifient la thérapie d'un patient. Les médecins devraient savoir que le risque de Clostridium difficile est associé à un antimicrobien particulier et à sa durée de prescription. La deuxième étape est l'isolement précoce et de dépistage rapide des cas suspects. La troisième étape est la prévention de la transmission de patients colonisés et infectés au personnel de santé et aux autres patients. Il a été démontré que l'on peut diminuer la transmission grâce à des éléments de protection tels que le port de blouses et de gants, et à des équipements à usage unique (thermomètres rectaux, tensiomètres, stéthoscopes).

Fibrillation auriculaire : quel est votre niveau de connaissance ?

La fibrillation auriculaire est une affection cardiaque invalidante provoquée par une activité électrique cardiaque anormale qui entraîne une arythmie. En Europe, six millions de personnes en souffrent et ce nombre devrait plus que doubler d'ici 2050. Les patients atteints de fibrillation auriculaire peuvent être sujets à des palpitations, de l'essoufflement, des douleurs thoraciques, de la fatigue ou même des pertes de conscience. Si la fibrillation auriculaire peut avoir des conséquences physiologiques, elle affecte aussi le bien-être psychologique et la vie sociale des patients. Ils se plaignent parfois d'une mauvaise qualité de vie. Cette maladie est également associée à un risque accru d'accident vasculaire cérébral, d'insuffisance cardiaque, et de mortalité, ainsi qu'à l'augmentation des taux d'hospitalisation.

Malgré ces graves conséquences, une étude indépendante effectuée en 2010 qui s'appuie sur un examen rapide des témoignages et une enquête auprès des organisations de patients a constaté qu'il y a un manque d'informations et de données de comparaison en Europe. Commandé par la « Stroke Alliance for Europe » (SAFE) et soutenu par la Fédération mondiale du cœur, le rapport « How AWARE are you ? » conclut que la prévalence de la fibrillation auriculaire est probablement sous-estimée alors que nous pourrions y apporter un traitement efficace. Cette gestion insuffisante a des répercussions négatives sur les patients et les systèmes de santé : sur les patients en termes de morbidité et de mortalité évitables, et sur les systèmes de santé en termes de coûts plus élevés.

Dialectique et leadership

Par Stephen R. Baker

La maîtrise des techniques vous permettant d'influencer d'autres personnes de façon à ce qu'elles adoptent votre point de vue est une pierre angulaire du leadership. Parfois, à condition de savoir communiquer avec ceux qui relèvent de vous avec un sentiment d'urgence et de passion partagée, vos idées seront soutenues avec enthousiasme. Mais, la plupart du temps, l'unanimité fait défaut : certains vous contestent, tandis que d'autres sont passivement agressifs. D'autres encore seront réticents ou ne comprendront ni votre propos, ni le rôle qu'ils peuvent jouer.

Il existe trois techniques pour l'application de la dialectique à l'hôpital : établir la distinction entre une volonté délibérée et une conséquence accidentelle, minimiser l'hyperbole destructive, et offrir des réponses réfléchies plutôt que des déclarations abruptes. La dialectique n'épargne personne de l'épreuve de la confrontation, qu'elle s'effectue entre le personnel et vous, ou entre plusieurs employés et que vous soyez présent en tant que médiateur. Pourtant, c'est souvent une bonne façon d'éviter les effets préjudiciables de la dissension immédiate ou d'un ressentiment prolongé. En outre, la dialectique est un moyen efficace qui vous permet de faire passer votre message sans que votre caution en tant que dirigeant n'en pâtisse. Elle pourrait même en être améliorée.

Les tendances actuelles dans la gestion des laboratoires

Par Anthony Kurec

Même si les laboratoires médicaux ont actuellement de nombreux défis à relever, ils connaissent également de grandes satisfactions. Il est maintenant reconnu que les laboratoires contribuent de manière significative à la gestion des patients. Il est également incontestable que 70 à 80 % des décisions médicales peuvent être attribuées à des données de laboratoire.

Positifs et optimistes, les professionnels de laboratoire souhaitent maintenant jouer un rôle encore plus important dans les soins de santé et être reconnus pour leurs compétences. Les progrès technologiques continueront d'avoir de l'influence sur les pratiques et sur la formation du personnel. En adoptant ces avancées, ils pourront inclure cette technologie dans leur pratique quotidienne, offrant ainsi un niveau de soins plus élevé aux patients.

Willy Heuschen

EUROPÄISCHE RICHTLINIE ZUR GRENZÜBERSCHREITENDEN GESUNDHEITSVERSORGUNG: MEILENSTEIN AUCH FÜR PATIENTEN ?

Die am 4.4.2011 im Amtsblatt der Europäischen Union veröffentlichte Richtlinie 2001/24 macht im Titel bereits deutlich , worüber es eigentlich gehen sollte, nämlich ,über die Ausübung der Patientenrechte in der grenzüberschreitenden Gesundheitsversorgung.

Es bedurfte nahezu drei Jahre des Austausches und des Ringens zwischen der Kommission, dem EU-Parlament und dem Ministerrat, vorrangig den Gesundheitsministern der 27 EU-Mitgliedstaaten um Kompromisse zu finden bzw. juristische Feinheiten auszufeilen. Vorweg gesagt, wie auch immer deren Anwendung auch gerade im Hinblick auf das Verständnis des Patienten, ausfallen wird, diese Richtlinie war längst überfällig.

Angefangen hatte es ja in der Mitte der neunziger Jahre, nachdem der Europäische Gerichtshof (EuGH) den Luxemburgern Kohll und Decker Recht auf Rückvergütung durch ihre Krankenversicherung ihres Brillen- bzw. Zahnersatzes zusprach, die sie sich im europäischen Nachbarland besorgten. Die Grundlage dieses EUGH-Urteiles entsprang der im europäischen Recht verankerten Grundlage auf freien Verkehr von Gütern im Binnenmarkt. Seit dem reihen sich viele weitere Urteile des EuGH in die europäische Rechtsprechung ein. Wie unsererseits des Öfteren an dieser Stelle angemerkt übernahm der EuGH mangels einer bestehenden Richtlinie in der Gesundheitsversorgung die Aufgabe, die eigentlich in jeder Demokratie der gesetzgebenden Körperschaft, hier dem Europäischen Parlament zu erfüllen hatte. Die jetzt erlassene Richtlinie setzt diesem Manko ein Ende, wenn auch die bislang gesprochenen Urteile und andere Verordnungen (so der Fortbestand der VO –EG- Nr.883/2004) als derer integraler Bestandteil übernommen bzw. leicht verfeinert wurden. Dies erleichtert sicherlich nicht das Verständnis der Patienten bzgl. der Rückvergütungsmodalitäten für Leistungen der Gesundheitsversorgung im EU-Ausland .

Die Bedeutung dieser Richtlinie reicht jedoch weiter als diese Fragen der Rückvergütung bei Patientenmobilität. Selbst wenn der Versuch der Schaffung einer eigenen Rechtsgrundlage der Gesundheitsversorgung, in Anwendung der Sicherung eines hohen Gesundheitsschutzniveaus (AEUV Art 168) scheiterte und sich die der Verbesserung der Funktionsweise des Binnenmarktes (Freizügigkeit von Personen sowie des freien Verkehrs von Waren) durchsetzte, ist dennoch erstmals eine Grundsatzregelung eines europäischen Gesundheitssystems erlassen.

Dazu gehören die in einigen Ländern schon bestehenden Patientenrechte aber auch Qualitäts- und Sicherheitsnormen. Anzunehmen ist, dass die Europäische Kommission hiermit diese Normen als Basis für die Verlässlichkeit der Gesundheitsversorgung in anderen EU-Staaten legen wollte, denn ohne gegenseitiges Vertrauen wird wohl kaum eine Zusammenarbeit geben.

Die EVKD plädiert seit Jahren für die Ausarbeitung solcher Sicherheits- und Qualitätsnormen. Selbst wenn diese Normen laut der Richtlinie autonom durch jeden Mitgliedstaat festzulegen sind und nicht wie von uns gewünscht, auf europäischer Ebene, lässt sich eine weitere Entwicklung zu einer europäischen Angleichung kaum vermeiden. Dies umso mehr, da Patienten und Verbände diese Informationen in der jeweiligen nationalen Kontaktstelle erhalten müssen, die jedes Mitgliedsland einzurichten hat. Darüber hinaus werden ausdrücklich Austausche und gegenseitige Hilfestellungen zwischen Kontaktstellen gefordert. Eine ähnliche Schaltfläche zwischen nationalen Gesundheitssystemen wird sicherlich auch über die Errichtung von länderübergreifenden Referenzzentren bzw. von Netzwerken entstehen.

Wir meinen, die Krankenhäuser sollten sich über ihre Geschäftsführungen unbedingt in diesen Aufbauprozess eines europäischen Gesundheitsmarktes einklinken, sowohl in der landesinternen Aufarbeitung als auch im europäischen Austausch. Wie so oft gilt auch hier das voneinander Lernen. Um die Reichweite der Richtlinie richtig zu nutzen und das und dessen Wirkungspotential zu beleuchten veranstaltet unser Beirat für europäische Angelegenheiten eine Großveranstaltung. Gemeinsam mit anderen europäischen Spitzenverbänden des Gesundheitssektor möchten wir anlässlich der MEDICA am 18.November 2011 in Düsseldorf die Weichen richtig stellen, damit diese Richtlinie auch für Patienten zum Meilenstein eines besseren europäischen Miteinanders wird.

Willy Heuschen
EVKD Generalsekretär u.Chefredakteur

Leitartikel in *(E)Hospital* werden von Führungspersönlichkeiten der EVKD verfasst. Die hier veröffentlichten Beiträge geben dennoch ausschließlich die Meinung der Autoren wieder und sind nicht als offizielle Stellungnahme der EVKD zu werten.

IT ARBEITSGRUPPE IST AKTIV

Die EVKD Arbeitsgruppe ‚Hospital IT-Manager' hat ihre Arbeit aufgenommen. Die Mitglieder trafen sich kürzlich in Brüssel und schlossen dabei Vorbereitungen für die im September stattfindenden IT-Workshops ab. Dies ist das erste direkte Ergebnis des Reflexionsprozesses vom letzten Jahr, als die Vereinigung die zunehmende Bedeutung und das steigende Potential des Fachgebietes ‚IT im Gesundheitsbereich' erkannte.

Einer der vier Hauptpunkte, die sich aus dem Reflexionsprozess herauskristallisierten, lautete: ‚Qualität durch gemeinsame Nutzung von Erfahrungen und best practices' – nicht nur auf höchster europäischer Ebene, sondern durch regionale Aktivitäten in ganz Europa. Seit einiger Zeit haben Mitglieder innerhalb der EVKD registriert, dass die Informationstechnologie (IT) auch im Krankenhaussektor fortschreitet, ihre Bedeutung zunimmt und ihr Einfluss auf allen Krankenhausebenen zunehmend ausschlaggebend ist. Für viele Krankenhausmanager sprechen IT-Experten allerdings immer noch Fachchinesisch. Und umgekehrt: Auch für die IT-Fachleute stellt es eine Herausforderung dar, die Bedürfnisse und die Prozesse des Krankenhausmanagements zu verstehen. Und genau hier setzen die Arbeitsgruppe IT-Manager und die organisierten Workshops an: beim Austauschen von Erfahrungen und best practices in diesem Bereich und bei der Überbrückung der Kluft zwischen Krankenhausmanagement und IT.

Der offizielle Zweck der Arbeitsgruppe ist die Unterstützung der EVKD in der Verwirklichung deren Ziele im Bereich Informationsmanagement und Technologie. Laut Mandat ist die Vereinigung dafür zuständig, die professionelle Kompetenz und die Verantwortung von Managern und leitenden Mitarbeitern im Krankenhaus- und Gesundheitsmanagement europäischer Länder zu fördern, einschließlich der Informationstechnologie (IT). In diesem Sinne steht IT für Information & medizinische Technologie für den ambulanten und den stationären Bereich. Dies umfasst Bereiche wie IT-Gebäudemanagement, Kopplung der Medizintechnologie, Sicherheitsstrategien, Weiter- und Ausbildung und Standardisierung.

Eine wichtige Strategie für den Brückenbau zwischen der Welt des Krankenhausmanagements und IT ist „die Business IT Angleichung in Krankenhäusern", betont Dr. Pierre-Michael Meier, Vorsitzender der Arbeitsgruppe. Die Informationsbeauftragten (Chief Information Officers, CIOS) spielen hierbei ebenfalls eine wichtige Rolle. Darum wenden sich die Aktivitäten der Arbeitsgruppe an Vorstandsvorsitzende (CEO) als auch an die CIOS europäischer Krankenhäuser.

Für CEOs sind die Ziele der Arbeitsgruppe die Förderung des Übergangs von Krankenhausstrategien hin zu IT-Strategien, die Entwicklung von IT-Masterplänen und die Sicherstellung, dass die Zielsetzungen des IT-Masterplans auch erreicht werden.

Für CIOs liegt der Fokus auf der Wissensvermittlung von Managementmethoden und -praktiken und von Personalwirtschaft. Aus technologischer Sicht liegt der Fokus auf der Interoperabilität innerhalb intra- und inter-organisatorischer IT-Landschaften und auf der Integration medizinischer Geräte in die IT-Landschaften, einschließlich geschäftsführender Aspekte wie Risikomanagement.

Die EVKD freut sich bekanntzugeben, dass das erste Regionalseminar für CEOs vom 15. bis 16. September in Wien stattfinden wird (Sprache: Deutsch). Seminare auf Französisch und Englisch werden zu einem späteren Zeitpunkt abgehalten.

Das Workshop für CIOs wird vom 29. bis 30. September in Brüssel stattfinden. Dieses Workshop auf europäischem Niveau wird auf Englisch gehalten.

Mitglieder der Arbeitsgruppe Hospital IT Manager
Vorsitzender: Pierre-Michael Meier (DE)
Mik Horswell (UK)
Gunther Kostka (BE)
Christian Marolt (BE)
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Merkblatt / bevorstehende Aktivitäten

15.-16. September 2011:
"Hospital success by optimised IT contribution – CEO Workshop"
Wien (Österreich)

29.-30. September 2011:
"Hospital success by optimised IT contribution - CIO Workshop"
Brüssel (Belgien)

Datenzentralen im Gesundheitsbereich: die Trends

Von Robert Forsyth, Bruno Raeymaekers

Zunehmend nehmen IT-Anwendungen eine zentrale Position im Funktionieren einer Gesundheitseinrichtung ein. Bestehende Standorte sind meist auf ältere IT- und technische Ausrüstungen angewiesen und daher nicht in der Lage, den neuen und immer höheren Anforderungen der Organisationen von Morgen zu entsprechen. Die Zusammenarbeit mit anderen, ähnlich strukturierten Gesundheitseinrichtungen erlaubt die Optimierung von Investitionen und Betriebshaushaltsplan, während der differenzierte on-site/off-site Ansatz die nötige Geschwindigkeit und Verlässlichkeit dieser essentiellen Dienste sichert.

Ein high-level Ansatz, zentral überwacht, kann den Bedarf richtig einschätzen und die nötigen Budgets bereitstellen. Ressourcen und Budgets über verschiedene Abteilungen aufzuteilen ist meist weniger effizient, als sie in einem einzigen, spezifischen Projekt zusammenzufassen. Die Management-Teams von IT, Gebäudemanagement und Finanzen sollten zusammen eine mehrjährige Strategie für die Einrichtung ausarbeiten.

Jede integrierte Einrichtung unterliegt einer Anzahl von Datenschutz-Regulierungen, die sorgfältig zu evaluieren sind, um die nötige Balance zwischen den Vorteilen einer gemeinsamen Einrichtung (wichtige Patientendaten sind schnell abrufbar) und den Gefahren (allzu einfacher Zugriff auf medizinische Daten) zu gewährleisten.

So halten Sie Ihre Krankenhaus-Ressourcen auf Spur: Asset Management Systeme

Von T.E Jayapradha

Krankenhaus IT-Systeme sind seit einigen Jahren integrierter Teil des Gesundheitssystems und Zeuge vieler technologischen Fortschritte im Bereich von Diagnose und Disease Management, wie etwa CT- oder MRI-Geräte. Wenn es aber um den Einsatz der richtigen Technologien für das Management ihrer Aktiva geht, hinkt die Krankenhausindustrie anderen Bereichen hinterher. Dies führt zu einer Über- oder Unter-Auslastung ihrer Aktiva.

Zu den für das Asset-Management entscheidenden Anwendungen zählen die Güterverfolgung und Authentifizierung, Datensammlung und -transfer. Die automatisierte Sammlung von Asset-Information wie etwa Herstellungsdatum, Lokalisation, Wartungszustand etc. führt zu Vorteilen hinsichtlich der Kosten und der Produktivität.

Gesundheitsfürsorge für Arme in ländlichen Gebieten: Telemedizin in Indien

Von Prachi Shukla

2008 initiierte "World Health Partners" (WHP) ein Pilotprojekt, das mehr als 3,6 Millionen Menschen in 1.000 Dörfern der marginalisierten Bezirke von Uttar Pradesh (UP) mit technischen Diensten versorgen sollte. Zu dem WHP Provider Netzwerk in UP zählten 1.100 ländliche Anbieter, die mit 102 Telemedizinzentren, 14 Kliniken und neun pathologischen Labors vernetzt waren. Die Telemedizinzentren, ‚Sky Health Centres' genannt, sind über ein geschlossenes Telekommunikationssystem namens ReMeDi mit Allgemeinmedizinern in einer Zentrale verbunden. Entwickelt wurde das System von Neurosynaptic Communications (www.neurosynaptic.com). Dieses umfassende System erlaubt den Ärzten, ihre Patienten visuell zu untersuchen, ausgeklügelte diagnostische Tests durchzuführen und therapeutische Empfehlungen auszusprechen. ReMeDi wurde speziell für den ländlichen Raum entwickelt. Es beachtet einerseits mögliche Probleme aufgrund einer unzuverlässigen Stromversorgung oder eines gestörten Zugangs zur Stromversorgung, aber auch den Bedarf für Dauerhaftigkeit und einfache Bedienung.

Die kontinuierliche Desinfektion des Krankenhausumfelds mittels hochintensivem Schmalspektrum-Licht (High-Intensity Narrow-Spectrum Light, HINS-light)

Von Scott J. MacGregor, John G. Anderson, Gerry Woolsey, Michelle Maclean

Das ‚HINS-light Environmental Decontamination System' (HINS-light EDS) ist eine neue Technologie für die Dekontamination von Luft und freiliegenden Oberflächen im klinischen Umfeld. Die Effektivität des Systems wurde in umfangreichen Laboruntersuchungen und einer ausführlichen Krankenhausevaluierung bestätigt. Die Technologie benutzt hochintensives Schmalspektrum-Licht (HINS) aus dem sichtbaren Spektrum mit der Spitzenleistung bei 405nmm Wellenlänge. HINS-Licht tötet eine große Bandbreite bakterieller Keime ab, indem es innerhalb des lichtexponierten Bakteriums die photodynamische Produktion hochreaktiver Chemikalien fördert. Obwohl stark bakterizid, ist HINS-Licht unschädlich für Patienten und Angestellte, und erlaubt somit den kontinuierlichen Einsatz in Krankenhäusern und anderen Gesundheitseinrichtungen. Das HINS-Licht EDS setzt eine an der Decke montierte Lichtquelle ein, deren bakterizides Licht für Patienten und Angestellte sowohl sicher als auch bequem zu bedienen ist. Zusammen mit konventionellen Verfahren der Infektionskontrolle kann mit dieser Technologie eine effektivere Desinfektion des Krankenhausumfelds erreicht werden, womit die Keimübertragung von Umwelt-Quellen entschieden gemindert werden kann.

Schutz von Patienten vor einer Clostridium Difficile Infektion

Von Robert Orenstein

Patienten vor einer Clostridium difficile Infektion (CDI) zu schützen, ist für alle Gesundheitseinrichtungen weltweit zu einer großen Herausforderung geworden. Schlüsselfaktoren der Prävention sind die antimikrobielle Verwaltung, eine frühe Isolierung, die genaue Diagnose und die Desinfektion der Umwelt. Ein einfacher Drei-Stufen-Ansatz kann dazu beitragen, Infektion und Übertragung zu vermindern. Der erste Schritt für Kliniker ist es, an C. difficile zu denken – beim Planen einer Therapie für einen Patienten. Ärzte sollten das mit einem bestimmten Antibiotikum assoziierte Risiko einer CDI und die Dauer des Antibiotika-Zyklus bedenken. Der zweite Schritt besteht aus der frühen Isolierung und dem schnellen Testen von CDI-Verdachtsfällen. Der dritte Schritt ist die Prävention der Übertragung von kolonisierten und infizierten Patienten und deren Umgebung auf Angestellte und andere Patienten. Barrieren wie etwa Kittel und Handschuhe und dem Patienten zugeordnete Instrumentarien (Rektalthermometer, Blutdruckmanschetten, Stethoskopie) können nachweislich die Übertragungsrate senken.

Vorhofflimmern: How AWARE are you?

Das Vorhofflimmern (AF) ist eine durch abnorme elektrische Aktivität des Herzens ausgelöste Herzkrankheit, die zu kardialer Arrhythmie führt. In Europa liegt die Anzahl der Betroffenen bei sechs Millionen Menschen, und diese Zahl soll sich bis zum Jahr 2050 mehr als verdoppeln. Patienten mit AF erleben Palpitationen, Kurzatmigkeit, Thoraxschmerzen, Müdigkeit oder sogar Bewusstseinsverlust. AF kann die körperliche Funktionsfähigkeit, das psychologische Wohlbefinden und die Teilnahme am gesellschaftlichen Leben beeinträchtigen, womit Patienten eine eingeschränkte Lebensqualität in Kauf nehmen müssen. AF ist außerdem mit einem erhöhten Risiko für Schlaganfall, Herzversagen, kardialer Mortalität und erhöhten stationären Aufnahmeraten assoziiert.

Trotz dieser schwerwiegenden Folgen zeigte eine unabhängige Studie 2010, welche die Beweislage und Befragungen von Patientenorganisationen untersuchte, dass es einen Mangel an vergleichbarer AF-Information und -Daten innerhalb von Europa gibt. Im Auftrag der ‚Stroke Alliance for Europe' (SAFE) und mit Unterstützung der ‚World Heart Federation', zeigt der ‚How AWARE are you?' Bericht, dass die Prävalenz von AF unterschätzt und somit Möglichkeiten verpasst werden, AF erfolgreich zu managen. Solch ein suboptimales Management hat negative Auswirkungen sowohl auf Patienten als auch Gesundheitssysteme: Patienten sind wegen der vermeidbaren Morbidität und Mortalität betroffen, Gesundheitssysteme aufgrund der höheren Kosten.

Dialektik und Führerschaft

Von Stephen R. Baker

Ein Eckpfeiler von Führerschaft ist das Meistern von Techniken, die es Ihnen erlauben, Menschen von Ihrer Vision zu überzeugen, damit sie diese dann auch verfolgen. Manchmal, wenn man es schafft, Untergebene mit einem Gefühl der Dringlichkeit und Leidenschaft zu inspirieren, werden Ihre Anweisungen enthusiastisch unterstützt. Doch meistens fehlt diese Übereinstimmung bei der Verfolgung eines Ziels. Manche der Personen, die Sie anführen, werden aktiv widersprechen, während sich andere passiv aggressiv zeigen. Wieder andere sind reserviert oder verwirrt über das, was Sie meinen und über das, was sie zu tun haben.

Für die Anwendung der Dialektik im Krankenhausbereich gibt es drei Techniken: Differenzierung zwischen Absicht und zufälliger Konsequenz; Herunterspielen destruktiver Übertreibung; und Anbieten überlegter Antworten anstelle abrupter Ansagen. Dialektik verhindert nicht die Mühe einer Konfrontation der Mitarbeiter mit Ihnen oder zwischen zwei Angestellten unter Ihrer Führung (mit Ihnen als Mediator). Doch ist diese Methodik oft ein guter Weg, um die destruktiven Auswirkungen einer unmittelbaren Zwietracht und länger dauernden Missstimmung zu vermeiden. Es ist außerdem eine effektive Maßnahme, Ihre Botschaft rüberzubringen, während der Ethos Ihrer Führerschaft intakt bleibt oder sogar verstärkt wird.

Aktuelle Trends des Labor-Managements

Von Anthony Kurec

Heutzutage stehen klinische Laboratorien sicher vielen Herausforderungen gegenüber, doch wird man in diesem Beruf auch belohnt. Die Wichtigkeit des Labors für das Patientenmanagement wird zunehmend anerkannt. Es steht nun zweifelsfrei fest, dass 70 bis 80 Prozent aller medizinischen Entscheidungen auf Labordaten zurückzuführen sind.

Mit dieser optimistischen Erkenntnis freuen sich Labor-Mitarbeiter darauf, eine noch größere Rolle im Gesundheitssystem zu spielen, und Anerkennung für die Fähigkeiten zu erhalten, die wir mitbringen. Technische Fortschritte werden weiterhin die Praktiken im Labor und die Schulung zukünftiger Labor-Mitarbeiter beeinflussen. Indem wir uns diese Fortschritte zu Eigen machen, wird es uns möglich, diese Technologie in die tägliche Praxis zu implementieren und schlussendlich besser für unsere Patienten zu sorgen.

AGENDA 2011

May

ECCMID 2011 7-10
Milan, Italy
www.eccmid-icc2011.org

World of Health IT 2011 10-12
Budapest, Hungary
www.worldofhealthit.org

Euromedlab 2011 15-19
Berlin, Germany
www.berlin2011.org

HIT Paris 2011 17-19
Paris, France
www.health-it.fr

June

Doctors 2.0™ & You 22-23
Paris, France
www.doctors20.com

IEEE International Symposium on Computer-Based Medical Systems 27-30
Bristol, England
www.cbms2011.org

September

ESMO 2011 23-27
Stockholm, Sweden
www.esmo.org

EAHM EVENTS COMING SOON

September 15-16, 2011 / *Vienna, Austria*
"Hospital success by optimised IT contribution – CEO Workshop"

September 29-30, 2011 / *Brussels, Belgium*
"Hospital success by optimised IT contribution - CIO Workshop "

November 18, 2011 / *Düsseldorf, Germany*
EAHM Seminar: The European Cross-Border Directive and Hospital Managers

September 27-28, 2012 / *Athens, Greece*
24th EAHM-congress, "The Innovative Hospital Manager"

IN THE NEXT ISSUE OF *(E)HOSPITAL*:

- Patient-Centred Management
- Financing
- Generics
- Focus: UK

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