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ASSOCIATION EUROPÉENNE DES DIRECTEURS D'HÔPITALS
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TRAINING AND EDUCATION

VALUE MODELS

PLUS

- Waste Management
- Hospital-Acquired Infections
- Focus: Ireland

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FACING ADVERSITY WITH TRAINING AND EDUCATION

Our societies in Europe are facing great challenges. The financial and economic crisis, climate change and demographic change are all high on our agenda. Demographic changes have repercussions for health supply and in particular, hospitals. It is nice that we are living longer but this leads to increased responsibility to make sure this can be coped with socio-politically. Older people have always depended on the welfare of the younger generation but there are less and less young people. The burden on medical and nursing treatments is increasing while the number of young people joining the healthcare workforce is decreasing. It is becoming more difficult to find sufficiently qualified young employees for the health professions. In Germany, for example almost 70 percent of medical students are women. This will undoubtedly change the way in which hospitals are organised.

Changes in both health policy and education policy are needed to provide lasting solutions. But the management must also face these changes and find labour organisation solutions on the one hand and more flexibility with new forms of the medical and nursing supply structures on the other.

Even more significant is the direct responsibility of the hospital management regarding these issues. This of course happens at the level of the entrepreneurial behaviour in the

hospitals. However, it is just as important that the hospital directors become more open-minded and are aware of their responsibility on both a national and a European level and make the necessary changes in the structures and processes of the health supply.

The training and education of employees and also the executives in the hospital sector is of special importance in this context. The course is set for success here. Executives and employees trained well create the prerequisites for positive motivation and successful qualitative processes and excellent results (efficiency and effectiveness). This issue of *(E)Hospital* puts further education and training for management and leadership into the centre stage.

The country focus in this issue of *(E)Hospital* focuses on beautiful Ireland, famous for innovative structures and processes and positive results in hospital care.

EAHM is concentrating on its European congress on September 9th and 10th, 2010 in Zurich. We are all looking forward to this event and may I invite you to the beautiful Switzerland on behalf of the committee and the executive board.

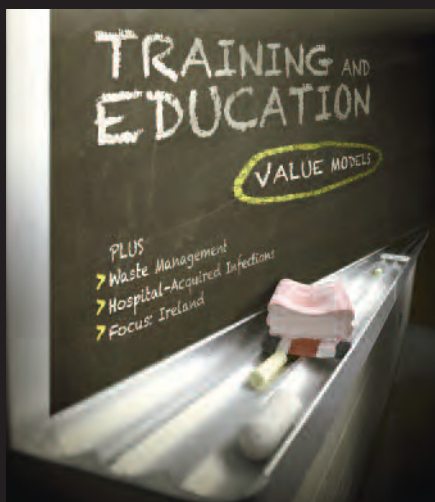
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Heinz Kølking



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Training and Education

This issue's cover story focuses on an important topic: training and education for hospital managers. Managing a hospital comes with a great deal of responsibility; decisions range from financial issues to personnel to processes. But what qualifications and experience are required before assuming this position? And does this differ between European countries? We decided to ask our correspondents and associate members to enlighten us on the subject and the cover story details our findings. We also interviewed three prominent academics in charge of hospital management training programmes: Prof. Maarse from the University of Maastricht, Prof. Von Eiff from the University Meunster and Prof. Antoine Flahault Dean of EHESP School of Public Health.

Value Models

Value models, a new form of enterprise modelling, are a promising new tool for managing the complexity of today's healthcare systems. A value model is a graphical representation of a network of cooperating actors that create value through resource exchanges and transformations. This article by Paul Johannesson and Erik Perjons explains how these models can be used to systematically design, reconfigure and improve networks of healthcare providers.

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Focus: IRELAND



Ireland is one of a small number of countries where the delivery of Health and Social care services comes under the auspices of one government department. The range of services delivered ranges from neuro-surgery at one end of the spectrum to child and family welfare services on the other end. Services are usually categorised by acute care, primary care, continuing care and community care services - such as disabilities, mental health, social inclusion and children and family welfare services. The delivery system is mixed with a range of public, voluntary and private providers in the different care settings.



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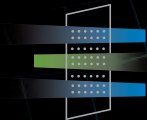


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MORE INFORMATION

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ORGANISERS

IT @ 2010 is organised by the European Association of Healthcare IT Managers and the European Association of Hospital Managers, supported by Excellent Event and EMC Consulting Group.

“ROADMAP TO TOP QUALITY”

23rd EAHM Congress in Zurich, 9 and 10 September 2010

We are pleased to announce the 23rd European Association of Hospital Managers (EAHM) Congress, during which we will address the topic 'Roadmap to Top Quality'.

On the first day of the Congress, we will be presenting service providers, hospital managers, politicians and other healthcare exponents who will be giving their views on the topic of quality and quality improvement. You will have the opportunity to discuss issues directly with the authors at a poster session.

The second day of the Congress is devoted to practice: representatives from different countries will be presenting their experiences and what they have learned from implementing projects.

Come to Zurich and discuss these topics with colleagues.

We look forward to meeting you.

Great honour: Head of the Federal Department of Home Affairs to open the Congress

The Swiss interior minister who is in charge of healthcare, Mr. Didier Burkhalter, will officially represent the state government at the Congress of the European Association of Hospital Managers in Zurich.

Mr Burkhalter will be opening the conference and addressing participants from all over Europe at the opening ceremony.

EAHM welcomed the ÖIK

A delegation of the Austrian Institute for Hospital Management (Österreichisches Institut Für Krankenhausbetriebsführung) visited the EAHM on Thursday April 8th. During the visit, information and views on education and training of hospital managers were exchanged.

AGENDA for the 40th Ordinary General Assembly

to be held on Thursday, 9 September 2010 from 09.00 – 10.00,
at Kongresshaus Zürich, Gotthardstrasse 5, 8022 Zürich (CH)

| | | | |
|------|---|------|---|
| 1. | Approval of the agenda | 5.1. | Action programme and presentation of the candidates |
| 2. | Approval of the minutes of the 39th Ordinary General Assembly, held on Friday, 20 November 2009 in Düsseldorf, Germany | 5.2. | Election |
| 3. | President activity report 2009-2010 - results of reflection group on the future and the evolution of the EAHM | 6. | Economic plan for 2011 |
| 4. | Tendering of accounts for 2009 | 6.1. | Approval of the proposed membership subscription fees of full members and associate members (4.3.e of statutes) |
| 4.1. | Presentation by the Secretary General | 6.2. | Approval of the economic plan for 2011 |
| 4.2. | Auditors' report | 7. | Election of auditors for the year 2010 |
| 4.3. | Approval of accounts for 2009 and discharge of the Board and the Secretary General | 8. | Admission and exclusion of members |
| 5. | Election of the President, the Vice-President, the Board and the Executive Committee for a period of four years (2010-2014) | 9. | Next Ordinary General Assembly 2011 |



BELGIUM

EIB Grant for Health Sciences Campus Gasthuisberg

The European Investment Bank (EIB) will grant 325 million euro to K.U. Leuven and UZ Leuven for the construction and completion of the "Health Sciences Campus Gasthuisberg", a first-class medical and university centre providing acute care, education and research in a single location, "Gasthuisberg" in Leuven. The EIB decided to support the project, considering it as a major initiative in line with the European policies for health, education and innovation.

The project will be a comprehensive centre of excellence, combining acute and specialist hospital services on a single campus together with teaching activities and biomedical research of K.U. Leuven. As such it will also provide a central specialist hospital "hub" within K.U. Leuven hospital network, to offer the highest level of healthcare services to the patients. Through co-location resulting in full integration of healthcare, research and teaching activities, it will ease synergies and allow the achievement of UZ Leuven and K.U. Leuven's academic and biomedical objectives.

DENMARK

International Benchmarking of the Danish Hospital Sector

A recent international benchmarking study, made by the Danish Ministry of Health and Prevention, compares the Danish hospital sector with that of other countries in the following four fields:

- ▶ Health systems and health status;
- ▶ Expenditure, personnel, capacity and activity;
- ▶ The patient and hospital service; and
- ▶ Use of resources and quality of care.

The benchmarking indicators relate primarily to resources, process, services and effects. For the comparison, seven European countries have been selected: Sweden, Norway, Finland, the UK, Germany, the Netherlands and France. In addition, an OECD average is presented where possible. The countries have been selected primarily on the basis of the fact that they are countries with which Denmark naturally compares itself due to geographical closeness and comparable living standards.

Generally, the benchmarking study shows that the Danish hospital sector performs well in most areas compared with the seven countries and with the average of the OECD countries. With respect to Denmark, it should be underlined that access to healthcare is good with relatively short waiting times, and that Denmark has the lowest proportion of citizens who experience unmet needs for medical examination among the countries benchmarked. Moreover Denmark performs relatively more surgical procedures on inpatients than the other countries in the comparison and the average of the OECD, and average length of stay is lower than most at 3.5 days.

Danish patients have well-developed rights and out of the eight countries in the comparison, it is only Denmark that has a generally extended free choice of hospital after one month waiting time.

On the other hand Danes have shorter life expectancy than citizens in the other seven countries and the average of the OECD countries. This is due among other things to lifestyle factors for example high consumption of tobacco and alcohol. Finally, in Denmark, hospital expenditure accounts for 4.3 percent of GDP, whereas the average for the OECD

countries is 3.1 percent and between 2.8 – 4.1 in the other seven countries in the comparison. After Norway, Denmark has the highest number of full-time employees at public hospitals per 1,000 population.

More information about the study (in English) can be found on:

www.sum.dk

Asger Hansen

SLOVAKIA

Preparing for E-Health Services

Following an amendment to the Health Care Act, the Ministry of Health of the Republic of Slovakia is preparing the grounds for a set of e-health services to establish a national electronic health system.

The reform of the healthcare system includes services such as the electronic booking of General Practitioners (GPs), GPs' online consultation, health services that are to be provided remotely, electronic prescription forms or vouchers, as well as the issuing of electronic health cards, as from 2013.

The main purpose of the medical electronic cards is to give citizens access to their personal health records via the Internet at any time and place. The electronic health card will contain patient data including information about vaccinations.

The Ministry of Health believe that this electronic health card will store life-saving medical information, "The electronic records will allow doctors around the world to provide healthcare to citizens, via the National Health portal. These medical data will be stored in an electronic health card through which doctors will be able to access them and therefore provide proper medical care even remotely."

> EU Presidency and Ministers Provide Direction for E-Health

Recognising the efforts that brought EU policy on e-health to the present, EU Ministers and the Spanish Presidency have recommended a plan for the future.

In the Ministerial Declaration of European Cooperation on e-health, a detailed framework was set forth in order to achieve the overall objective of enhancing quality and sustainability of healthcare professionals and society. The main points addressed in the declaration included:

- ▶ Political and strategic commitment both at the regional and national level, encouraging collaboration with States outside the EU;
- ▶ Building confidence and acceptance, focusing on all stakeholders (patients, health providers, authorities and government);
- ▶ Bringing legal and ethical clarity and ensuring protection of personal health data;
- ▶ Solving interoperability issues, specifically legal, regulatory and organisational barriers to e-health; and
- ▶ Linking e-health policy to competitiveness, innovation and research as well as to cohesion and inclusion policies.

In conclusion, the ministers and representatives responsible for e-health encouraged policy coordination among the various areas of e-health as well as stronger synergies within policy areas like competition, research and regional development. They stressed involving all stakeholders in strategic planning, validation and implementation of e-health solutions and specifically, including e-health within the framework of the European Digital Agenda. Most importantly, they encourage using e-health solutions to improve patient benefits, welcoming more research, innovation and deployment.

In a recent communication, the Spanish Presidency proposed four goals for e-health as part of a wide strategic framework and corresponding action plan:

- ▶ Introduce a global vision for an e-health policy totally integrated in the post 2010 European Agenda;
- ▶ Drive a new E-Health Action Plan, facing the new European challenges;
- ▶ Develop and promote ministerial agreements, in particular regarding integration of e-health in community policy; and
- ▶ Implement reinforced government.

The Action Plan will be directed at the current challenges in European healthcare: crises, ageing populations, sustainability and efficiency in the public sector, and economic and so-

cial inclusion. The Spanish Presidency hopes to integrate e-health policy in the post 2010 European Agenda, contributing to its main goals of economic recovery, growth and employment and economic, social and territorial cohesion.

For more information, please visit:
www.ehealthspain.eu

> Commissioner for Development Addresses Global Health MDGs

At the Cross Europe Conference, EU Commissioner for Development, Andris Piebalgs, addressed the progress made toward the Millennium Development Goals (MDGs), and the work still needed to be done.

In his keynote address at the conference titled “Delivering the Right to Health with the Health Millennium Development Goals,” Piebalgs offered an overall perspective of past, present and future actions toward the MDGs. The MDG framework focuses on three main priorities: mortality of children under five years old; maternal mortality; and the impact of major pandemics, such as HIV/AIDS and malaria.

Piebalgs reported that progress towards health-related MDGs remains totally insufficient, giving examples of the little and seemingly no changes in child and maternal mortality, respectively, in sub-Saharan Africa. Piebalgs did recognise the positive changes, citing the increase in the direct aid to health since 2000 by a factor of four, now amounting to 16 billion euro a year. This increase has enabled access to HIV/AIDS treatment to three million people in developing countries.

Piebalgs then outlined four priority areas in the EU’s future commitment to global health challenges: the challenge of governance, the challenge of coherence of policies; the challenge of knowledge; and the challenge of health coverage. Specifically on health coverage, Piebalg addressed the prioritisation of aid commitments, the fragmentation of the health sector, and the division of labour. These priorities will be addressed in a future Commission Communication on the EU’s role in Global Health, in agreement with the Spanish Presidency.

The Cross-Europe Conference for Global Health took place on 2 March in Brussels. The day included panel discussions including the EU Presidencies Panel consisting of the EU Presidency of Spain and the upcoming EU Presidencies, Belgium and Hungary, and the EU Institutions panel with representation from the three EU Institutions.

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LEGISLATION: WORKING TIMES AND LATE PAYMENTS

By Rory Watson

The European Commission is reopening the controversial debate on the future of working time across Europe and has begun to canvas the views of employers and employees on the changes that should be made to the present arrangements. The initiative will have direct implications for hospital managers as attention focuses on the maximum working week, the definition of daily and weekly rest periods, the opt out and, most difficult of all, the treatment of on-call time.

László Andor, the new EU employment and social affairs Commissioner, is determined to try to break the deadlock which has existed since national governments and the European Parliament failed to agree in April 2009 on ways to update legislation which first took effect some 16 years earlier. That failure, he points out, makes it impossible to ensure that employees' health and safety are being effectively protected across Europe. It denies employers, businesses and employees the necessary flexibility to organise their work schedules and raises the possibility of legal action against governments whose arrangements are incompatible with European law.

He is now challenging trade unions and employer organisations to come forward with imaginative ideas to bridge the many differences which continue to stall progress. "We need a comprehensive review of the rules based on a thorough impact assessment with a strong social dimension. We invite the social partners to reflect broadly on this crucial issue and to come forward with innovative proposals that move beyond unsuccessful debates of the past," he said. If the current exercise does indeed produce some constructive thinking, the Commission, which is preparing an impact assessment on the existing legislation, could table a new legislative proposal.

The Commission is hoping that the way in which work patterns have changed significantly over the past two decades may encourage both employer and employee organisations to be more flexible. It points to the fall in average weekly working hours in the EU from 39 hours in 1990 to 37.8 hours in 2006; the growth in part-time workers from 14 percent in 1992 to 18.8 percent in 2009; and to wider use of flexitime and time credit systems.

The Commission's report launching the new working time consultation acknowledges the specific situation of the health sector, without offering any possible ways to reconcile competing demands. It recognises that the need to provide round the clock services "creates the delicate problem of how to cal-

culate working hours and rest periods in cases of 'on-call time'. It contrasts the views of those who maintain that long hours spent on call at the workplace can have a detrimental effect on staff health and so should therefore be counted as working time against the argument that to do so "can have very damaging consequences for the functioning and financing of services that need special flexibility in order to function on a 24-hour basis".

While changes to EU working time legislation are certainly unlikely in the short-term, new European rules clamping down on late payments could be agreed within a few months. The European Parliament is due to vote before the summer on measures to tighten up existing arrangements and the medical technology industry is following developments with interest.

Eucomed, which represents 11,000 designers, manufacturers and suppliers of medical technology, has recently complained that its members are suffering because of delays by hospitals in paying for the equipment they purchase. It found that last year invoices unpaid for over 30 days by public hospitals amounted to over seven billion euro – the equivalent of 10 percent of the sector's turnover.

John Wilkinson, Eucomed's chief executive, has warned of the consequences of such delays, "The situation has become so severe that some companies are facing bankruptcy. Unfortunately, patients will also suffer when companies withdraw from the market and the range of products and treatments available become restricted. This will add to health inequalities across Europe."

The worst culprits are Spain and Italy where the average payment time by hospitals is 200 days, although in some of their regions it can be three times as long. In almost half of all 27 EU Member States the average payment period is well over 100 days. At the other end of the scale, the UK has committed central government departments and National Health Service agencies to pay within ten days. In Ireland, government departments settle invoices within 15 days and state bodies within 30.

Eucomed fully supports the current legislative proposal that tougher penalties be applied to late payers. These include interest on the sums owed and responsibility for meeting the recovery costs involved. The medical technology sector is also fighting any moves to exempt public hospitals from the scope of the European legislation.

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TRAINING AND EDUCATION FOR HOSPITAL MANAGERS

By Lee Campbell, Willy Heuschen

Writing in the 1970s, Peter Drucker, one of the most highly regarded pioneers of management stated, “Management is tasks. Management is a discipline. But management is also people.” Indeed, management is both complicated and stressful, hospital management even more so. Hospital managers’ decisions impact patients, meaning higher stakes and more responsibility. Instead of a typical market they rely on public funds and they are also responsible for managing different independent professional groups (doctors, nurses etc). It is their job to create a tool that these groups can use to perform their duties but the hospital manager is not a direct authority. But what qualifications and experience are required before assuming this position? Are there legal requirements? Does the level of experience vary between countries in Europe? And also, what qualifications and training programmes are available? We decided to ask our correspondents and associate members from EAHM to enlighten us on the subject and answer these questions.

We began our research by searching for relevant management courses and it has to be said there is certainly no shortage of business and management courses in Europe. Searching for hospital management courses however, is not as easy as it seems. You will come across a plethora of healthcare management courses but these are not specifically designed for hospital managers. Of course, general healthcare management issues are important; hospitals are embedded in this system and managers need to know what is happening on this macro-level. But hospital management is much more specific with the most important focus being on a micro-level.

The Changing Environment of Hospitals

The organisation of hospitals is under constant evolution. Recent demographic and financial changes have led to significant changes in hospitals. This has also affected the management. Instead of the all-encompassing power of the CEO, hospital management is changing in favour of management teams. This team is made up of representatives from the different professions within the hospital: doctors, nurses, engineers, finance, IT etc.

This has led to a broader dimension of hospital management. The power of the hospital CEO has not lessened but the role has

changed. Now the CEO is the coordinator of all approaches, he assumes the general responsibility of the hospital. He has gone from a one player to a team player.

We have witnessed this change in Denmark in the last 25 years. Before it was common practice that the administrative responsible for the management of the

agers using our correspondents, national associations and associate members, including universities proposing studies for hospital managers. It is in no way a complete overview of the situation in Europe, indeed, it can be better described as a starting point for a dialogue on training. We wish to continue this discussion every year, and will fea-

The CEO is the coordinator of all approaches, he assumes the general responsibility of the hospital

hospital consisted of only one person (and never an educated physician or nurse). Now it is normal for the top management to consist of several leaders including a chief doctor and head nurse. For the purpose of this article we are investigating training for CEOs and not the wider departmental management for which there are many courses available.

European Overview

We have tried to get a European overview of training and education for hospital man-

ture it in one issue of *(E)Hospital* per year.

The information used comes from the answers to our questionnaire and is not a definitive guide to training programmes. We would appreciate your input to complete our study (please contact us via lee@hospital.be).

The interest is not to discuss whether hospital managers should be or can be a medical doctor or not. This is about the practice in different countries and the legal and practical requirements. We asked correspondents a set of questions regarding legal requirements, experience

and they types of qualifications available in their countries.

Educational Requirements: Legal and Practical

Let us take the requirements first. For a doctor, nurse, lawyer or accountant there are professional bodies regulating who can practice this particular profession. The same simply does not exist for hospital managers. From the responses to our questionnaire it is apparent that in many European countries there are no formal legal requirements for becoming a hospital manager, instead requirements are set up by the hospitals themselves. This is certainly the case in the Netherlands, Belgium, UK and Austria. Most commonly, hospital managers will have a Bachelor's degree and probably a Master's and significant management experience.

In Austria for example, the hospital system is by principle regulated by the Austrian government while the specific details are left to the governments of the nine provinces. Austrian law simply states, "For each hospital a suitable person should be appointed as director/manager of the economic, administrative and technical affairs... For the education and training of the staff in the hospital administration and management measures must be taken." In the provinces there are usually more detailed regulations, but there are no uniform rules in Austria.

Like most European countries, Finland places importance on education requirements. For higher supervisory positions, like hospital managers, a higher academic degree is required as is sufficient experience in supervisory and administration tasks. Notably, in Finland there is another dimension: language. Hospital managers must have good language skills in both Finnish and Swedish. In Ireland, as in Germany and the UK, most hospital managers have Master's degrees (but the subject area is not important) and of course extensive experience in a management position.

In Italy there appear to be more formal regulations. In fact, a reform of current regulations is being discussed in Parliament at the minute. At the present moment the director of public hospital is required by law to have a degree and at least five years experience as a manager in a hospital, local

For most European countries there are no formal regulations set out for the appointment of hospital managers

healthcare enterprise, private hospital or public or private (not healthcare) company. This experience must also include managing their own budget and human, technical and financial resources. There is also a compulsory course on the public healthcare sector and healthcare management, which must be followed within six months of appointment. Different regions can also have further requirements.

France also requires a special mention. As you will see from our interview with Antoine Flahault, the Dean of EHESP School of Public Health (pg.16), 90 percent of public hospital managers are trained at

the school. The 27 month training programme only available after first being hired by the government, is extensive involving a two degrees and 11 months of internship in various hospital positions.

From our questionnaire we can conclude that for most European countries there are no formal regulations set out for the appointment of hospital managers. That being said, there is a general consensus that the role can only be appointed to someone with a degree and significant management experience. Further conditions depend on countries, regions and even hospitals.

Prof. Maarse

University of Maastricht, the Netherlands



1. What are the legal requirements regarding training and education for hospital managers in your country?

There are no specific requirements. A hospital CEO is not required to be a medical doctor. There are however a few training programmes to professionalise CEOs.

2. What are the most popular programmes?

The most well-known is the Tias programme in Tilburg and the training programme of Boer en Croon. Master's and MBAs and also very popular.

3. Who are these programmes aimed at?

They are additional programmes not first time qualifications. To qualify you must have several years experience as a manager in healthcare.

4. What are the main themes/topics?

Policy, administration, financing, ICT, human resources and business administration.

5. Does the training programme include cross-border care or hospital care in Europe?

As far as I know, no.

6. How long is the programme? What is the method of teaching?

Two years, part time.

7. Has the programme been adapted along with recent changes/reforms in the hospital sector?

Yes it has.

8. How do you position your training programme in the training and career of hospital director?

Here in Maastricht we have a Master's in health policy economics and management (HPEM). There are generally 60 students every year. This gives only a basic training. The programmes referred to above are post-doctorate programmes.

Changing to Meet New Demands

Recent developments including the economic and financial crisis, demographic change and the increased mobility of patients and healthcare workers have all put increasing pressure on hospitals and therefore hospital managers. With this in mind, one of our key questions was whether or not hospital management qualifications

and training programmes have been adapted to take into account these new situations and offer hospital managers specific, tailored guidance.

As you can see from our interviews with representatives from management schools across Europe, most programmes have indeed been adapted along with recent changes in the hospital environment. In Germany, Prof. von Eiff highlights that their

programme is a living programme updated in line with legal reforms implemented twice a year. While in France, course adaptation and changes are monitored by the board of education and a special committee with the help of various stakeholders including alumni and employees.

In light of the difficult financial situation in Ireland, all training and development is being reviewed in terms of deliverables in the current setting. Training and education is capitalising on modern technology and e-learning is being utilised more and more. In Belgium, the University of Leuven ensures its students learn about cross-border care and hospital care in Europe. There is a specific course on healthcare systems studying and comparing systems in various countries.

Prof. von Eiff

CKM – Centrum für Krankenhaus Management
University of Muenster, Germany



1. What are the legal requirements regarding training and education for hospital managers in your country?

There aren't any legal requirements, but it is common practice so far, that hospital managers hold a masters degree in business administration. Additionally, the number of hospital managers with practical experience in nursing or even as a physician is increasing.

2. What training programmes are offered?

There are various programmes for preparing hospital managers for their job. On the one hand, especially the private hospital chains offer trainee programmes: a combination of training-on-the-job and academic qualification. These programmes are basically aimed at making attendees familiar with the corporate culture and the specific management tools used inside the group. On the other hand, MBA programmes are offered by universities of applied sciences. These programmes focus on managerial instruments and problem-solving methodologies.

3. Tell us about your programme, what are the key topics?

Our hospital management programme at the University of Muenster contains of both an introduction to medicine (e.g. medical surgical procedures) and the basics in medical controlling. Our MBA programme is offered in cooperation with the Danube University Krems. This is an international programme with site-visits in best-in-class hospitals in the US, in UK, in Singapore and Japan. The students have the opportunity to meet hospital managers with different cultural backgrounds which I believe is very helpful for gaining and adopting best management practices.

Furthermore key competencies and social skills e.g. solution-centred communication, leadership checks and management ethics, are an important part of the training agenda.

4. How long does the programme take and what method of teaching is used?

Normally the programme can be mastered in 24 months. The methods of teaching are mainly interactive e.g. case studies, decision-making under laboratory conditions, confrontation workshops and pro-cons-discussions. The students also have to workout small projects in hospitals in order to learn how findings in industry could be transferred into the hospital arena.

5. Has the programme been adapted along with recent changes/reforms in the hospital sector?

Yes, it is a living programme and adaptation is necessary due to legal reforms which can be expected twice a year – at least in Germany.

6. How do you position your training programme in the training and career of hospital director? Where are past students working now?

Most of our former students have achieved management positions in hospitals, in the health industry and in the health consulting business. But we also trained a lot of physicians to acquaint them with management tools and to teach them how to communicate with business administrators on eyes-level.

Continuous Professional Development

So far we have discussed the educational requirements for becoming a hospital manager, but what about training for hospital managers already in their post? This is where continuous professional development (CPD) comes in. Few can dispute the advantages of CPD; it is an essential element of effective management practice. Both the British and Irish health management institutes promote and even require CPD from their members.

The UK Institute of Healthcare Management (IHM) defines CPD as "A process that enables managers to acquire, maintain and enhance their knowledge, skills and attitude to optimise individual and organisational performance." Each member of the IHM must abide by the Healthcare Management Code, which stipulates managers must ensure their skills and competences are up to date.

A similar situation in Ireland, the Health Management Institute of Ireland (HMI) is "dedicated to the education and continuing Professional Development of all its members. Education, training and related activities play a central role in ensuring that members have the skills and know-how to apply best management practices in their work." In association with their education partner SHRC, HMI deliver practical management training that combines theory, peer learning, networking and action learning principles.

Many of the national associations offer or recommend further training for their members. These range from extended programmes

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Since the healthcare industry is becoming more international, managers must have an international, practice-oriented education and intercultural skills.

Intercultural

Participants in the largely international study groups enrich the discussions by formulating their own thoughts, feelings or views, thus bringing in their individual cultural backgrounds. Graduates from the programme are equipped with the skills to manage staff from a wide range of national, cultural and religious backgrounds.

Facts:

- **Degree** MBA in International Hospital and Healthcare Management
- **Duration** 18 months, Part time programme, 10 modules, eight residential modules, each 8.5 days
- **Language** English
- **Accreditation** FIBAA, Re-accredited with Excellence

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to one-day seminars. In Austria, the national association of hospital managers (BUKO, Bundeskonferenz der Krankenhaus-Manager Österreichs) has led the ÖIK (Austrian Institute of Hospital Management Sciences) for over 20 years. ÖIK organises an appropriate, practical training for senior hospital management with a special focus on commercial activity on a nonprofit basis.

Specifically tailored to the Austrian health system, these training courses provide the business knowledge necessary for modern hospital management. There is a clear focus on the importance of highly skilled commercial management, improving economics to combat the current financial situation.

Although there are no legal requirements of specific qualifications to become a hospital manager in Austria, their MBA programme is so well established it is considered by many hospitals in Austria as a qualification requirement for senior management roles. Topics include quality management, planning, performance management, benchmarking, supply management and HR. They also run basic business seminars with the aim of ensuring employees meet the growing demands of the hospital as a service provider and focus on efficiency.

Conclusion

It is clear that training and education is an important issue for hospital management and something that our member associations take seriously. While there are no fixed European regulations or standards for hospital management training it is evident that many countries in Europe expect the same level of training and education teamed with significant management experience.

Although there might not be so many hospital management courses in comparison to healthcare management, we can see from our questionnaire and interviews that there are many options out there for both Bachelor's and Master's degrees and professional training programmes for hospital management. Another key point is how these programmes and courses are being adapted to meet the current changes in our hospitals providing hospital managers with the correct tools they need to manage successfully.

As we said before, this is not an exhaustive study of management training and education. It is merely a starting point. We would love to continue the discussion and learn about your experiences, programmes and opinions.

Prof. Antoine Flahault

Dean, EHESP School of Public Health, Rennes & Paris, France



1. What are the legal requirements regarding training and education for hospital managers in your country? (What qualifications do they need to be appointed to the post?)

EHESP School of Public Health used to train all public hospital managers in the recent past, in a monopoly; however, recently a decree requested that a maximum of 10 percent of them could be hired from outside. This is the end of the EHESP monopoly with regards with this. To be appointed to the post, our students have been first hired by the governmental administration (through an external independent highly selective process), and have succeeded a 27 month EHESP programme dedicated to hospital management (corresponding to a dual degree including a 12-month Master's of public health, and a 18-month Master's of health-care management, with an overlap of about five to six months between the two Master's degrees, and an overall 11 months of internship in various hospital positions.

2. What is the name of the programme?

"Elève Directeur d'Hôpital" is the name of the programme.

3. Who is the programme aimed at? (Is it a basic training programme or an additional qualification?)

We have both: a 27-month basic training programme, and continuous education (one 5 week executive programme in French) and an 18-month Executive Health MBA (in English).

4. What are the main themes/topics of your training programme?

After a core curriculum including the five main areas in Public Health education (namely Biostatistics, Epidemiology, Environmental Health, Management and Health Policy, Social and Behavioural Sciences), there are minors and majors in healthcare management, human resources, finance, economics, law, ethics, clinical practice (including nursing, medicine, surgery, obstetric and psychiatry), and global public health.

5. Does the training programme include cross-border care or hospital care in Europe? Are there specific European exchange programmes and contacts?

A two-month internship abroad (or in a private company) is required during the programme course.

6. What qualifications do you need to take the programme?

A Master's degree is required (Baccalaureat + 5) in liberal art, political science, law, economics.

7. How long is the programme? What is the method of teaching?

It is a 27 month programme including 11 month internship (in several periods); interactive small groups, work in groups and homework.

8. Has the programme been adapted along with recent changes/reforms in the hospital sector?

Permanent adaptation and changes monitored by a board of education and a programme committee specifically devoted to this programme, with the help of alumni and employees among other stakeholders.

9. How do you position your training programme in the training and career of hospital director?

Our basic programme allows for a job position as an assistant director general, and with experience and sometime with the help of an Executive degree such as our Executive programme Hôpital Plus or our Executive Health MBA.

10. How many persons are following the training programme? Where are past students working now?

In the class of 2010, 62 students were enrolled in the 27-month basic programme, 26 are enrolled either in Hôpital Plus or the Executive Health MBA. Past students are working mainly in public hospitals, and 50 percent of private hospitals come from our School too. Some are working in ministry of Health. Employment rate is around 100 percent.

VALUE MODELS: A NOVEL FORM OF ENTERPRISE MODELLING

By Paul Johannesson, Erik Perjons

Politicians, healthcare managers, and systems designers need new instruments for managing the complexity of today's healthcare systems. One of the most promising instruments is a recent enterprise modelling technique called value models. A value model is a graphical representation of a network of cooperating actors that together create value through resource exchanges and transformations. Value models have their origin in commercial contexts, where they have been used for analysing the economic viability of networks and their participants. Value models can be extended to cater for the special requirements of healthcare networks, thereby facilitating the design of new forms of collaboration in healthcare as well as innovative healthcare services.

Designing innovative healthcare services, including e-services, is an intricate task that needs to address the needs and wants of citizens as well as the goals and constraints of healthcare providers. An effective instrument for this task is a novel form of enterprise modelling, called value models, which focuses on the exchange and transformation of resources in value networks.

Complexity and Innovation

A core component in the European welfare society is an equal and efficient healthcare system. Large resources are spent on health-

care, but a number of problems still remain, including unequal access to healthcare, large variations in outcomes of treatments, deficiencies in service quality, and inefficient resource use. A main reason behind these problems is the complexity of the healthcare sector, where a large number of stakeholders participate and interact in order to ensure the delivery of high-quality healthcare. Organisational forms, vocabularies, IT systems, regulations, and relationships vary and evolve over time, thereby contributing to the complexity. Furthermore, European healthcare faces a period of potentially profound changes: in social attitudes, economic conditions and

the potential of medical technologies. This makes the ability to innovate and evolve essential for stakeholders in healthcare.

In order to manage complexity and support innovation, healthcare organisations need to acquire effective instruments for managing their knowledge about themselves and their environments. One popular instrument for this purpose is enterprise modelling that offers graphical representations of the structure, processes, information, resources, people, and constraints of an organisation. A novel type of enterprise model has recently been proposed, so called value models (or business models). A value model gives a high level view of the ac-

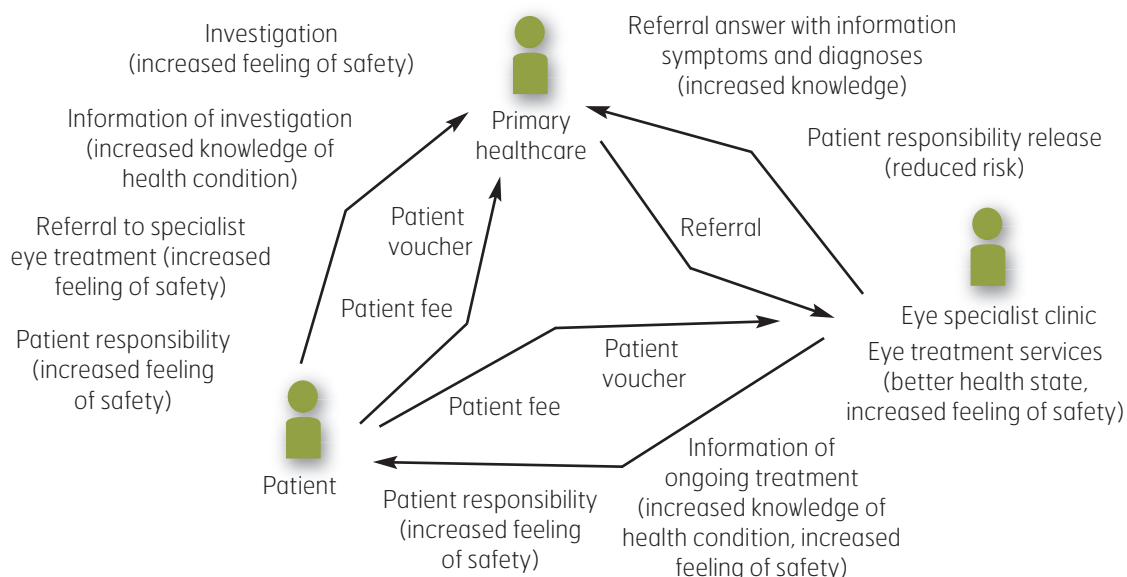


Figure 1. Value model depicting actors and the exchange of resources

tions taking place in and between organisations by identifying actors, resources and the exchanges of resources between the actors, thereby making it possible to visualise networks of cooperating actors. Value models provide compact and graphical descriptions of complex networks, which makes them ideal for supporting communication between different stakeholders. Furthermore, value models can be used for the purpose of innovating new and improved healthcare services by supporting stakeholders in reasoning about the values and benefits of the services. In this article, we will outline how value models can be used for service innovation in healthcare.

The Basics of Value Models

The central entities in value models are actors, resources, and exchanges and transformations of resources. The purpose of a value model is to show how these entities can be configured in order to form value networks, i.e. networks of actors that collaborate to produce value.

Actors: An actor is someone who is able to participate in resource exchanges and transformations. An actor is typically a legal entity, such as a person or a company.

Resources: A resource is an object that is viewed as being valuable by some actor. A resource is typically scarce; otherwise an actor would not consider it valuable. Some concrete examples of resources are books, cars, movies, hair cuts, and medical treatments. However, resources can also be of a more psychological and social nature, such as status, beauty, pleasure, health state, honour, and feeling of safety. The first examples of resources are often classified as economic resources, meaning that they can be controlled by an actor and can be transferred from one actor to another. The latter examples of resources are internal to an actor and cannot be sold or bought.

Transformations: An action that uses some input resources to produce new or modify existing resources is called a transformation. For example, water and flour can be used as input resources in a baking conversion to produce bread. Another example is an eye treatment that is used to improve the health state of a patient.

Exchanges: An exchange of a resource occurs when one actor transfers the ownership of a resource to another actor.

The Eye Hospital Case

The figure below shows an example of a value model. The model is an excerpt of a larger value model created in the REMS (REferral Management and Support) project, a collaboration project between the County Council of Stockholm, St. Eriks Eye Hospital, and The Royal Institute of Technology. The purpose of the project was to improve the collaboration between the primary care providers and the eye specialist clinics within the Stockholm area. The value model was used as a starting point for analysing the resource exchanges between the patient, the primary healthcare units and the eye specialist clinics. Subsequently, this analysis was the input to defining new e-services supporting the resource exchanges.

In the value model in Fig. 1, actors are shown as stick person icons and exchanges as labelled arrows. A label on an arrow tells which (economic) resource is exchanged and, within parentheses, the benefits of using the resource, i.e. what benefits the receiving agent can get by using the resource in a transformation.

Let us take a closer look at the exchanges from the primary healthcare provider to the pa-

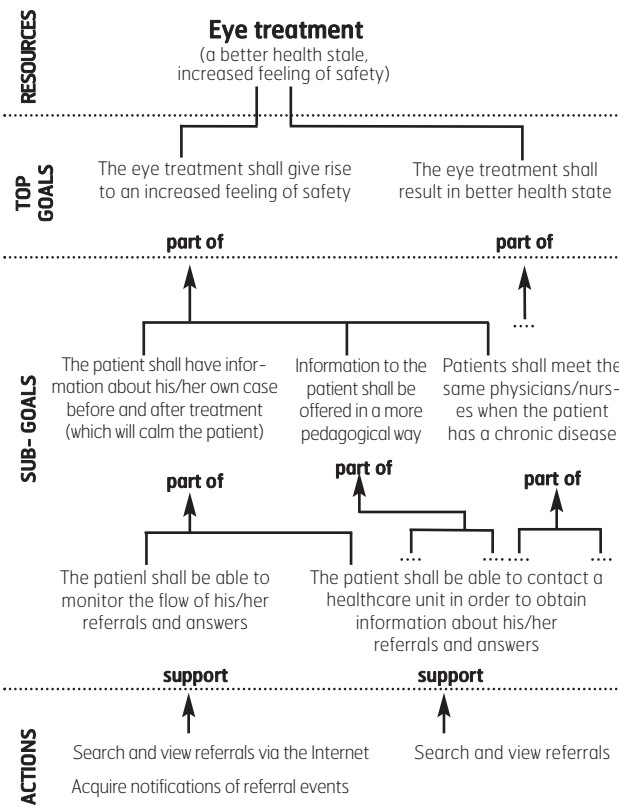


Figure 2. Goal model, starting from a resource exchange and its benefits

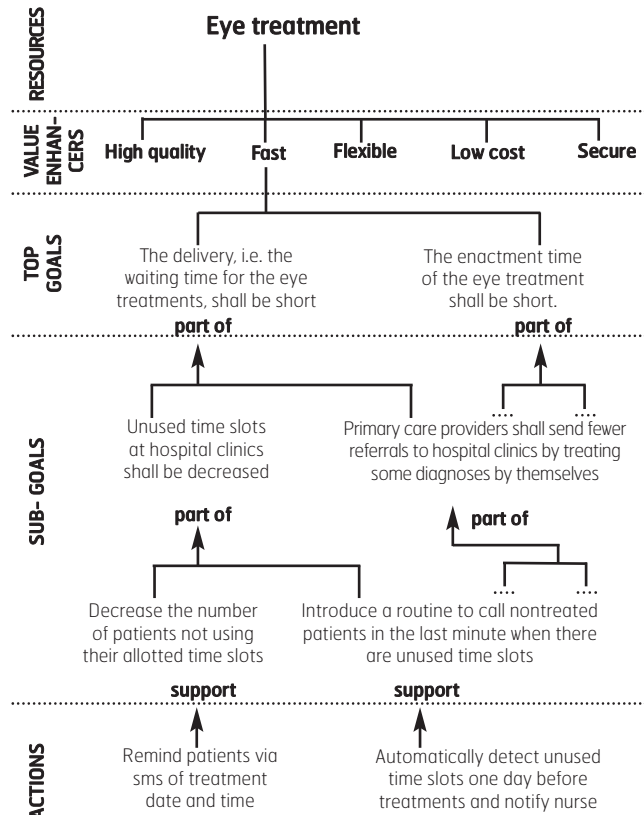


Figure 3. Goal model, starting from a resource exchange and value enhancers

tient. When a patient experiences an eye health problem, she will visit a primary healthcare provider. The primary resource this provider offers is an investigation service. The benefit of this investigation is that the patient gets an increased feeling of safety. Furthermore, the investigation provides a basis for an information exchange, where the provider informs the patient about her health status. This information has the benefit that the patient will get an increased knowledge of her health condition. If the patient needs further treatment, either the primary care provider will carry out the treatment (not shown in Figure 1) or the provider refers the patient to an eye care specialist at a hospital clinic that is able to provide advanced treatments. To do this, the provider offers a referral to an eye specialist treatment, which is a voucher for an eye treatment.

There are two benefits as a result of the exchange of the referral. The first benefit is direct: the patient will get an increased feeling of safety, since the patient knows that the referral can be used for advanced treatment, thereby reducing anxiety. The other benefit is more indirect: if the patient uses the referral, the treatment at the hospital clinic may improve the health state of the patient, i.e. another benefit of the referral is a potentially better health state. Furthermore, when the primary care provider starts investigating the patient, it gets a responsibility for the patient's health, i.e. the provider is responsible to carry out required actions in order to maintain or improve the patient's health state. The benefit is that the patient gets an increased feeling of safety, since she/he knows that a professional healthcare provider has a responsibility for her health.

The other exchanges in the value model can be described in a similar way, but this is left out for reason of space. The example illustrates some of the advantages of value models. They enable healthcare stakeholders to easily get an overview of their complex networks. They can be used to describe the rationale of a network and analyse its sustainability and the benefits it provides to its participants. Value models can also be used as a starting point for identifying business processes and services needed for realising the interactions of a healthcare network, and this is the topic for the remainder of this article.

From Values to Goals and Actions

As a first step in identifying and designing processes and services, it is helpful to derive goals from the resource exchanges in a value model. A goal is generally a description of a de-

sirable state, something that is worth pursuing. In other words, a goal expresses something a business seeks to accomplish, a desired future state of affairs or condition. Examples of goals are being the market leader in an industry or having a profit of more than 1 million euro. Goals can be broken down, i.e. one goal can be a part of another goal. Generally, the decomposition forms a hierarchy where high level goals are broken down into sub-goals. In order to achieve a goal, an organisation can make use of actions. The main difference between actions and goals is that an action states what an organisation will do to achieve a goal, while a goal tells what the organisation views as desirable.

One way of identifying goals from a value model is to address each resource exchange and focus on the benefits it is intended to provide. For example, starting from the resource exchange of eye treatment, we can identify two top level goals "The eye treatment shall give rise to an increased feeling of safety" and "The eye treatment shall result in better health state", see Fig. 2. Each of these goals can be broken down into a number of sub-goals. Such sub-goals may concern the exchange of information between actors, responsibility relationships between actors, transaction costs, internal efficiency, risk management, etc. In Fig. 2, we have decomposed the top levels goals mainly by focusing on information exchanges, taking into account what information patients should get and what channels should be used to distribute it. Goals at the lowest level are related to actions that can support them.

Another way of identifying goals from a value model is to focus on desirable properties of resources that are exchanged as well as desirable ways in which the resources are delivered to the recipients. In particular, desirable properties in this context are high quality, fast, flexible, low cost, and secure. These properties are called value enhancers as they describe what makes resources even more valuable. The value enhancers can be used to assist a designer in finding goals that address the usefulness of a resource as well as the adequacy of its delivery. For each resource being exchanged and for each value enhancer, we identify a number of top level goals.

In Fig. 3, we have started from the resource eye treatment and identified two top level goals based on the value enhancer "fast". The first one states that the waiting time for the eye treatment shall be short, while the second one states that the time for carrying out the treat-

ment shall be short. Just as before, we can break down these goals into lower level goals based on aspects like information exchanges, internal efficiency, risk reduction, and resource planning. In the example, we have primarily considered sub-goals about resource planning, i.e. how time slots shall be booked and used in efficient ways. Finally, we identify actions to support low level goals. These actions can vary in nature but they often take the form of new e-services. For example, the sub-goal of decreasing the number of patients not using their time slots can be supported by an e-service that reminds the patient via SMS.

In the REMS project the value model and goal models were created in several modelling seminars, each seminar included representatives for the involved actors. Together with a seminar leader proficient in goal modelling, the representatives identified sub-goals and supporting actions. In this way, the decomposition of top level goals into actions led to the identification of a number of e-services.

Concluding Remarks

The approach suggested in this article can be used in two ways. First, it can be used to systematically suggest and identify new innovative actions that improve the overall performance of a network of actors in the healthcare sector. A part of these identified actions will be the creation of new e-services. The approach will thereby assist designers in generating new ideas, where the use of value and goal models helps to ensure that all potential improvements are explored. Secondly, the approach enables traceability of actions to the high level goals they support. This enables designers to validate existing actions, in particular the effect they have on actors participating in a value network.

The proposed approach illustrates how value modelling can be used to systematically design, reconfigure and improve networks of healthcare providers, citizens, and other stakeholders. These tasks will become even more important in the future, as citizens are no longer only passive consumers but active co-producers of value in a healthcare network.

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WORK ABILITY: EFFECTS OF AGE AND WORK ENVIRONMENT ON HOSPITAL NURSES IN BELGIUM AND NEIGHBOURING COUNTRIES

By Jian Li, Michael Galatsch, Sascha Gerd Schmidt, Bernd Hans Müller, Hans Martin Hasselhorn

In recent years, all hospitals in Europe have suffered from nurse shortages. It is widely agreed that there are two main reasons for this: global demographic ageing and poor working conditions in the nursing profession. But what consequences do these factors have for work ability?

The nursing workforce is affected by demographic ageing in two ways: on the one hand, it will have to assure adequate healthcare provision for the increasing number of older people, and at the same time, the nurses are ageing as well. This double burden indicates that there is going to be a heavier requirement of healthcare from society while the active nursing workforce is decreased. It is also clear that poor working conditions, such as high job demands, low job control, conflicted interpersonal relations, work family conflict, and so on, can drive nurses to leave the institution or their profession prematurely.

Therefore it is important to consider the 'Work Ability' of the nursing workforce. Work ability has been introduced by Finnish researchers since 1980s, which is regarded as a concept combining both the individual's resources and work characteristics. Some findings indicated that work ability could be changed by individual factors and work factors. However, to our knowledge, few studies reported the effects of age and work environment on work ability in hospital nurses.

To date, the European Nurses' Early Exit Study (NEXT) provides us with the opportunity to explore the following questions:

1. What is the work ability of nurses according to age and country?
2. To what extent does work environment contribute to work ability?

Methods

The NEXT-Study investigated work, health, and professional turnover behaviours of nursing staff across Europe in 10 countries, in three different healthcare settings. In this article, we analysed the NEXT data from Belgium and neighbouring countries including Germany, France, and the Netherlands. We focused on the registered nurses (RNs) working in hospitals in these four countries. All in all, our analyses were based on the data from 3,146 nurses (Belgium 529, Germany 1,340, France 572, and the Netherlands 705).

Work ability was measured by the standardised instrument in terms of 'Work Ability Index (WAI)', which has been used worldwide. The score of WAI ranges from 7 to 49, high scores indicate good work ability. The nurses

were dichotomised as younger nurses (under 45 years) and older nurses (over 45 years) to examine the age effect. The work environment in this study consisted of three dimensions: Work Content (including quantitative demands, emotional demands, and lifting & bending), Work Organisation (including possibilities for development, influence at work, and work family conflict), and Social Work Environment (including quality of leadership, social support from colleagues, and interpersonal relations).

Results

Work ability by age

The proportion of older nurses (>=45 years) among the four countries was striking. More older nurses were found in France and the Netherlands whereas the percentages of older nurses in Belgium and Germany were relatively lower. On average the work ability of Dutch nursing staff was the most favourable (41.91) and German nurses reported the lowest work ability (38.30). Figure 1 shows that older nurses reported lower work ability than younger nurses in all countries.

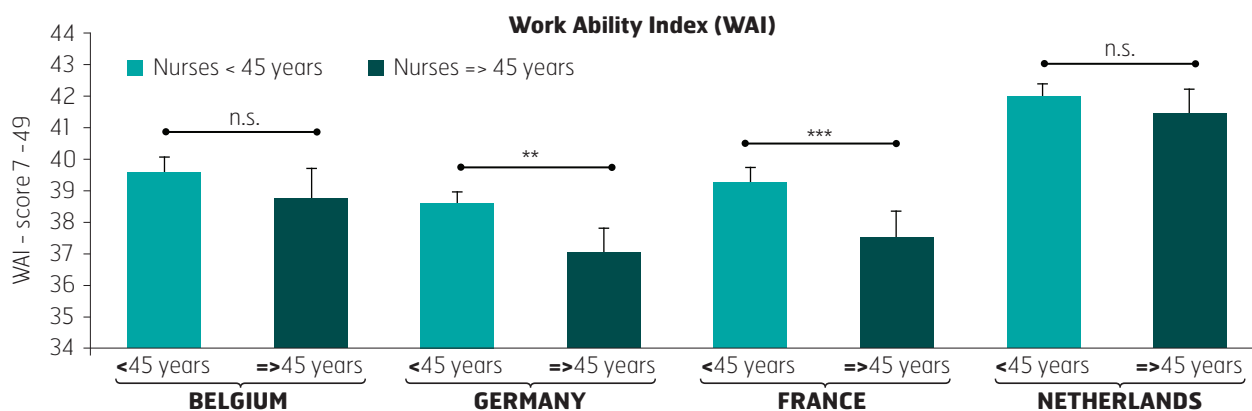


Figure 1. Scores of work ability in younger and older nurses * P < 0.05, ** P < 0.01, *** P < 0.001

Predictors of Work Ability

Based on the findings of linear regression modelling (see Figure 2), it is very clear that work family conflict is the biggest reason for decreased work ability among all nurses in all countries. But the other patterns of predictors are very different in each country. In Belgium, for young nurses, good interpersonal relations can improve work ability significantly; but high emotional demands predict low work ability in older nurses. In Germany, both good interpersonal relations and strong possibilities for development are important factors in improving work ability, whereas high quantitative and emotional demands are significant risk factors to decrease the work ability in younger nurses. For German older nurses, strong possibilities for development can improve work ability while high quantitative and emotional demands are also the risk factors to decrease work ability.

In France, strong possibilities for development and good interpersonal relations are important factors to enhance the work ability, meanwhile high quantitative demands are also the risk factors to decrease work ability in younger nurses. The picture in the Netherlands is quite unique, for both age groups, we only find the work family conflict as a risk factor that influences work ability.

Conclusions

Work ability is of high relevance for nurses and for hospitals. According to the Finnish researcher Ilmarinen, work ability may be understood as 'how good is the worker at present, in the near future, and how able is the worker to do his/her work with respect to the work demands, health and mental resources'.

The worker contributes to work ability via age and functional abilities, with knowledge, skills, attitudes and motivation. The workplace influences the work ability through work environment – by work content, work organisation, and social work environment. Given the increasing necessity for older nurses to participate in the nursing workforce, the decreasing possibilities for premature departure from working life and also the declining satisfaction due to unfavourable work environment among nurses, work ability becomes a more and more relevant concept in hospitals in Europe.

Looking at our results, the nurses of the Netherlands had the highest mean WAI scores, usually they reported better working conditions than the nurses from the other countries. This observation cannot be explained by the

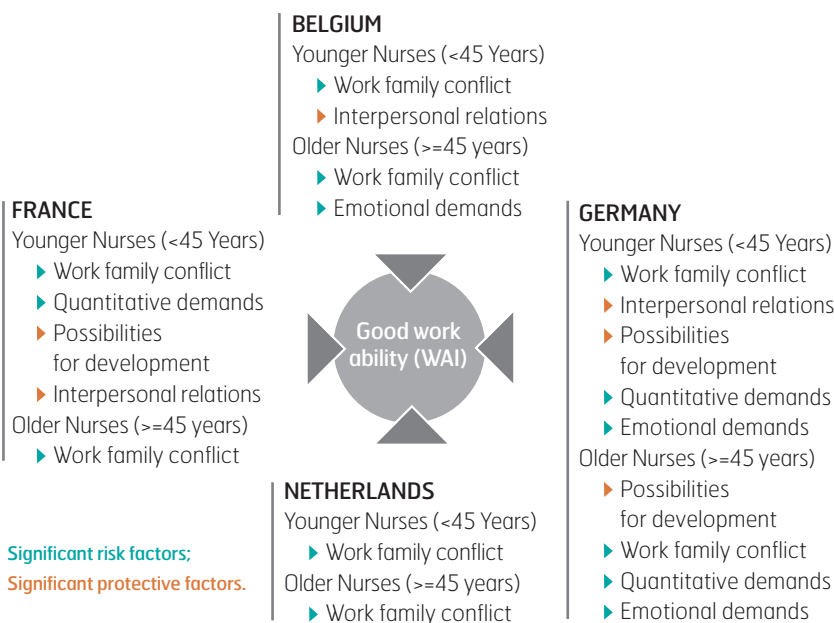


Figure 2. Predictors of work ability in younger and older nurses

substantially lower working hours of nurses in the Netherlands, but is likely to reflect better working conditions, possibly due to an especially tight labour market for nurses and increased attention to working conditions. In contrast, the low mean scores for WAI in Germany and France are surprising, they are significantly decreased in older nurses. It is likely that they reflect a mismatch between perceived working conditions and own abilities.

In Germany and France, the low WAI scores can to a large degree be explained by the perception of one's own work ability in relation to adverse working conditions. Another explanation is that German and French nurses tend to report worse working conditions when they are not satisfied with their jobs (so called negative affectivity). Among Belgian nurses, interestingly, the mean scores of WAI in younger and older nurses are at a middle level compared nurses from the other countries. The healthy worker effect and the effect of (former) early retirement programmes are being reflected.

Concerning the contribution of work factors to work ability, there is no doubt that work family conflict is the main risk in predicting low work ability for all nurses in the four countries. It has been reported that work family conflict is one of the main characteristics that influence quality of working life. The hospital management should pay more attention to the balance between work and family among nurses, such as more flexible and individual work schedules and the provision of a supportive atmosphere.

In Belgium, Germany, and France, interpersonal relations seem to be important to younger nurses, indicating that younger nurses might need more consultation on how to handle the relations among colleagues, supervisors, physicians, and patients. In Germany and France, possibilities for development are also another major factor to younger nurses. However, job demands are found to be harmful to work ability in Belgian older nurses, French younger nurses, and German nurses at all ages. It is easily understood that nurses' workloads are usually higher than other occupations, and nurse shortages increase the workloads of existing nursing staff.

There is no way of avoiding the nature of the nursing profession, such as dealing with death, human suffering, and aggressive/troublesome patients in their work, which would increase emotional demands among the nurses. The hospital management should recognise the importance of both visible and invisible workload of nurses in all age groups.

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CONCEPT MAPPING FOR HEALTHCARE ORGANISATIONS

Part Two: A Working Example

By Michael Hall

Part one of this series in the last issue of *(E)Hospital* introduced the topic of concept mapping for healthcare organisations focusing on the theory behind the concept and underlining the importance of marketing. This second, and final part shows us examples of concept mapping in action.

DME Based Concept Mapping Methodology: Coordinated Care Research

The Life Institute of Albany, New York, situated in the Albany Veterans Administration Hospital, began to conceive of a new market entry of coordinated care service for patients suffering chronic diseases of aging, patients with terminal illnesses and family caregivers of such patients. Given that the service did not exist for the market, the Institute thought creating a large enough market to sustain the service was necessary. Recognising the need to establish the service in the market quickly and not fully experienced in the development of marketing messages, the Institute's executive management decided that a sound research and measurement approach was needed. They agreed to a concept mapping market research project.

Research began once permission for access to a sample of the population of potential customers at a series of locations in Albany, New York was granted. Those locations included senior centres in Albany, New York with which the Life Institute had affiliations. A set of open-ended questions was posed to the potential market respondents. While the questions guided the interview, as in focus groups, the intention was to engage the respondents in a conversation. The following questions were asked:

1. If you or your family member (parents, spouse) became seriously ill, for example, heart disease, Alzheimer's disease, cancer, what help or services would you imagine you might need or want for yourself or your family?
2. Imagine the serious illness is worsening and requiring additional care. What added help or services do you think would be needed as the health of you or the family member became poorer?

3. Imagine assistance is needed in understanding and managing help and services for a serious illness. What do you think you might need help in understanding or in managing those services?
4. In addition to what we have already asked, do any other ideas come to mind about serious illness in general? Imagine your income and health insurance coverage are about the same as they are now when you or a family member became seriously ill.
5. If some of the help or services you needed were not covered by insurance, what help or services would you be willing to pay for?
6. If you needed help understanding or help managing services, which services would you be willing to pay someone to manage for you or give you advice about?
7. How much would you be willing to pay for that advice and/or management?
 - ▶ How much per month?
 - ▶ How much per year?

The responses were recorded and then analysed using specialised cluster analysis software. The resulting concepts were:

- ▶ Help coordinating bills;
- ▶ A sympathetic person to talk to;
- ▶ Transportation;
- ▶ Understanding and coordinating doctors' information;
- ▶ Housekeeping;
- ▶ Understanding and coordinating insurance information; and
- ▶ Medical homecare.

These concepts were then submitted to a DME survey generator, creating a survey arraying service attributes from the cluster analysis to include the Life Institute's coordinated care service, titled Care Sup-

port of America or CSA, a prepaid health package, and the Self. The resulting questionnaire is found in Exhibit 1. The concepts chosen as the reference frame came from the domain of concepts as the final pairs.

The distance questionnaire was administered to a convenience sample of 115 respondents. The respondents were selected using a convenience sample with the intention of performing demographic analysis to determine market representation. The respondents were chosen from a close approximation of the potential market sought by the coordinated care services programme. The distance questionnaire was administered to participants at the Family Business Resource Council as well as to graduate students in the Graduate Programmes in Management at Sage Graduate School, specifically from the Health Services Administration, Public Administration, MBA, and Organisational Management programmes. These respondents appeared to represent potential caregivers of parents and other relatives who would be in need of coordinated care services.

Dimensionality of Concept Analysis

In consideration of Bigne, et al., analysing the pattern of the conceptual space in which magnitude estimation based concepts can reside is critical to the analysis. Therefore, uncovering the number of dimensions in the space was the first step to undertake in the analysis. The dimensionality of the space is an extension of multidimensional scaling. Human cognition, in concept mapping analysis, exists in conceptual space in the same way that physicists conceive of and measure interstellar space. Cognitive space is curved in the same way that physicists

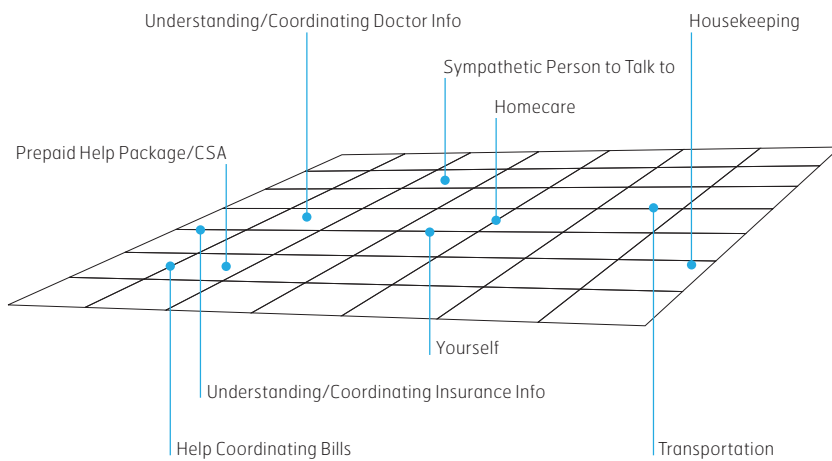


Figure 1. Graphic representation of the resulting map

observe interstellar space. There can be two types of space in multidimensional concept mapping methodology, as there are in physics; Euclidean, consisting of flat dimensions and Riemannian, consisting of curved dimensions. As a result, understanding the bending of the space around product attributes is essential.

The number of Euclidean or plane space dimensions uncovered was seven and the number of Riemannian or curved space dimensions was two. This finding is particularly noteworthy because the meaning of the space in which the product attributes or concepts is found significantly affects the interpretation of the distance between and, ultimately, among the product attributes or, in this case, the coordinated care services attributes. Figure 1 is the graphic representation of the resulting map based on the distance data.

While the analytic software is able to represent the product attributes or concepts in three dimensional space, the map displayed here is the two dimensional representation. Thus, the distances represented in the map cannot clearly demonstrate the curvature. Nevertheless, the space is curved and, therefore, must be interpreted numerically.

The most meaningful way to interpret a multidimensional space in DME concept mapping is to represent the data between pairs in a rank ordering based on distance and space curvature. Given the curvature of the conceptual space for the coordinated care services, adding a third concept became important to the development of the persuasive messages. Using the three concept/product attribute combination changed the concept combinations.

Persuasive Message Content

Based on the combinations, relative distances, and the interpretation of the conceptual space in which they exist, a series of persuasive messages, i.e., marketing messages, was generated. At this point, creativity was combined with the multidimensional concept mapping research. The resulting messages are found in Exhibit 2. As can be seen from the messages generated, a combination of the most important product attributes or, concepts, added to

a marketing context for coordinated care services, has been produced.

In addition, the creativity portion of marketing messages for coordinated care services was associated with appropriate message delivery media. Message 1 was determined to be most effective and, therefore, should be delivered using radio. Messages 2-9 were determined to be most effectively delivered by print ads and webpage copy making it a coordinated marketing campaign. Given the complexity of the space and the three concept combinations, radio media were thought to be the strongest delivery mechanism. The remaining messages were considered to be supportive. The combination of media was based not only on the map of product attributes but also on the budget of the non-profit organisation.

The delivery of messages concerning CSA and the potential customer is the process by which the key marketing concepts are moved closer to “you” or self. The distance between the product or, in this case, service, specifically, Care Services of America (CSA), represents market share. The closer the product or service moves toward “you”, the greater the market share gained.

In order to understand what the psychological elements of the messages are to be is, in large measure, derived from the open

▶ EXHIBIT 1. QUESTIONNAIRE

Instructions:

Please estimate how different or “far apart” each of the following words or phrases are from each of the others. The more different, or further apart they seem to be, the larger the number you should write. To help you know what size number to write, remember: Homecare and Help Coordinating Bills are 100 units apart.

If two words or phrases are not different at all, please write zero (0). If you have no idea, just leave the space blank.

Home Care and Help Coordinating Bills are 100 units apart, how far apart are:

- | | | |
|---------------------------|-----|--|
| ▶ Help Coordinating bills | and | A sympathetic person to talk to |
| ▶ Help Coordinating bills | and | Transportation |
| ▶ Help Coordinating bills | and | Understanding/Coordinating Doctor’s Information |
| ▶ Help Coordinating bills | and | Housekeeping |
| ▶ Help Coordinating bills | and | Understanding/Coordinating Insurance Information |
| ▶ Help Coordinating bills | and | Prepaid Help Package/CSA |
| ▶ Help Coordinating bills | and | Homecare |
| ▶ Help Coordinating bills | and | Yourself |

How far apart are:

- | | | |
|-----------------------------------|-----|----------------|
| ▶ A Sympathetic person to talk to | and | Transportation |
|-----------------------------------|-----|----------------|
- And this pattern continues for each concept.*

ended data using software applying a form of neural network analysis or how consumers think about the context of the product, what they think about in addition to the context of the product or services, what related concepts consumers think about in the context of the product or service. Since the DME concept mapping begins with neural network analysis of potential caregivers, it provides natural categorisation of product attributes generated by potential caregivers rather than by researchers.

The attribute clusters when measured with DME give the researchers/marketers further information. Attribute clusters reveal the psychological and other attitudinal elements. Resultantly, marketing and persuasive messages can be crafted in a more comprehensive way. This kind of information is particularly important, not only for the generation of persuasive messages with likely greater impact, but also because a predictable amount of market share is generated by those messages. Providers may then be in a more favorable position to advertise, promote, and otherwise persuade potential market members to accept and buy their products and/or services.

Based on the results of DME concept mapping research in other marketing contexts, the CSA messages have a high probability of success. Naturally, the executive management of the Life Institute and CSA must apply the messages and the delivery mechanisms as provided by the multidimensional analysis and the creativity of the market researchers. With these elements present CSA can measure the results of its persuasive messages against the market share predicted by the data because of the measurement of distance between the concepts of self and the CSA service. The map of DME based concepts provided CSA executive management with a plan to navigate the market terrain uncovered here.

Conclusion

The CSA research shown here allows for mapping of consumers as the end user or consumer. The mapping methodology directs itself clearly at message content. The message content can be adapted to several forms of media. The message content can be creatively organised with graphics and images based on demographic data collected at the time of the interviews and DME questionnaire completion.

The DME map data are also the basis for practical applications beyond the first map and resulting concepts. The DME map may be added to and compared directly. Since the data are on a ratio scale using a reference point pair, the map can be added to for greater understanding of the psychological concepts and dimensions in the marketing context.

However, the first order of importance in building maps of concepts and space is to produce health marketing and outreach messages that can persuade patients to seek treatment, remain in treatment, seek health prevention, and persuade consumers toward other important health outreach programmes. In terms of marketing, the service providers need to understand the

thinking of their consumer and community bases in order to attract users in sufficient numbers to continue to supply needed health services. These areas are resource dependent and the messages need to be addressed with such circumstances in mind. The most powerful persuasive messages are needed. Using DME based concept mapping provides the power of measurement-derived content while considering important psychological factors.

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► EXHIBIT 2. PERSUASIVE MESSAGES

1. INTRODUCING CARE SUPPORT OF AMERICA!

CSA is a help oriented organisation that provides a prepaid care package to assist family members or loved ones with chronic or serious illnesses. A trained professional is assigned to an individual's case to help the individual in financial matters, such as coordinating insurance information; help in practical matters such as housekeeping; and help in emotional matters by having a sympathetic ear to listen to concerns about the many areas of serious illness.

2. Care Support of America is here to Help!

Help when serious illness strikes you, your family or someone you love!

3. CSA can Help!

CSA is prepaid insurance for coordinating insurance information for those who are seriously ill or the families of those who are seriously ill. Help with housekeeping, too! Help by providing a person with a sympathetic ear!

4. Is Someone in Your Family Sick? CSA can Help!

CSA can help with insurance benefit coordination!

CSA can help keep the house clean and clutter free during the illness!

CSA is your prepaid help insurance package!

Available when illness strikes! CSA is a prepaid insurance package for you!

5. Someone ILL in your family?

Call a CARE SUPPORT of AMERICA Representative for the help you need with insurance coverage! Help Keeping the House Clean while the family member or you are ill!

All these services are offered through the CSA prepaid insurance programme!

6. Help with Insurance coverage! Housekeeping! Helping is what CSA does through its prepaid insurance package. Let CSA listen sympathetically to you and help when illness touches you, your family, or people you love.

7. CSA, your prepaid help insurance package, can assist in supporting you and your family if serious illness strikes. When serious illness strikes your ability to keep the household clean and orderly and pay bills on time will be reduced. CSA can coordinate service to help with these things. CSA will also be around to listen sympathetically as you, your family, or a loved one work through the illness.

8. When illness strikes CSA can help! CSA is a prepaid insurance package that can assist with household chores and cleaning and getting bills paid on time. Most importantly, CSA is there to listen sympathetically when you most need it!

9. Need someone to listen to you when you are seriously ill? Need someone to listen sympathetically if a family member or close friend is ill? Call Care Support of America, the prepaid help package that creates the services you need at such a time. CSA will listen sympathetically! CSA will assist with housekeeping chores! CSA will help get bills paid on time!

WASTE MANAGEMENT FOR HOSPITALS IN THE 21ST CENTURY

Creating a Win-Win Situation for Hospitals and Our Environment

By Anja Leetz

The best practices in hospital waste management start with procurement. If fewer disposable items are purchased, less total waste will need to be disposed. Better waste classification and careful segregation leads to less contaminated and mixed waste, and more recovered recyclables.

A Solution for Waste Reduction

These simple facts describe the challenges hospital managers face. Delivering quality care while keeping infection rates low and costs under control is a constant demand to be met.

Hospitals face varying realities. If they have an environment or waste manager they usually start at the end of the process, where the waste is waiting to be dealt with, and not at the beginning with procurement. Or hospitals outsource the whole waste management process and pay a hefty price for piece of mind, without being able to reduce waste and associated costs.

Health Care Without Harm (HCWH) is an international coalition of 470 hospitals and healthcare systems, medical professionals, community groups, health-affected constituencies, labour unions, environmental organisations and religious groups in more than 52 countries. Our partner organisation Practice Greenhealth works with over 1,100 hospitals and systems to change to sustainable and eco-friendly practices. Together we work to transform the healthcare sector so it is no longer a source of harm to people and the environment by encouraging and sharing best practices.

Waste Working Groups as Drivers for Change

HCWH recommends setting up hospital site working groups on waste to develop, monitor and enhance waste reduction programmes. In order to be successful these need input and cooperation from experts in all departments and all occupational groups within a hospital. Waste working group members will need to audit hospital practices and

set out clear short and long-term goals. Their research should include an analysis of purchased products and medicine from the point of waste, identify the types and amount of discards generated within the hospital, and ideally compare this data with information from a similar medical establishment. Recommendations on reasonable supply management should be developed.

This leads to purchasing practices for products, medicines and food that reduce the amount and toxicity of the waste produced. Procedures should also be developed for the classification, segregation and management of waste from each individual source, and these should be made easily accessible to staff. A programme for separate collection of different waste streams should be developed with an indication of potential recycling markets. Technical parameters for waste management in the facility and premise need to be set. Cost and savings need to be estimated before launching a waste reduction programme. Information material for staff and patients needs to be developed and the staff trained in order to have full buy-in.

Environmentally Preferable Purchasing as a Way Forward

Environmentally preferable purchasing (EPP) means assessing the environmental and human health impact of products before you buy them, and choosing least harmful products/services. One may eliminate products that contain mercury, chlorine compounds, bromine, cadmium, lead and chemical substances that disrupt body functions, i.e. phthalates. The Stockholm County Council, for example, has a list of chemicals that should be avoided when

purchasing for their city hospitals. EPP encourages a gradual and ongoing process by which a hospital continually refines and expands the scope of its efforts to select healthy, safe and environmentally sound products and services.

The German consultancy Ökopol worked with circa 70 hospitals in Germany over three years to introduce EPP and found that most hospitals choose overpriced products of low quality. The main challenge Ökopol identified was organising an internal purchasing group that brought relevant staff together. If this was successful then analyses were done, using criteria developed by the team in collaboration with Ökopol, and very quickly products were changed and costs saved.

The introduction of EPP guidelines is key to reducing the amount and toxicity of waste. Source reduction should have a higher priority than even reuse or recycling, where currently some of waste management energy is focused. We need to remember all purchased products will eventually become more or less burdensome and costly wastes. Interestingly the NHS carbon footprint between 1992-2004 represents 25 percent of England public sector emissions, with procurement being 60 percent, followed by building energy use (22 percent) and travel (18 percent). Procurement is not only a major source of waste, but also of CO₂ emissions, and thus a shift in purchasing will help to address climate change.

One simple, but very efficient, criteria is that of product weight. Select the product with the lowest weight after comparing this for the same product and its packaging from various suppliers.

Another criteria, applying primarily to packaging and products that do not have

direct contact with pathogens, is the potential for reuse and/or recycling. If possible from a hygienic and sanitary point of view, disposable products should be eliminated. Even though reusable products require cleaning, and thus consume energy, water and disinfectants, as a rule the total spending on their purchase and application is lower than in the case of single-use products. It is also environmentally preferable to reuse a product and clean it than to manufacture a new item each time. Analyses carried out in hospitals have shown that disposable products, such as single-use mugs for drug administration, bottles for feeding infants, tongue depressors, colostomy pouches, and intubation tubes, among others, can be substituted without reducing quality of service, to the benefit of both the environment and hospital finances.

Proper Waste Classification and Segregation

In order to reduce cost and waste managers must pay attention and implement carefully planned procedures. First, various wastes have to be correctly identified, segregated, and disposed of to avoid a threat to human health and the environment. If staff members do not find these

procedures easy to follow, the different waste streams (municipal, medical, infectious medical, hazardous and low level radioactive waste) will get mixed together and become uniformly hazardous, which requires the most costly and environmentally adverse treatment methods. Thanks to constant progress in segregation, the public hospital of Tours in France managed to reduce its infectious medical waste production from 1.4 kg/bed/day in 2000 to 1.08 kg per bed/day in 2007.

In order to achieve segregation, policies should be understandable and manageable for staff. Containers for separate collections of waste should be located where the waste is generated, in locations that do not get in the way of personnel's everyday duties. The containers need to be clearly labelled. Colour coding and symbols are used to make waste segregation easy for staff. Training and motivation of staff is important for implementing segregation. A hospital in Luxembourg, for example, uses stickers on the bags to identify which department generates the waste, and can reinforce training for staff who are lagging behind in correct disposal. This facilitates data gathering and monitoring of proper waste separation.

Recycling

More than half of all waste generated in healthcare are various kinds of packaging. Most of this waste does not have any direct contact with infectious agents or hazardous substances. It can often be recycled, and should not be mixed with non-recyclables, infectious or hazardous wastes. King's College Hospital in the UK for example was able to increase the cardboard recycling rate by 115 percent between 2008 and 2009 due to improved internal processes. Key to success here is staff motivation and training, and ease of access to recycling bins.

Waste Treatment and Neutralisation

Infectious medical waste must undergo treatment in order to be downgraded to normal household waste. Treatment can include autoclaving, thermal disinfection, and microwave sanitation. Hospitals should strive to eliminate the amount of waste being incinerated. Gaseous, solid, and water residues from incineration release highly toxic, persistent and accumulative sub-

stances into the environment, including dioxins, furans, and heavy metals. The more chlorine-containing products (such as PVC or vinyl plastic, disinfectants, bleached dressing materials etc.), mercury (although there is a general ban on incinerating mercury it may end up in the waste stream) and chemical agents that exist in the infectious waste stream, the more toxic emissions will be released by incineration.

Incineration is also the most costly method of waste treatment, taking into account both investment outlay and day-to-day operating costs. No technology offers a panacea to the problem of medical waste disposal. In general, however, most non-incineration technologies emit fewer pollutants and generate solid residues that are not hazardous and can at times be recycled. Opole Hospital in Poland achieved a 52 percent reduction of emissions (SO₂, CO₂, NOX) in 2007 compared to 2006 after introducing a waste reduction programme and extending their environment protection activities in line with ISA 14001.

While HCWH realises that in most of Western Europe landfills are coming to an end and incineration is offered as the "solution", especially with waste to energy promotion, we posit that this is a false solution. If we continue to waste and burn our resources then fairly soon we will not have any left to live and treat our patients with. Forward thinking institutions together with industry and governments need to begin getting serious about implementing real solutions for hospital waste. Solutions do exist and can be implemented.

Conclusion

The solution for better waste management lies in the challenge of addressing hospital procurement, improved segregation of non-medical waste and avoidance of incineration. We have many doctors and nurses who are questioning current practices and working towards healthier alternatives. HCWH is there to be part of this process.

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HOW DOES YOUR HOSPITAL MEASURE UP?

- ▶ Where does waste sit in your management structure?
- ▶ Does your hospital have an environmental manager?
- ▶ Do you have a waste working group in your hospital?
- ▶ Do you know where your waste goes?
- ▶ Does your waste reduction plan have measurable and achievable goals?
- ▶ Do you have an environmentally preferable purchasing system?
- ▶ Do you have a segregation plan and how do you motivate staff to participate?
- ▶ Do you know the material content of products you send to incineration and what their environmental impacts are?
- ▶ Do you explore alternatives for incineration?

CHANGING HOSPITAL ORGANISATION CRITERIA: **FROM CLINICAL SPECIALTIES TO DIFFERENT LEVELS OF CARE**

By Dario Rosini, Lorenzo Bartoli, Mario Romeri, Fausto Mariotti

Traditional hospital organisation, structured hierarchically along the lines of clinical specialties, generates duplicate costs and is not able to guarantee adequate answers to the different levels of patient needs. For this reason, the Italian government, both at national and regional level, contemplated the creation of clinical departments where hospital resources (beds, rooms, technologies and nurses) have to be shared by many teams of specialists.

Organising hospital departments by patients' intensity of need is emerging as the most interesting solution but this organisational reengineering requires a strong cultural and informative change. Careggi Hospital undertook this change process five years ago. Although some cultural resistance still has to be overcome, interesting innovative outcomes tend to emerge in terms of IT and Management by Objective (MBO) systems.

The Careggi Hospital and the Organisational Change Process

Careggi Hospital is the main clinical hub of the Health Regional System of Tuscany. It is a teaching hospital and activities are performed in 25 different buildings and 12 departments created on the basis of clinical pathways. This means that in more than 95 percent of cases, patients entering the hospital will receive all the health services they need inside the same department.

The organisational change started at the end of 2004, when there were 141 specialists teams, each of them claiming and managing its own resources. At that time it was clear that dealing directly with a such a large number of clinical units could not be the best solution for the general directorate to manage the system. So those units were grouped inside the 12 new departments (ten clinical and two diagnostic) and new innovative rules were set concerning the production process. The main pillars of the new model were the distinction between the professional dimension (how to produce) and the productive one (what to produce) and the allocation of resources (beds, nurses, technologies and rooms) under the authority of the departmental management.

In this new model the specialists no longer have their own resources but have to manage the care of their patients by negotiating annually the use of departmental resources with the management.

On the other hand, these resources are organised by the department on different areas characterised by different levels of assistance to be provided. Management of these settings was assigned to a new organisational figure, the nursing coordinator.

All settings were classified in three different levels:

- a) Level 1: intended to receive clinically unstable patients needing high intensity care;
- b) Level 2: designed to provide a medium degree of assistance and organised to take care of the majority of patients entering the hospital for elective surgery; and
- c) Level 3: containing all low care activities such as outpatient treatments and diagnostic procedures.

As a consequence, each department organisational chart was representable as a matrix characterised by two different middle manager dimensions: a clinical one in charge of managing patients's pathways; and an assistance based one taking care of logistics and resource optimisation.

A New System for Recording Costs and Medical Events

Due to the change process and its consequences in terms of responsibility, a new organisational system of coordinates for recording resource consumption and clinical events had to be rebuilt on the basis of this new double dimension.

Indeed, the hierarchical recording system that in the older model identified at the same time the medical team, the nursing team and their own rooms proved to be no longer suitable.

Since both practical experiences and literature about the argument were quite poor in Italy at that time, about five months were spent in thinking about a new informative recording system able to cope with this increased complexity.

The solution that was identified takes into account the need of each event to be recorded by keeping two different kinds of information: who is generating the event (clinical dimension) and the nursing setting where it is generated (the place where the event to be recorded is happening and the level of care characterising it). In this new perspective, it was necessary to map all crossings among these two dimensions and to consider each crossing point as a possible organisational recording centre.

This approach allowed the monitoring and control of costs and medical events in a double perspective simply by calculating sums of rows (costs and events articulated per setting) and columns (costs and events classified per specialist unit).

An Overview of the Implementation Process

The ADHOC Project, a challenging three year plan worth about five million euro and supported by three external consulting organisations, began in 2005. It aimed at implementing such an organisational change by introducing new criteria based on intensity of care, by stimulating clinicians to think over their activities and by creating strong conditions for cultural change too.

During the first year, all new hospital settings were defined and classified and a comprehensive training programme was started for the majority of hospital personnel; medical, nursing and administrative. At the end of 2006 the new organisational coordinates plan was approved and tested successfully on the human resources administration system. Then, in March 2007, it was activated in the logistic and accountability softwares. This step was undertaken by relying mostly on the involvement of the nursing staff and administrative clerks. The most demanding step was in December 2007, when the new plan was switched on on all remaining clinical and diagnostic software.

Due to the significant risks concerning possible consequences on hospital activities, it was switched on during the night. A call centre devoted to supporting personnel in this change was set up and it proved to be very useful for removing some blocking problems that had emerged, especially in the morning hours of the first two days. After the first week of implementation, calls were reduced to routine level and almost all the reported problems had already been solved.

The Role of ICT in the Change Process

As shown above, Careggi's change relied heavily on ICT solutions. The percentage of resources invested in ICT in Italy is only 0.8-0.9 percent of the total health expenditure, compared to the 2.5 percent average of EU countries and 3.5 percent of Northern America (source Gartner Group – 2006). At the same time, ICT provider reliability tends to

be less adequate for software solutions than for hardware.

In our experience, we had to deal with both small and big providers. Small providers have sometimes proved to be very flexible and effective in implementing innovative ideas but often had been not able to support the growing scale of the change process. The bigger providers, although reliable in terms of coping with the scale, at the beginning tended to be less flexible and to slow innovation by pushing their standardised solutions. Only when they began to understand that the implementation of this new model of hospital organisation is becoming standard, did they start to adequately support our efforts.

New Perspectives for the Management by Objectives System

Now, the main ongoing challenge concerns the development and implementation of a new Management by Objective (MBO) system. The new recording system based on intensity of care criteria has a strong latent power but needs a clear and shared organisational context to produce the best effects possible.

Analysing and clarifying the nature of responsibilities of the main actors was the top priority. New nursing responsibilities have emerged and traditional managerial responsibilities of clinical middle managers have to be redefined. Setting objectives, assigning budgets and assessing results can no longer be carried out by the old methods.

In this reconfiguration process, the clinical body is made responsible for effective case management. The nursing middle management, in addition to its traditional assis-

tance tasks, is required to organise and manage the resources of settings by maximising efficiency and personalising assistance to patients. These are the principles driving the process of building the new MbO system, but its implementation is not easy as proclaiming them.

Main opportunities generated by this new system concern:

1. Splitting up responsibility on organisation of resources from responsibility on their use;
2. Flexibility of the allocation of resources, thanks to the annual negotiation of resources between the clinical specialist units and departmental management; and
3. Shifting most of the attention from organisational structures to activities performed so to incentivise the adoption of an Activity Based Costing system.

Also some problems seem to arise:

1. Strong cultural difficulties for the clinical middle managers in accepting their new role; and
2. Risk of burdening the negotiation procedures inside departments (conciliating nursing objectives and constraints with clinical ones.)

Conclusions

Looking back at the whole process and thinking about the present trends, it seems that the undertaken way is the right one. Certainly, this process has improved several aspects of hospital organisation. The most evident being the significant reduction of inpatient beds, from 1,830 at the beginning of 2005 to 1,615 now, with a higher occupation rate (almost 90 percent) and the same level of production value.

Other positive outcomes will probably emerge in years to come, when all hospitals will be organised on the basis of intensity of care and all actors are completely aware of their new role.

Authors:

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- Lorenzo Bartoli (Chief Information Officer)
- Mario Romeri (Head of the staff of general directorate)
- Fausto Mariotti (former medical Director of Careggi Hospital)

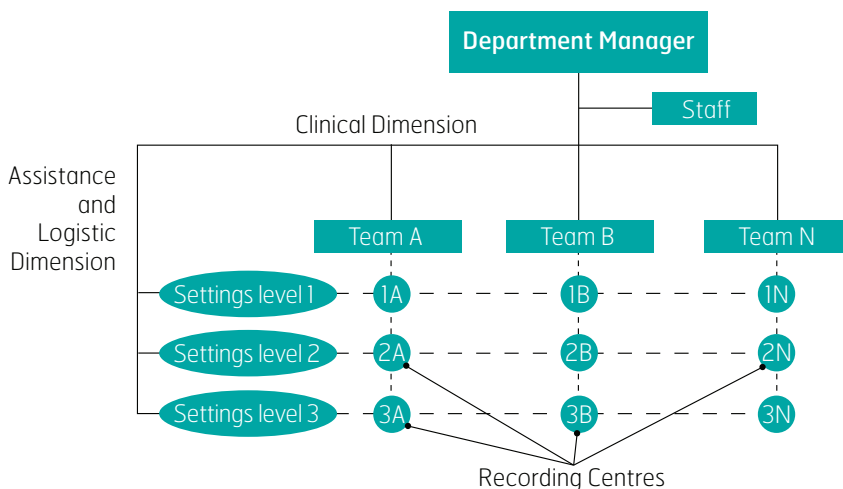


Figure 1. The new recording system

THE GEOGRAPHICAL DIMENSION OF **HOSPITAL-ACQUIRED INFECTIONS**

Unravelling the Spread of Nosocomial Infections Through Healthcare Networks

By Hajo Grundmann

Hospital-acquired infections (HAIs) are a constant battle for hospitals, often making the headlines. But how do these infections spread and what can be done to stop them? This article investigates the use of mapping tools for epidemiological investigation, which could allow for early warning and response for hospital infections.

The Epidemiology of Hospital-Acquired Infections

Hospital-acquired infections resemble each other. They are likely to be caused by opportunistic pathogens carried by patients as part of their 'normal' flora and are usually associated – in some way or the other – with antibiotic consumption, either of the patient himself or among the fellow patients in the rest of the ward or hospital. It therefore comes as no surprise that in hospitals, where on average

about one of third patients are receiving systemic antibiotic chemotherapy, most bacteria that cause nosocomial infections express some type of resistance to first or second line antibiotics or occasionally even compounds of "last resort". This provides them with the edge over their susceptible competitors.

Moreover, de novo emergence of antibiotic resistance in hospitals is a relatively rare event and mainly restricted to some special bacteria or resistance mechanisms. Most antibiotic resistance is encoded by genes and

more often assemblages of genes so called genetic elements which are frequently mobile and can spread between different bacteria. Antibiotic resistance of this type is mainly disseminated by bacterial strains which have acquired these elements and are carried by patients. Naturally, these antibiotic resistant strains are also more frequently transmitted between patients who share the same facilities and some have evolved into notorious hospital clones (groups of bacteria that are all genetically related and descended from a



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single, common ancestor) with the potential to cause outbreaks if given the chance. In absence of the high antibiotic selection pressure and the multiple opportunities for transmission that exist in hospitals, these strains are constrained in their ability to spread far and wide in the community and if this paradigm holds one should be able to observe a geographical concentration of typically hospital-acquired clones.

The European Network Approach of the Staphylococcal Reference Laboratories

We have tested this hypothesis by utilising one of the most successful networks for the surveillance of antimicrobial resistance, the European Antimicrobial Resistance Surveillance System (EARSS). With this approach we intended to identify the geographic distribution of *Staphylococcus aureus* clones that cause invasive infections in patients treated in European hospitals.

S. aureus lives on the skin and in the nose of about a third of healthy people. These bacteria usually coexist peacefully with their human hosts but occasionally can cause trivial infections such as spots or boils, or even less frequent, serious, life-threatening conditions such as blood poisoning and pneumonia. These latter infections require professional management in hospitals and treatment with antibiotics. Unfortunately, in some parts of Europe many of the *S. aureus* clones that are typically encountered in hospitals are resistant to most frequently prescribed group of antibiotics the betalactams and are then referred to as methicillin-resistant.

Epidemic clones of methicillin-resistant *S. aureus* (MRSA) infections can be a particular problem in hospitals and other healthcare facilities (so-called hospital-acquired MRSA), but a few clones can also occur in otherwise healthy people who have not been admitted to a hospital and are then called community-acquired MRSA. With the help of the EARSS network, we were able to garner the support of Staphylococcal Reference Laboratories (SRLs) from 26 European countries.

Together with the experts from these laboratories, we agreed on a standardised approach to identify different clones of *S. aureus* using the most advanced genetic characterisation consisting of sequencing the DNA of a particularly variable gene the so called *spa* gene. The SRLs also secured the participation of up to 25 hospitals per coun-

try. These hospitals were chosen to provide a representative geographic as well as demographic coverage at the national level. Using a common sampling frame, participating hospitals collected successive methicillin-susceptible (MSSA) and MRSA isolates from patients with invasive *S. aureus* infection. All isolates were then sequenced at the *spa* locus at the respective national SRL and all data were aggregated into a single database.

The Geographical Distribution of *S. Aureus*

In the course of the study, we were able to collect data on approximately 3,000 isolates from 450 hospitals of which one third consisted of MRSA the others were MSSA. The non antibiotic resistant isolates, the MSSA showed a very large diversity with individual clones distributed all across Europe. However, the genetic diversity of MRSA differed considerably between countries. Especially for the most dominant MRSA clones, we could identify distinctive geographical clusters. Some of these clones were clearly confined to national boundaries. Others had spread regionally and had become mainly prevalent in neighbouring countries. Others still were found in single hospitals which most likely resulted from local outbreaks.

For visualisation and interrogation we built an interactive web-based mapping tool that provides detailed information for clinicians, diagnostic microbiologists, infection control teams and hospital management on the dynamics of the *S. aureus* and especially the MRSA population. We also made this tool freely available at www.spatial-epidemiology.net/srl-maps/.

The Role of Hospital Networks in the Dissemination of Nosocomial Pathogens

Obviously, the difference in geographic concentration between resistant and susceptible isolates was intriguing. The most plausible explanation lay in the fact that acquisition of resistance by MSSA to become MRSA is a relatively rare event. Therefore, there are far fewer MRSA clones compared to MSSA clones and they are very young in evolutionary history since they mainly emerged since the availability of antibiotic chemotherapy during the last 40-60 years. MSSA on the contrary is much older and therefore had time to diversify.

Since hospital-acquired MRSA clones have their special selective advantages over MSSA

when antibiotic use is high, they expand in hospitals and attain geographic spread by repeated admissions and referrals between hospitals by patients that carry them. These patients typically belong to a frailer or more ill segment of the population, which normally don't travel large distances. We therefore have reasons to believe that the geographic concentration of MRSA clones is a reflection of patient movement between hospitals that are part of a collaborative referral structure.

By analysing the admission pattern of patients in the Netherlands and England we could show that indeed, all hospitals in each country are interconnected by means of patients that they share over a single year. This patient traffic mainly happens at national level since hospital referral structures only occasionally reach out over national borders, and we believe that it is this national healthcare utilisation pattern that determines the spread of nosocomial pathogens in modern healthcare systems.

Improving the Understanding by Collaborative Mapping Exercises

By establishing a large collaborative network and then combining molecular and spatial analytic techniques, we were able to map specific strains across large geographic regions. At its most basic, we could show that MRSA clones were not randomly distributed but clustered. But the study also illustrated other potential applications of this approach. Combining demographic with clinical outcome data and more detailed genetic characteristics such as toxin genes or virulence properties, these mapping-tools may become extremely versatile for epidemiological investigation.

They will allow for early warning and response to emerging hospital as well as community pathogens. This information may provide a better understanding of transmission, also across the interface between distinct ecological habitats such as farm animals, environmental reservoirs and humans, risk factors such as occupation or exposures to healthcare, nursing homes, etc and may therefore be able to help protect vulnerable populations.

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ANTIMICROBIAL RESISTANCE AND ANTIBIOTIC USE IN THE ICU: UTILISING COMPUTER SURVEILLANCE TO IMPROVE WORKFLOW AND OUTCOMES

By Kirsten Colpaert, Pieter Depuydt, Filip De Turck, Johan Decruyenaere

COSARA (Computerised Surveillance and Alerting of nosocomial infections, Antimicrobial Resistance and Antibiotic consumption in the ICU) is a software application designed and developed for the registration and integration of infection-related data in the ICU patient. The application architecture consists of three different software modules:

- 1) A registration module which in real-time requires the ICU-physician at each (electronic) antibiotic prescription;**
- 2) A presentation module which provides the ICU-physician with all infection-related data of the individual ICU-patient in a concise and visually attractive way; and**
- 3) An information module which incorporates infection-related data at the level of the ICU and can be used for surveillance purposes and to steer infection control measures.**

Background

Nosocomial (i.e. hospital-acquired) infections are common, and are important contributors to unfavorable clinical and economic outcomes. In Belgium, these nosocomial infections are estimated to be responsible for a yearly excess mortality, an additional 607,880 hospitalisation days and a total extra society cost of more than 300 million euro. The ICU is clearly the epicentre of the nosocomial infection problem. Furthermore, it is estimated that 20 to 30 percent of these infections are preventable.

Given the importance of infection control in the ICU, one would expect that the medical files and nursing charts of the ICU patient would include a well documented overview of previous and current infections together with the prescribed antibiotic therapy and the associated microbiological data (i.e. cultured bacteria and antibiograms). Unfortunately however, this is not the case, not even in an ICU that utilises advanced computerisation. As such, the intensivist in charge returning to work on Monday, needs to investigate all infectiological details in a way a detective does, in order to be able to answer the following questions:

- ▶ Why was this antibiotic regimen chosen?
- ▶ Why was it changed after two days?
- ▶ What was the focus of this infection?
- ▶ Was this a firm diagnosis, or only a suspicion?
- ▶ Is there a positive culture?

- ▶ What was the severity of the infection?
- ▶ What is the resistance pattern of these cultured bacteria?
- ▶ Did the patient respond well to the initialised therapy?
- ▶ What is the radiological evolution?

Consulting all these different data sources, and trying to integrate this retained information into a comprehensive infection status of an ICU patient is therefore often a very time consuming and frustrating job.

Furthermore, in the absence of a readily available standardised infection overview, high quality infection data are lacking. These data however, are essential to implement an efficient nosocomial infection surveillance system and to perform advanced clinical research regarding infection control.

Solution

An advanced and user-friendly software application (named the COSARA project) was developed by a consortium of the ICU and Information Technology departments from Ghent University in order to alleviate some of these issues. COSARA is an acronym for "Computerised Surveillance and Alerting of nosocomial infections, Antimicrobial Resistance and Antibiotic consumption in the ICU".

The goals of COSARA are to support the intensivist in the daily workflow by automatic integration of all relevant infection related data from different data sources. Besides

a continuously available up-to-date view on all parameters regarding the infectious management for every single patient, the application also provides high quality data surveillance data on the ICU level with respect to incidence, severity and focus of infections, antibiotic drug treatments and the micro-organisms involved, including their resistance pattern. These data are stored in a relational database and can be used for clinical research.

Implementation

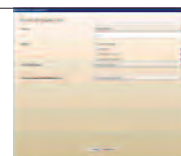
In the COSARA project, three main software modules were designed: a registration module, a presentation module and an information module (figure 1). These modules are integrated with the existing hospital information systems.

At the moment of a new prescription of antimicrobial therapy, popup screens appear in real-time on the PC monitor asking for a motivation for the start of this new therapy including the probable focus and the severity of infection. These pop-ups appear on the bedside or on the central PC monitor, depending on the workstation where the intensivist is prescribing the drug. There is no possibility to bypass these pop-up screens. As the registration maximally requires 20 seconds and does not require specialised training, the user acceptance is excellent, both by senior ICU-physicians and by fellows in training.



▶ **At Antibiotic prescription time:**
Motivation for starting an antibiotic therapy,
focus of infection and severity of infection

▶ **Admission data**



▶ **Infection and antibiotic dashboard**
▶ **Link micro-organisms and resistance patterns**



▶ **Surveillance information**
Infection incidence
Antibiotic usage, responsible micro-organisms + resistance patterns

▶ **Queries to enable advanced (academic) research**



Figure 1: COSARA solution

The presentation module is the core of the COSARA software. In one single surveyable graphical view, the intensivist can consult the selected patients' current and past infections during his/her ICU stay, together with the associated antibiotic therapies. After linking of a certain infection with the related microbial data, the graphical view shows the responsible micro-organism and, only one click away, the related antibiogram. The patient's evolution of infectious laboratory parameters (i.e. CRP, WBC count), together with the automatically captured daily SOFA scores, are shown in a graphical way.

Without any delay in loading time, all available chest X-rays are available in another tab, and even the chest X-rays taken before ICU admission are shown.

In contrast to the presentation module, which is focused on the individual patient level, the information module is entirely focused on the ICU unit level. Incidence of specific infections, antibiotic usage, responsible micro-organism and resistance pattern can be analysed together with their evolution over time. Furthermore, it is possible to perform very advanced and refined queries for academic research.

The benefits of COSARA are the potential to decrease the time to therapeutic intervention in case of infection (on the individual patient level), to decrease the intervention time for targeted infection control measures in case of outbreaks (on the ICU level) and to investigate accurately

the impact of infection control programmes and antimicrobial exposure on the incidence of nosocomial infection and microbial ecology, taking into account a maximum of potential confounders. Eventually, the implementation of COSARA as a computer-based surveillance and alerting system will likely result in (1) less nosocomial infections, (2) reduced emergence of resistance, (3) better patient survival, and (4) less costs for the society.

Future Expansions

In a future version, COSARA will be extended to generate specific alerts indicating alarming trends in (i) nosocomial infection incidence, (ii) microbial ecology, and (iii) antimicrobial consumption, using expert based thresholds and longitudinal data analysis. Besides the alerts itself, COSARA will automatically provide the associated information in order to make the interpretation of every alert easy and efficient.

Another extension of COSARA will include the integration of a rule base-expert system assisting the intensivist with respect to the optimal choice and duration of antimicrobial therapies. Already in 1998, Evans showed in an article in the New England Journal that a computerised anti-infectives management programme can improve the quality of patient care and reduce costs. However, at that time, important technological barriers were still present, problems that are now solved within the COSARA software.

Conclusion

Advanced computerisation of the ICU has allowed the development of specific software (COSARA) designed to capture and integrate all data related to infection and antibiotic prescription in the ICU patient. These data are returned to the ICU physician as a comprehensive and up-to-date 'infection status' of the individual patient, assisting in daily decision-making. In addition, this software builds up a high-quality database, which provides a sound basis for infection surveillance and control policy as well as testing research hypotheses.

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OVERVIEW OF THE IRISH HEALTHCARE SYSTEM

By Damien McCallion

Ireland is one of a small number of countries where the delivery of Health and Social care services comes under the auspices of one government department. The range of services delivered ranges from neurosurgery at one end of the spectrum to child and family welfare services on the other end. Services are usually categorised by acute care, primary care, continuing care and community care services – such as disabilities, mental health, social inclusion and children and family welfare services. The delivery system is mixed with a range of public, voluntary and private providers in the different care settings.

Health of the Nation

Over the past decade, Ireland has experienced unprecedented gains in health status and this has been paralleled by major investment in the health services. For many years Irish life expectancy lagged behind the EU average. An improvement over the last decade mean that overall life expectancy in Ireland stands at over 79 years, and is now almost one year greater than the average for the EU.

It is difficult to measure what proportion of this improvement may be attributable to better health services, but it is at least indicative that much of the gain has been in mortality from conditions particularly amenable to treatment and care such as heart and circulatory system disease. For example there has been a reduction of 38 percent in circulatory system disease between 1997 and 2005. In addition, over the same period, the cancer mortality rate has fallen by 13 percent and it now close to the EU average. In terms of breast cancer, the five-year relative survival rate is about 80 percent for the period 1999-2004 – the highest rate of improvement in the OECD. Infant mortality is also down by 35 percent in the last ten years.

Health Policy in Ireland

Health Policy is a matter for government, specifically the Minister for Health and Chil-

dren. The role of the ministry, called the Department of Health and Children, is to advise on the strategic development of the health and social care system including policy and legislation and to evaluate performance of the health and social care system.

Delivery of services is the responsibility of a separate government agency, called the Health Service Executive (HSE). Government allocates funding to run the Health and Social Care system each year and agrees a service plan with the Health Service Executive that sets out the quantum and nature of services to be provided.

Funding our Healthcare System

Compared with other OECD countries, Ireland's health spending per capita ranks in the top half but when expressed as a percentage of GDP (7.6 percent in 2007) ranks at the lower end of the OECD spectrum. In 2009 15.5 billion euro was allocated to fund the public health and social care system in Ireland, including payments to family doctors and community pharmacists.

A review group, established by the minister for Health and Children, is due to report in 2010 on how to improve the funding model and the method of allocating resources, including how a population based funding model might lead to greater equity in allocation of funding to different parts of the country.

How Services Are Delivered

The Health Service Executive (HSE) has recently re-organised into four regional operating units with the intention of moving responsibility for service delivery closer to the populations they serve. Each region provides services to a population of around one million people and services are delivered through a combination of public, voluntary and private providers. Within each region there are a number of hospital networks providing acute care and local health offices that provide a broad range of primary, community and continuing care services.

Acute care is provided through hospitals or hospital networks. These are principally state owned and run with the exception of the capital city, Dublin, where most of the hospitals are non-statutory. Continuing care is provided through networks of community hospitals, long stay facilities and private nursing homes. Significant emphasis is now being put on development of primary care teams that bring Family Doctors and Community Health Professionals, such as Public Health Nurses, into multi-disciplinary teams serving populations of between six and ten thousand people. In addition more specialist services in areas such as Child and Family Welfare, Disability and Mental Health services are delivered primarily through HSE providers or contracted to voluntary agencies.





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Important note: The focus must be on the practical benefits for and their ability to be implemented by hospital management.

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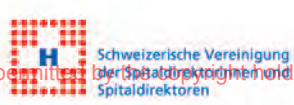
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Healthcare Reform in Ireland

Government made a major change in the organisation and management of services in 2005 that saw the establishment of a single agency with responsibility for delivery of all health and social care services, called the HSE. This replaced the ten former regional health boards. In addition a national body, called the Health and Information Quality Authority (HIQA) was set up to drive quality, safety, accountability and to ensure the best use of resources in our health and social care services, whether delivered by public, voluntary or private bodies.

Several very serious patient/client safety incidents resulted in the establishment of a commission on patient safety that has resulted in a number of recommendations for change. This coupled with the need for progress on several existing strategies and a continued focus on ensuring a more integrated service for patients/clients has led to the:

- ▶ Establishment of a Directorate of Quality and Clinical Care to bring renewed focus to define and implement models of care and to ensure our services are delivered to the highest possible standards;

- ▶ Creation of hospital reconfiguration programmes for groups of hospitals to ensure care is being delivered in the most appropriate settings that is resulting in significant changes for many hospitals;
- ▶ Planned rollout of over 500 primary care teams across the country by 2011;
- ▶ Implementation plan for change in Mental Health and other community services;
- ▶ Commencement of a series of integrating programmes that will focus on defining the patient pathways for priority areas such as diabetes and stroke; and
- ▶ Re-organisation of the HSE national directorates to bring our acute hospitals and Primary, Community and Continuing care divisions together under one umbrella.

Outlook in Current Economic Downturn

Ireland is no different to most other countries in the challenges it faces in the current economic downturn. The challenge will be to deliver accessible, high quality and equitable health services to those who need them, when and where they need them within available resources. This will bring pressures to bear on both health

services and on the health of the population.

The demographic ageing of the population is a fact of life and will accelerate over the coming years. By 2025, there will be nearly double the number of people over the age of 65 as there are now. Lifestyle risks remain to the fore as major areas of concern with the potential to undo much of the health improvement achieved in recent years.

We have seen significant changes in how services are organised and managed in recent years, following thirty years of a relatively stable health and social care service delivery system in Ireland. This has been driven by the need for a safer and more effective system for patients and clients and we are continually trying to improve our system through a series of changes in the areas of funding, performance measurement, organisation and also in how services are accessed and delivered to our patients and clients.

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A STRATEGY FOR CANCER CONTROL IN IRELAND

PROGRESS WITHIN THE NATIONAL CANCER CONTROL PROGRAMME

By Ann McLoone

In order to improve cancer patient outcomes, which according to the National Cancer Registry data, are generally lower in Ireland than in the rest of Europe, Ireland recommended establishing the National Cancer Control Programme (NCCP).

The National Cancer Strategy "A Strategy for Cancer Control in Ireland, 2006", recommended establishing the NCCP with four cancer control networks, each with two centres delivering high volume specialised surgery with equitable access to all other cancer treatments based on population needs. Evidence shows that patients derive more benefit when the expertise that is necessary to treat cancer patients is concentrated in specialist centres. It indicates that a centre doing complex cancer care at

high volume had better outcomes than a centre that is doing it intermittently.

Cancer treatment is a complex process where the diagnosis assessment, radiological investigation, surgical treatment chemotherapy and radiation treatment all have to be integrated. This can only be achieved successfully through concentrating clinical leadership and resources in specialist cancer centres. While this approach is not always the easy or most popular option,

it is the best option for patients to ensure we deliver safer, quality cancer care. Patients benefit by having a higher chance of survival and by living longer with cancer. Additional resources and staff have been put in place to deliver specialised breast cancer treatment within the eight centres. The NCCP was established by the HSE in 2007 and Prof. Tom Keane appointed as Interim Director for a two year period on secondment from the British Columbia Cancer Agency.

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Centralisation of Breast Surgical and Diagnostic Services

Significant progress was made in 2009, with the centralisation of breast cancer diagnosis and surgery remaining the highest priority for the NCCP. Over the twelve months the NCCP completed four separate transfers of initial breast diagnostic and surgical services into designated centres. This phased approach allowed the NCCP to ensure that no transfer occurred unless the necessary resources were in place and the designated hospitals were in a position to provide quality assured services for patients. In April, initial diagnostic and surgical services were successfully transferred from Our Lady of Lourdes Hospital, Drogheda to Beaumont and the Mater Misericordiae Dublin. A new medical oncology unit was officially opened in Our Lady of Lourdes Hospital Drogheda and a new medical oncologist appointed to the unit. This further confirmed the commitment of the NCCP to the provision and development of medical oncology services in local hospitals.

In early August services were transferred from Sligo General Hospital to Galway University Hospital. Services were also successfully transferred from Tallaght Hospital to St. James Hospital and St. Vincents University Hospital, Dublin in late August. In December, one of the most ambitious amalgamation and transfer processes was completed with the formal opening of the new Symptomatic Breast Cancer Service and Diagnostic Cancer Day Unit by the Minister for Health & Children, Ms. Mary Harney, TD, at Cork University Hospital (CUH). This involved the amalgamation of breast cancer services from South Infirmary and Mercy Hospital Cork to CUH. The new Symptomatic Breast Cancer Unit at CUH will be the largest in the country seeing more than 10,000 patients annually and diagnosing approximately 520 patients with breast cancer. Having set out to transfer 90 percent of surgical and diagnostic breast cancer services by the end of 2009, the NCCP successfully exceeded this target with the full transfer of all relevant services completed by early December. This contrasts sharply with the position in 2007 when 33 hospitals were providing breast cancer services across the country.

Among the transfers completed in 2008, led by the NCCP were those from Mayo General Hospital in Castlebar to GUH; from Ker-

ry General Hospital, Tralee to CUH; from Clonmel, Kilkenny and Wexford to Waterford Regional Hospital. With the first full audit of the symptomatic breast cancer services carried out by HIQA (Health Information and Quality Authority) during the year, the eight centres were being measured on timely and prompt access to services for patients. By December the access target for urgent and non urgent cases was being exceeded. Nationally, by December, 98 percent of urgent cases were being seen within two weeks, while 96 percent of non urgent cases were being seen within the twelve week target.

Centre for Pancreatic Cancer

National Surgical Centre for Pancreatic Cancer St. Vincents University Hospital, Dublin was designated as the National Surgical Centre for Pancreatic Cancer in May 2009. Prior to arriving at this decision, the NCCP sought expressions of interest from designated centres currently performing this surgery. Following a review of the capacity of individual cancer centres to take on this commitment, it was decided that all pancreatic surgery should be centralised in one hospital as specific by the Advisory Group to the National Cancer Strategy.

Pancreatic surgery is highly complex requiring a sophisticated surgical team and support services to achieve optimal outcomes. International evidence suggests that optimal survival and reduced operative morbidity and mortality are achieved when surgery is restricted to institutions performing significant volumes of surgery, performed by experienced personnel. Almost all major pancreatic cancer surgery is currently performed in six hospitals nationally St. James, the Mater Misericordiae, Beaumont, Tallaght, St. Vincents University Hospital, Dublin and Mercy Hospital, Cork with a total of approximately 100 specific surgeries carried out annually. St. Vincents University Hospital, which houses the National Hepatobiliary Unit, already has a significant concentration of the necessary infrastructure and medical expertise to facilitate this development.

Rapid Access Cancer Clinics Prostate Cancer

A significant part of the explanation for poor cancer survival rates in Ireland relates to late

diagnosis of cancer. Comparison with other jurisdictions shows that advanced stage of disease at presentation is problematic. Based on the symptomatic breast cancer experienced, the NCCP decided that access to early diagnosis and multi-disciplinary decision making must be enhanced for both prostate and lung cancer.

The national guidelines for the diagnosis and management of prostate cancer were completed during 2009. These guidelines together with patient pathways or diagnosis and treatment provide a framework for national standards which will be monitored on an ongoing basis through the reporting of key performance indicators. The guidelines were disseminated to GPs through the NCCP Community Oncology Programme in collaboration with the Irish College of General Practitioners.

Approximately 2,400 men develop prostate cancer in Ireland annually. Around 550 men die each year from the disease. The previous pathway for the diagnosis of prostate cancer was through the referral of patients to general urology clinics across 20 hospitals. In many cases, there was no formal triage process and this produced unacceptable delays in diagnosis. Given the large number of suspected cases, it was agreed that patients at higher risk based on agreed clinical criteria should be fast tracked directly into Rapid Access Diagnostic Clinics in the designated cancer centres. Having set out to open four Rapid Access Prostate Clinics in 2009 and four in 2010, the NCCP oversaw the opening of clinics in St. James, Galway University Hospital, the Mater and St. Vincents University Hospital in 2009. These clinics provide men with quick access to medical teams to ensure they get a diagnosis as early as possible. Patients therefore have a definitive diagnosis established within two weeks of initial appointment and if confirmed as cancer, they have immediate access to a multi-disciplinary specialist cancer consultation to establish appropriate management of their case.

The new Rapid Access Clinics at Galway University Hospitals and St. James Hospital, Dublin were jointly opened by the Minister for Health and Children, Ms. Mary Harney TD in June 2009. GUH now has a full range of expertise for the management of prostate cancer, including complex urological surgery and curative radiation therapy with ex-

ternal beam radiation and brachytherapy (radioactive seed implant). The hospital has the capacity for seeing up to 24 patients per day at the rapid access clinic with up to 12 patients provided with biopsy and a further 12 attending for review. GUH has seen an increase in suspected prostate cancer patients in recent years. In 2006, 820 new patients were seen, while in 2007 that number rose to 1100. The relevant increase in actual prostate cancers also rose from 272 in 2006, to 365 in 2007.

Rapid Access Cancer Clinics Lung Cancer

Lung cancer incidence continues to increase in Ireland. Survival at five years is currently at nine percent which is significantly below the best performing countries. There is as yet no evidence to support screening for lung cancer. In Ireland, 40 percent of all cases receive no specific cancer treatment presumably because of the advanced stage of disease at presentation. The pathway to a lung cancer diagnosis had been almost exclusively through referral to a respiratory clinic staffed by respirologists. Only a small number of the general respiratory clinics in 20 hospitals nationally were specifically set up to address the diagnostic challenge of lung cancer. The majority of referrals to these general clinics relate to general respiratory ailments and only a small minority of referrals have an eventual diagnosis of lung cancer.

In consultation with the Irish Thoracic Society, the NCCP agreed that patients with defined symptoms should be fast tracked to lung cancer diagnostic clinics in one of the eight designated cancer centres where they will have a diagnosis established within two weeks. On a parallel basis with the prostate clinics, the NCCP agreed to open four Rapid Access Lung Cancer Clinics in 2009 and another four in 2010. On that basis, four Rapid Access Clinics were opened at St. Vincents University Hospital, Mater Misericordiae Hospital, Beaumont Hospital and St. James Hospital Dublin during the year. These clinics provide patients with quick access to medical teams to ensure they get a diagnosis as early as possible. These patients have a definitive diagnosis established within two weeks of initial appointment and if confirmed as cancer, they have immediate access to a multi disciplinary specialist cancer consultation to establish appropriate management of their case.

Rectal Cancer

There is widespread agreement that rectal cancer surgery which is technically demanding must be performed by trained rectal cancer surgeons. At the request of the NCCP, the National Cancer Registry, in collaboration with the Royal College of Surgeons of Ireland has performed the first national audit of rectal cancer surgery. The audit showed that in 2007, 577 patients had rectal cancer surgery performed by a total of 86 surgeons in 41 hospitals. The audit showed that 58 surgeons operated on less than six cases each and only 17 surgeons operated on more than 12 cases. The NCCP accepted a recommendation from the Irish Society of Coloproctology that the number of hospitals performing rectal cancer surgery should now be reduced to 13 public hospitals with a goal of reducing this number to the eight designated cancer centres as surgical capacity is created.

Brain Tumours

Agreement has been reached with staff and management at both Beaumont and Cork University Hospital to create a single National programme for the management of brain tumours and other central nervous system tumours. International best practice suggests that concentration of this service is necessary to achieve optimal outcomes and cost effective care. In total there are between 120 and 150 surgical cases per year and these are currently distributed across six or more institutions. It is proposed that all such surgery be performed in a single national specialist centre.

National Plan for Radiation Oncology

Significant progress has also been achieved on the National Plan for Radiation Oncology with the objective of achieving a national network for radiation oncology services. Development work began on two of the sites for new radiation oncology facilities at St. James and Beaumont in Dublin last year. Once this first phase of the national radiation oncology programme is complete, radiation therapy services for period 2011 to 2014 will be provided on three sites in Dublin Beaumont, St. James, and St. Lukes. These three sites will then function as a single net-

work of radiation facilities providing the service to approximately 60 percent of the national population.

The second phase of the expansion of radiation therapy facilities and the ongoing replacement of expensive infrastructure to meet projected expanding national needs for radiation treatment was approved by Government as a PPP funded project in 2005. Since then the project has been progressed by the NCCP working closely with the NDFA. The project is complex and involves six sites: St. James, Beaumont, Cork-CUH, Galway, Waterford and Limerick.

Community Oncology Programme

Significant progress was made in the development of the NCCP Community Oncology Programme during 2009. The Community Oncology Programme formally sets out to create capacity and knowledge among health professionals in the community and to promote best practice in cancer control. Priority in 2009 was given to the development of referral guidelines for GPs in the areas of breast cancer, prostate cancer and lung cancer. In March the new National Breast Cancer Referral Guidelines were formally agreed. The National Prostate Cancer Referral Guidelines were agreed in October and National Lung Cancer Referral Guidelines in December.

All the new guidelines take into account the findings of the National Cancer Strategy 2006, specific evidence based research and relevant national standards and protocols including the National Quality Assurance Standards for Symptomatic Breast Disease Services. The finalisation of the guidelines was achieved through the commitment and professionalism of the multi disciplinary oncology teams in the designated centres, the input of the Irish College of GPs, the NCCP Community Oncology Team and representative bodies including the Irish Thoracic Society. The NCCP is overseeing the roll out of electronic referral for all guidelines for GPs. Agreements with IT vendors were signed in 2009 that will allow for the full roll out of the electronic referral system nationally in 2010.

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Heinz Kölking

FAIRE FACE À L'ADVERSITÉ GRÂCE À LA FORMATION ET À L'ÉDUCATION

Nos sociétés européennes font actuellement face à de grands défis. La crise financière et économique, le changement climatique et les changements démographiques sont tous à l'ordre du jour. Les changements démographiques ont des répercussions sur les soins de santé et sur les hôpitaux en particulier. Il est heureux de pouvoir vivre plus longtemps, mais c'est la société entière qui en porte la responsabilité. Il y a de plus en plus de personnes âgées pour compter sur les plus jeunes générations, et pourtant de moins en moins de jeunes. Les traitements médicaux et les soins infirmiers sont de plus en plus nombreux et de plus en plus lourds alors que le nombre de jeunes à rejoindre l'effectif des professionnels de santé est en baisse et qu'il devient plus difficile de trouver des jeunes suffisamment qualifiés. En Allemagne, par exemple, près de 70% des étudiants en médecine sont des femmes. Cela aura certainement un impact sur l'organisation du travail dans les hôpitaux.

Pour offrir des solutions durables, des réformes doivent être effectuées dans les politiques de santé comme dans celles de l'éducation. Mais les gestionnaires doivent aussi faire face à ces changements et trouver des réponses grâce à de nouvelles formes et de nouvelles structures des soins médicaux et infirmiers d'une part, et à plus de souplesse dans l'organisation du travail d'autre part.

Le plus significatif est que cette question se pose aux gestionnaires responsables de nos hôpitaux. Bien sûr, cela se passe au niveau du processus en-

trepreneurial de chaque hôpital. Il est toutefois tout aussi important que les directeurs d'hôpitaux soient plus ouverts et davantage conscients de leur responsabilité tant au niveau national qu'euro-péen afin qu'ils effectuent les modifications nécessaires dans les structures et les processus des soins de santé.

Dans ce contexte, la formation et la qualification des salariés et des cadres du secteur hospitalier est d'une importance capitale. C'est ici que se posent les jalons du succès. Seuls des cadres et des employés correctement formés créent les conditions préalables à une motivation positive qui conduit à la qualité des processus et à d'excellents résultats - efficacité et efficacité. Le présent numéro d'(*E*)Hospital place l'éducation et la formation à la gestion et au leadership au centre de ses préoccupations.

La belle Irlande est également à l'honneur de ce numéro. Elle est connue pour ses structures et ses processus innovants ainsi que pour les bons résultats qu'elle obtient dans les soins hospitaliers.

L'AEDH concentre ses efforts cette année sur son congrès européen les 9 et 10 Septembre 2010 à Zurich. Nous attendons tous cet événement avec impatience et je vous invite, au nom de la commission et du conseil exécutif, à nous rejoindre dans la belle Suisse.

Heinz Kölking
Vice-président de l'AEDH



23rd Congress of the European Association of Hospital Managers

Topic: Roadmap to Top Quality
09/10 September 2010,
Zurich Congress Center (Switzerland)



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.

23e congrès AEDH à Zurich

ROADMAP TO TOP QUALITY

C'est avec grand plaisir que nous vous informons du 23e congrès de l'Association Européenne des Directeurs d'Hôpitaux (AEDH) ayant pour thème la « Roadmap to Top Quality ».

Lors de la première journée du congrès, des prestataires, directeurs d'hôpitaux, politiciens et autres exposants issus du domaine de la santé feront le point en matière de qualité et d'amélioration de la qualité. Vous aurez l'occasion de discuter directement avec les auteurs lors d'une exposition de posters.

Lors de la deuxième journée du congrès, la théorie cède sa place à la pratique: des représentants de divers pays présenteront leurs

expériences et la mise en place de projets. Venez nous trouver à Zurich et échangez vos impressions avec vos collègues.

Nous nous réjouissons d'ores et déjà de vous rencontrer.

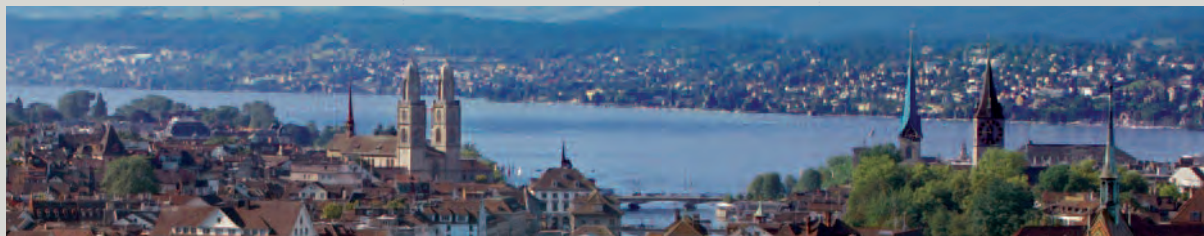
Un grand honneur: le ministre de l'intérieur suisse ouvre le congrès

Le ministre de l'intérieur suisse et responsable du domaine de la santé, Mon-

sieur Didier Burkhalter, représentera officiellement le Conseil fédéral lors du congrès de l'Association Européenne des Directeurs d'Hôpitaux à Zurich.

Monsieur le conseiller fédéral Burkhalter s'adressera lors de la cérémonie d'ouverture aux participantes et participants venus de toute l'Europe et ouvrira officiellement le congrès.

Nous nous réjouissons de sa présence.

ORDRE DU JOUR : 40^{ÈME} ASSEMBLÉE GÉNÉRALE ORDINAIRE

jeudi, 9 septembre 2010 de 9h00 à 10h00,
Kongresshaus Zürich, Gotthardstrasse 5, 8022 Zürich (CH)

| | | | |
|------|---|------|--|
| 1. | Approbation de l'ordre du jour | 5.1. | Programme d'action et présentation des candidats |
| 2. | Approbation du compte-rendu de la 39 ^{ème} Assemblée générale du 20 novembre 2009 à Düsseldorf, Allemagne | 5.2. | Election |
| 3. | Rapport d'activités du Président 2009-2010 – résultats de groupe de réflexion sur l'avenir et l'évolution de l'AEDH | 6. | Budget 2011 |
| 4. | Approbation des comptes 2009 | 6.1. | Approbation des cotisations des membres ordinaires et associés (Art. 4.3.e. des statuts) |
| 4.1. | Présentation par le Secrétaire général | 6.2. | Approbation du budget de l'année 2011 |
| 4.2. | Rapport des Commissaires aux comptes | 7. | Désignation des Commissaires aux comptes pour l'année 2010 |
| 4.3. | Approbation des comptes 2009 et décharge du Bureau et du Secrétaire général | 8. | Admission et exclusion de membres |
| 5. | Election du Président, du Vice-président, du Bureau et du Conseil d'Administration pour une période de quatre ans (2010-2014) | 9. | Fixation de la date de la prochaine Assemblée générale 2011 |

▶ **La formation des gestionnaires d'Hôpitaux***Par Lee Campbell, Willy Heuschen*

La fonction de directeur d'hôpital est source de stress et comporte de grandes responsabilités. Mais quelles sont les qualifications et l'expérience requises pour pouvoir assumer ce rôle ? Nous avons demandé à nos correspondants et membres associés quelles exigences juridiques et pratiques sont en vigueur dans leur pays. D'après les réponses obtenues à notre questionnaire, nous pouvons en conclure qu'aucune règle formelle n'est prévue pour la nomination des directeurs d'hôpitaux dans la plupart des pays européens. Il existe cependant un consensus général selon lequel seule peut être nommée une personne possédant un solide bagage universitaire et une importante expérience de la gestion. On peut trouver des conditions préalables supplémentaires variables selon le pays, la région et même l'hôpital concerné.

Malgré le manque d'exigences particulières en ce qui concerne la formation, de nombreux programmes de formation sont proposés aux gestionnaires d'hôpitaux. La formation professionnelle continue revêt une importance particulière. Plus encore de nos jours à cause des difficultés financières et démographiques qui obligent à prendre en compte le contexte en constante évolution entourant les hôpitaux. Les gestionnaires doivent posséder les outils de gestion appropriés afin de manœuvrer dans cette nouvelle situation et les cours de formation doivent être adaptés.

▶ **Les « Value Models » : une nouvelle forme d'« Enterprise Modelling »***Par Paul Johannesson, Erik Perjons*

Un « value model » est une représentation graphique d'un réseau de coopération entre des acteurs créant ensemble une valeur par l'échange et la transformation de ressources. Les entités centrales y sont les acteurs, les ressources, les échanges et les transformations des ressources.

Le « value model » utilisé pour la collaboration entre le Conseil d'Administration du comté de Stockholm, le St. Eriks Eye Hospital et l'Institut royal de technologie peut être utilisé pour proposer et identifier systématiquement de nouvelles actions innovantes qui seront capables d'améliorer la performance globale d'un réseau d'acteurs dans le secteur de la santé. La création de nouveaux services en ligne fait partie des actions identifiées. Cette approche permet la traçabilité de leurs actions et la réalisation de leurs objectifs à un haut niveau. Les concepteurs peuvent valider les actions déjà faites, et en particulier l'effet qu'elles ont sur les acteurs participant à un réseau de valeurs.

▶ **« Concept Mapping » pour les organisations de soins de santé (deuxième partie)***Par Michael Hall*

Le « Life Institute of Albany », New York, a commencé à envisager un nouvel accès sur le marché des services de soins coordonnés pour les patients souffrant des maladies chroniques du vieillissement, les malades atteints de maladies incurables et les personnes qui les aident au sein de leur famille. Les gestionnaires de l'institut ont décidé qu'une analyse minutieuse était nécessaire et ont convenu d'un projet de recherche de marché par un schéma conceptuel, le « Concept Mapping ».

L'utilisation du « Concept Mapping » combiné avec l'estimation de l'impact direct ou « Direct Magnitude Estimation » offre la puissance du résultat issu des mesures tout en tenant compte d'importants facteurs psychologiques. L'objectif principal est la commercialisation de produits de santé et de messages de sensibilisation susceptibles de convaincre les patients de se faire soigner, de ne pas abandonner leur traitement, de solliciter la prévention sanitaire, et d'amener les consommateurs à utiliser certains programmes pour leur santé. En termes de marketing, les prestataires de services doivent saisir les fondements de la pensée des consommateurs et de la collectivité afin d'attirer un nombre suffisant d'utilisateurs et de continuer à fournir les soins de santé nécessaires.

▶ **Gestion des déchets pour les hôpitaux au 21e siècle***Par Anja Leetz*

Les meilleures pratiques de gestion des déchets hospitaliers commencent avec les passations de marchés. Si moins d'articles jetables sont achetés, le total des déchets devant être éliminés sera moindre. Une meilleure classification des déchets et un tri attentif conduisent à un volume moindre de déchets contaminés et mixtes, et à un volume plus important de matières recyclables à récupérer. Ces simples faits nous exposent les défis auxquels sont confrontés les gestionnaires d'hôpitaux: une demande constante de prestation de soins de qualité tout en maintenant les taux d'infection et les coûts sous contrôle.

« Health Care Without Harm » défend plusieurs concepts pour une meilleure gestion des déchets : l'approvisionnement, la création de groupes de travail consacrés aux déchets, une politique d'achats écologiques, la classification appropriée et le tri des déchets, leur recyclage, leur traitement et leur neutralisation.

▶ **Changer les critères d'organisation à l'hôpital***Par Dario Rosini*

L'organisation hospitalière traditionnelle, structurée hiérarchiquement en fonction des spécialités médicales, génère des

coûts plus élevés sans toutefois être en mesure de donner de réponses adéquates aux différents besoins des patients. Pour cette raison, le gouvernement italien a envisagé la création de services hospitaliers où les prestations doivent être partagées par plusieurs équipes de spécialistes. L'Hôpital Careggi a amorcé ce processus de changement il y a cinq ans. Les principaux piliers du nouveau modèle ont été la distinction entre la dimension professionnelle (comment produire), la production (que produire) et l'allocation des ressources (lits, postes d'infirmières, technologies et salles) sous l'autorité de la direction du département. Maintenant, le principal défi concerne le développement et l'application d'un nouveau système de Gestion par Objectifs, GPO (appelé aussi « Management by Objective, MBO »).

▶ La dimension géographique des infections nosocomiales

Par Hajo Grundmann

En établissant un grand réseau de collaboration puis en combinant des techniques d'analyse moléculaire et spatiale, nous avons été capables de cartographier des souches spécifiques dans de vastes régions géographiques. À la base, nous avons pu démontrer que les clones de SARM (*Staphylococcus aureus* résistant à la pénicilline) ne sont pas distribués au hasard mais regroupés. Mais l'étude a également illustré d'autres applications potentielles de cette approche. Grâce à une combinaison des données démographiques avec les résultats cliniques et les caractéristiques génétiques plus détaillées tels que les gènes codant pour les toxines ou les propriétés de virulence, ces outils de cartographie pourraient devenir extrêmement polyvalents pour les enquêtes épidémiologiques.

Ils permettront l'alerte précoce et l'intervention à l'hôpital concerné et sur les agents pathogènes locaux. Cette information devrait aider à une meilleure compréhension de la transmission, qui se fait également à travers la liaison entre les différents habitats écologiques - comme les élevages, les réservoirs environnementaux - et les humains, les facteurs de risque comme l'exposition causée par les visiteurs ou les professionnels des soins de santé dans les maisons de retraite, etc. et devrait donc être en mesure d'aider à protéger les populations les plus vulnérables.

▶ Résistance aux antimicrobiens et utilisation des antibiotiques en réanimation

Par Kirsten Colpaert, Pieter Depuydt, Filip De Turck, Johan Decruyenaere

COSARA (Computerised Surveillance and Alerting of nosocomial infections, Antimicrobial Resistance and Anti-

biotic consumption in the ICU) est un logiciel conçu et développé pour l'enregistrement et l'intégration des données liées à l'infection chez le patient de soins intensifs. L'architecture de l'application se compose de trois modules de logiciels différents :

- 1) un module d'enregistrement qui nécessite que le médecin fasse part de chaque prescription d'antibiotiques de façon électronique en temps réel,
- 2) un module de présentation qui donne au médecin toutes les données individuelles relatives aux infections des patients de soins intensifs d'une façon concise et visuellement attrayante,
- 3) un module d'information qui intègre les données relatives à l'infection au niveau du service des urgences. Il peut être utilisé pour la surveillance et pour orienter les mesures de contrôle des infections.

▶ Le système de santé irlandais

Par Damien McCallion

L'Irlande fait partie du petit nombre de pays où l'offre des services sociaux et des soins de santé est sous l'égide d'un unique ministère. La gamme des services offerts varie de la neurochirurgie aux services de protection de l'enfance et de la famille. Les services sont généralement classés en soins d'urgence, soins primaires, soins palliatifs et services de soins d'aide à domicile - tels que l'aide aux personnes handicapées ou dans le secteur de la santé mentale, l'aide à l'intégration sociale et les services de protection maternelle et infantile. Le système d'offre est mixte avec une gamme de prestataires publics, bénévoles et privés dans des contextes de soins différents.

▶ Une stratégie pour la lutte contre le cancer en Irlande

Par Ann McLoone

La « National Cancer Strategy » a recommandé l'établissement d'un programme national de lutte contre le cancer comprenant quatre réseaux de lutte contre le cancer, chacun possédant deux centres importants de chirurgie spécialisée. L'expérience montre que les patients retirent plus de bénéfices de leur traitement si l'expertise nécessaire est concentrée dans des centres spécialisés - un centre effectuant un grand nombre de soins complexes contre le cancer obtient de meilleurs résultats qu'un centre qui ne le fait que plus rarement. C'est le cas dans les centres de sénologie, ou dans les centres spécialisés dans les cancers du pancréas, de la prostate, du poumon, du rectum ou du cerveau du programme national de lutte contre le cancer. Ce dernier a également progressé vers un réseau national de services de radio-oncologie et un programme commun d'oncologie.



Heinz Kölking

IM ANGESICHT VON WIDRIGKEITEN BEI AUS- UND WEITERBILDUNG

Unsere Gesellschaften in Europa stehen vor großen Herausforderungen. Die Finanz- und Wirtschaftskrise, die Veränderung des Weltklimas und die demografische Entwicklung in der Bevölkerung in Europa stehe auf unserer Agenda. Gerade die Veränderungen in der Demografie betreffen die Gesundheitsversorgung und besonders auch die Krankenhäuser. Es ist schön, dass wir älter werden können, aber wir haben auch die Verantwortung dafür, dass dies gesellschaftspolitisch verkräftet werden kann. Immer mehr ältere Menschen bedürfen der Fürsorge immer weniger junger Menschen. Die Anzahl wie auch die Schwere der medizinischen und pflegerischen Behandlungen nimmt immer weiter zu. Auf der anderen Seite wirkt die demografische Entwicklung beim beruflichen Nachwuchs jedoch auch immer stärker. Es wird immer schwieriger, ausreichend qualifizierte junge Mitarbeiter für die Gesundheitsberufe zu finden. In Deutschland sind beispielsweise nahezu 70 % der Medizin-Studenten Frauen. Dies wird die Arbeitsorganisation in den Krankenhäusern verändern.

Sowohl die Gesundheitspolitik wie auch die Bildungspolitik sind hier gefordert für nachhaltige Veränderungen zu sorgen. Aber auch das Management muss sich diesen Veränderungen stellen und mit neuen Formen der Medizinischen und pflegerischen Angebotsstrukturen einerseits und flexibler Arbeitsorganisation Antworten finden.

Umso bedeutsamer ist es, dass sich auch die unmittelbar Verantwortlichen für das Management in den Krankenhäusern dieser Fragen annehmen. Dies

geschieht natürlich auf der Ebene des unternehmerischen Handelns in den Hospitälern. Ebenso wichtig ist es aber, dass die Krankenhausdirektoren auf nationaler wie auf europäischer Ebene ihre Verantwortung wahrnehmen und die notwendigen Veränderungen in den Strukturen und Prozessen der Gesundheitsversorgung mit gestalten.

Von besonderer Bedeutung in diesem Kontext ist auch die Qualifikation der Mitarbeiter wie auch der Führungskräfte. Hier werden die Weichen für den Erfolg gestellt. Nur gut ausgebildete Führungskräfte und Mitarbeiter schaffen die Voraussetzungen für positive Motivation und damit für qualitative Prozesse und für exzellente Ergebnisse (Effizienz und Effektivität). Diese Ausgabe von HOSPITAL stellt die Fort- und Weiterbildung und das Training im Bereich der Führung und des Managements in den Mittelpunkt.

Der Länderfokus richtet sich diesmal auf das schöne Irland, berühmt für innovative Strukturen und Prozesse und gute Ergebnisse in der Krankenhausversorgung.

Unsere EVKD konzentriert sich in diesem Jahr besonders auf den kommenden Europäischen Kongress am 9. und 10. September 2010 in Zürich. Wir alle freuen uns auf dieses Ereignis und ich darf dazu im Namen des gesamten Präsidiums und des Vorstandes in die schöne Schweiz einladen.

Ihr
Heinz Kölking
Vizepräsident EVKD



23rd Congress of the European Association of Hospital Managers

Topic: Roadmap to Top Quality
09/10 September 2010,
Zurich Congress Center (Switzerland)



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.

“ROADMAP TO TOP QUALITY”

23. EVKD-Kongress in Zürich, 9. und 10. September 2010

Wir freuen uns, Ihnen den 23. Kongress der Europäischen Vereinigung der Krankenhaus-direktoren (EVKD) anzukündigen. „Roadmap to Top Quality“ lautet das Thema.

Am ersten Kongresstag präsentieren Leistungserbringer, Krankenhausmanager, Politiker und weitere Exponenten aus dem Gesundheitswesen ihre Standpunkte zum Thema Qualität und Qualitätsverbesserung. An einer Postersession besteht Gelegenheit, direkt mit den Autoren zu diskutieren. Der zweite Kongresstag ist der Praxis gewidmet: Vertreter aus verschiedenen Ländern präsentieren Erfahrungen und Umsetzungen von Projekten (siehe Agenda).

Kommen Sie nach Zürich und diskutieren Sie mit Kolleginnen und Kollegen.

Wir freuen uns auf Sie.

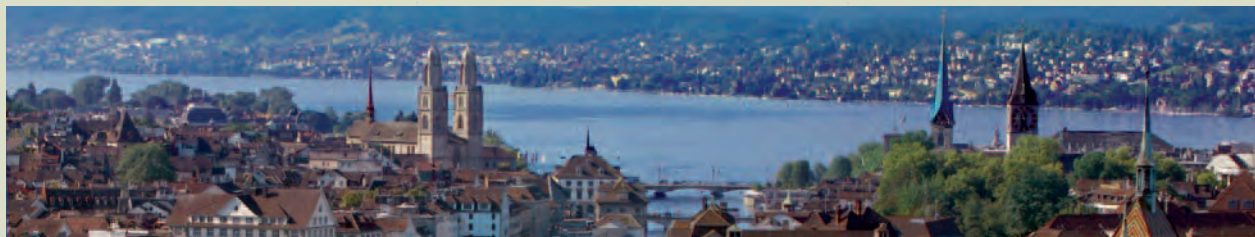
Grosse Ehre: Schweizer Innenminister eröffnet den Kongress

Der Schweizer Innenminister und Verantwortliche für das Gesundheitswesen, Herr

Bundesrat Didier Burkhalter, wird die Landesregierung am Kongress der Europäischen Vereinigung der Krankenhaus-direktoren in Zürich offiziell vertreten.

Herr Bundesrat Burkhalter wird an der Eröffnungsfeier für die Teilnehmerinnen und Teilnehmer aus ganz Europa eine Ansprache halten und den Kongress offiziell eröffnen.

Wir freuen uns darauf.



TAGESORDNUNG: 40. ORDENTLICHEN MITGLIEDERVERSAMMLUNG

abzuhalten am Donnerstag, den 9. September 2010, von 9.00-10.00 Uhr im Kongresshaus Zürich, Gotthardstrasse 5, 8022 Zürich (CH).

| | | | |
|------|--|------|---|
| 1. | Genehmigung der Tagesordnung | 5.1. | Aktionsprogramm und Präsentation der Kandidaten |
| 2. | Genehmigung des Sitzungsprotokolls der 39. Mitgliederversammlung vom 20. November 2009 in Düsseldorf, Deutschland | 5.2. | Wahl |
| 3. | Tätigkeitsbericht des Präsidenten 2009-2010 - Ergebnisse der Reflexionsgruppe über die Zukunft und die Entwicklung der EVKD | 6. | Wirtschaftsplan für das Jahr 2011 |
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▶ **Aus- und Weiterbildung für Krankenhausmanager**

Von Lee Campbell, Willy Heuschen

Der Posten eines Krankenhausmanagers bedeutet Macht, aber auch Stress. Doch welche Qualifikation und Erfahrung werden eigentlich benötigt, bevor man diese Stelle antritt? Wir befragten unsere Korrespondenten und außerordentliche Mitglieder über die rechtlichen und praktischen Voraussetzungen, die in ihren Ländern gelten. Aus den Antworten unseres Fragebogens lässt sich schließen, dass es in den meisten Europäischen Ländern für die Berufung eines Krankenhausmanagers keine formal regulierten Vorschriften gibt. Es herrscht jedoch allgemeine Übereinstimmung darüber, dass die Rolle nur solche Personen übernehmen können, die einen Universitätsabschluss haben und zusätzlich wesentliche Erfahrungen im Managementbereich mitbringen. Weitere Bestimmungen variieren je nach Land, Region oder sogar Krankenhaus.

Obwohl die Ausbildung nicht spezifisch festgelegt ist, stehen Krankenhausmanagern eine Vielzahl von entsprechenden Kursen zu Verfügung. Von eminenter Bedeutung ist die kontinuierliche professionelle Weiterentwicklung. Dies ist umso wichtiger, wenn man das sich ständig verändernde Umfeld von Krankenhäusern wegen sowohl finanzieller als auch demographischer Belange in Betracht zieht. Manager müssen die angemessenen Managementwerkzeuge besitzen, um mit dieser neuen Situation richtig umzugehen. Ausbildungskurse müssen dementsprechend konstant angepasst werden.

▶ **Wertemodelle: Eine neue Form der Unternehmensplanung**

Von Paul Johannesson, Erik Perjons

Ein Wertemodell ist die graphische Darstellung eines Netzwerkes kooperierender Akteure, die durch den Austausch von Ressourcen und Umformungen miteinander Werte kreieren. Die Schlüsselentitäten in Wertemodellen sind Akteure, Ressourcen, und Austausch und Umwandlungen von Ressourcen.

Das Wertemodell, das bei der Zusammenarbeit zwischen dem Gemeinderat von Stockholm, dem St. Eriks Eye Krankenhaus und dem Königlichen Institut für Technologie eingesetzt wird, ist in der Lage, systematisch neue und innovative Vorgänge für die Verbesserung der Allgemeinleistung des Netzwerkes der Akteure auf dem Gesundheitssektor vorzuschlagen und zu identifizieren. Dazu zählt auch die Erschaffung neuer e-Services. Der Ansatz erlaubt das Rückverfolgen aller Vorgänge, bis hin zu den von ihnen geförderten hochrangigen Zielen. Dies wiederum ermöglicht es Designern, alle existierenden Vorgänge zu überprüfen, vor allem in Bezug auf den Effekt, den sie auf die am Netzwerk teilhabenden Akteure haben.

▶ **Konzept Mapping für Gesundheitsorganisationen (Teil II)**

Von Michael Hall

Das ‚Life Institute‘ in Albany, New York, erstellte eine neue Markteinführung eines koordinierten Pflegeservices für Patienten mit chronischen Erkrankungen, unheilbaren Krankheiten und für die Familienangehörigen, die sich um solche Patienten kümmern. Der Vorstand des Instituts entschied, dass eine gründliche Untersuchung der Forschung und Bewertung vonnöten war, und stimmte einem Konzept Mapping Marktforschungsprojekt zu. Konzept Mapping auf Basis von DME bietet das Leistungsvermögen eines maßbezogenen Inhaltes, unter gleichzeitiger Berücksichtigung wichtiger psychologischer Faktoren. Das hauptsächliche Ziel der ‚Übersichtskarten‘ von Konzepten und Raum ist die Erstellung von Botschaften des Gesundheitsmarketings und der Öffentlichkeitsarbeit: Patienten sollen davon überzeugt werden, sich in Behandlung zu begeben, in Behandlung zu verbleiben, oder gesundheitspräventive Maßnahmen durchzuführen, und Konsumenten sollen andere wichtige Gesundheitsprogramme nahegebracht werden. Hinsichtlich des Marketings müssen die Provider die Gedankengänge ihrer Konsumenten und Gemeinden verstehen, um eine ausreichende Anzahl von Usern anzuziehen und weiterhin die benötigten Gesundheitsdienste anbieten zu können.

▶ **Abfallmanagement für Krankenhäuser im 21. Jahrhundert**

Von Anja Leetz

Die bewährten Methoden im Krankenhaus-Abfallmanagement beginnen mit dem Beschaffungswesen. Werden weniger Wegwerfprodukte eingekauft, muss dementsprechend weniger Gesamtabfall entsorgt werden. Eine bessere Klassifikation des Abfalls und eine sorgfältige Trennung führen zu weniger verschmutzten und gemischtem Abfall, und steigern die Quantität wieder verwertbarer Stoffe. Diese einfachen Fakten beschreiben die Herausforderung, denen Krankenhausmanager gegenüber stehen. Eine qualitativ hochwertige Versorgung zu bieten und gleichzeitig die Infektionsraten niedrig zu halten und die Kosten nicht explodieren zu lassen, ist eine ständige Anforderung, die erfüllt werden will.

„Health Care Without Harm“ fördert verschiedene Ideen für ein erfolgreiches Abfallmanagement: Beschaffungswesen, Abfall-Arbeitsgruppen, umweltbewusstes Einkaufen, eine ordentliche Abfallklassifikation und -aufteilung, Recycling, Abfallbehandlung und Neutralisation.

▶ **Die Kriterien der Krankenhausorganisation verändern: von klinischen Fachbereichen bis hin zu verschiedenen Pflegestufen**

Von Dario Rosini

Die traditionelle Krankenhausorganisation, hierarchisch nach klinischen Fachbereichen strukturiert, führt zu er-

höhten Kosten und ist dennoch nicht in der Lage, angemessen auf die verschiedenen Levels der Patientenbedürfnisse zu reagieren. Daher überlegte die Italienische Regierung, klinische Abteilungen aufzustellen, in denen die Krankenhausressourcen von vielen Spezialistenteams geteilt werden. Im Careggi Krankenhaus wurde dieser Prozess vor fünf Jahren eingeführt. Die wesentlichen Säulen dieses neuen Modells waren die Unterscheidung zwischen der professionellen Dimension (wie produzieren?) und der produktiven Dimension (was produzieren?) und der Allokation der Ressourcen (Betten, Krankenpflegepersonal, Technologien und Räumlichkeiten) unter der Leitung des Abteilungsmanagements. Nun betrifft die größte derzeitige Herausforderung die Entwicklung und Implementierung eines neuen ‚Management by Objective‘ (MBO) Systems.

▶ Die geographische Dimension nosokomialer Infektionen

Von Hajo Grundmann

Die Erstellung eines großen, gemeinschaftlichen Netzwerks und nachfolgender Kombination molekularer und räumlich-analytischer Techniken erlaubte uns die Festlegung spezifischer Stämme über weite geographische Regionen. Grundsätzlich konnten wir zeigen, dass MRSA Klone nicht verstreut, sondern gebündelt verteilt sind. Doch die Studie konnte zusätzlich auch andere potentielle Anwendungen dieses Ansatzes veranschaulichen. Durch die Kombination demographischer und klinischer Daten und detaillierter genetischer Merkmale wie etwa toxischer Gene oder Virulenz-Eigenschaften, könnten diese Mapping-Tools extrem vielfältig für eine epidemiologische Untersuchung eingesetzt werden. Sie würden eine frühe Warnung gegen und eine entsprechende Reaktion auf entstehende Pathogene erlauben, sowohl nosokomial als auch allgemein vorkommend.

Diese Information könnte ein besseres Verständnis der Übertragung bedingen, also der Schnittstelle zwischen klaren ökologischen Habitaten einerseits wie etwa Nutztiere, Umweltreservoir und Menschen, und andererseits Risikofaktoren wie etwa Beruf oder Exposition in Bereichen der Gesundheitsversorgung (Pflegeheime) und könnte daher dabei helfen, vulnerable Bevölkerungsgruppen zu schützen.

▶ Anitmikrobielle Resistenz und Antibiotika-Gebrauch auf Intensivstationen

Von Kirsten Colpaert, Pieter Depuydt,
Filip De Turck, Johan Decruyenaere

COSARA (Computerised Surveillance and Alerting of nosocomial infections, Antimicrobial Resistance and Antibiotic consumption in the ICU) ist eine Software-Anwendung,

die für die Registrierung und Integrierung von infektionsassoziierten Daten des Intensivpatienten erstellt und entwickelt wurde. Die Anwendung setzt sich aus drei verschiedenen Software-Modulen zusammen:

- 1) ein Registrierungsmodul, welches in Echtzeit bei jeder (elektronischen) Antibiotika-Verschreibung den zuständigen Intensivmediziner erfordert,
- 2) ein Präsentationsmodul, das dem Intensivmediziner all infektionsbezogenen Daten des einzelnen Intensivpatienten in einer präzisen und visuell ansprechenden Weise präsentiert, und
- 3) ein Informationsmodul, das infektionsbezogene Daten auf dem Niveau der Intensivstation einfügt, und für Überwachungszwecke oder für die Infektionskontrolle eingesetzt werden kann.

▶ Übersicht über das Irische Gesundheitssystem

Von Damien McCallion

Irland gehört zu der kleinen Anzahl an Ländern, wo die Leistungen der Gesundheits- und Sozialfürsorge unter der Aufsicht einer Regierungsabteilung stehen. Die angebotenen Leistungen reichen demnach von Neurochirurgie an einem Ende des Spektrums bis hin zu Kinder- und Familienfürsorge am anderen Ende. Die Leistungen werden üblicherweise kategorisiert nach Akutversorgung, Erstversorgung, laufende Versorgung und Versorgung der Gemeinden – wie etwa Behinderung, geistige Gesundheit, gesellschaftliche Integration und Kinder- und Familienfürsorge. Das System ist zudem vermischt mit einer Reihe von öffentlichen, freiwilligen und privaten Anbietern in verschiedenen Umfeldern der Fürsorge (different care settings).

▶ Eine Strategie zur Krebsbekämpfung in Irland

Von Ann McLoone

Die ‚National Cancer Strategy‘ empfahl die Aufstellung des ‚National Cancer Control Programme‘ (NCCP) mit vier Krebskontrollnetzwerken, jedes mit zwei Zentren, die spezialisierte chirurgische Eingriffe in großem Umfang liefern. Die Beweislage zeigt, dass Patienten mehr profitieren, wenn die notwendige Expertise zur Krebsbehandlung in spezialisierten Zentren konzentriert ist. Sie weist außerdem darauf hin, dass ein Zentrum, das komplexe Krebsbehandlungen in großem Umfang durchführt, bessere Ergebnisse aufweist als ein Zentrum, welches diese nur unregelmäßig durchführt. Die Zentren des NCCP sind auf Tumore der Brust, Pankreas, Prostata, Lunge, Rektums und des ZNS spezialisiert, und bieten ihren Patienten eine optimale Versorgung. Fortschritte zeigt das NCCP auch in Bezug auf ein nationales Netzwerk für die Bereitstellung radiologisch-onkologischer Services und eines Krebs-Programms für die Gemeinden auf lokaler Ebene.

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www.globalengage.co.uk/central_eastern_european_medical_tourism_summit.html

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Paris, France
www.hopitalexpo.com/

World Health Care Congress—Europe 19-20

Brussels, Belgium
www.worldcongress.com/events/HR10015/

1st Health Executive Summit 19-20

Paris, France
www.health-es.com

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www.zurich2010-eahm.ch

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