World Hospitals and Health Services
The Official Journal of the International Hospital Federation

Editorial

Opinion matters
The C-Suite–EHR Value Link: strategic conversations help ensure lasting success

Policy
Globalization and the ethical implications for the Egyptian healthcare system

Management
A method to evaluate the role of stakeholder dynamics in IT based innovation adoption processes
Quality, cost efficiency, the new quality-cost imperative: systemwide improvements can yield financial gains

Special feature
Evidence-based design
A new vision for hospital design – current reflections via seven projects
An overview of healing environments
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Editorial

ERIC DE ROODENBEKE, PHD
CHIEF EXECUTIVE OFFICER,
INTERNATIONAL HOSPITAL FEDERATION

This edition of World Hospitals and Health Services is presenting a special feature on architecture. IHF has been working closely with architects and especially the public health group of the International Union of Architects (http://www.uia-public-health-group.org/). This strong collaboration has been supported by a dedicated chapter in the IHF and by specific sessions during our bi-annual Congress. During last years’ Rio de Janeiro World Hospital Congress, the architect focused sessions provided our participants with valuable information on mega trends in health and hospital design (World Hospitals and Health Services, vol. 46-1). To further emphasize the importance and the role of architecture in the hospital sector, IHF has recently participated in a very interesting congress on the trends in European hospital architecture (http://www.genesi-srl.net/upload/news/Pres/1272446761_PROGRAMMA_DEF_CNETO.pdf) organized by the CNETO (http://www.gesi.it/cneto_test/srl.net/upload/news/files/1272446761_PROGRAMMA_DEF_CNETO.pdf) and by the IST (http://www.ist.it/) an Italian association of hospital architects.

Although healthcare comprises much more than using large buildings for inpatients, architecture plays a major role in creating the most suitable environment that will best sustain the delivery of care needed by all types of patients. Architecture must provide the most cost-effective support to the healing activities, but it must also create a well being environment for all users. In the last decades, more and more has been written on evidence-based design and IHF has featured some articles on this subject.

The article we share with you today does no longer belong to the category of those advocating for evidence-based design, but answers the question of the room features. The trend has been to create individual patient rooms with the assumption that these rooms were better for the patients. But does this design take into consideration the patients’ needs and wants? Responding to such a question will not only allow hospitals to be patient responsive, but it will also have major consequences on the running costs of hospitals. The response to this question is a good example of cost effective architecture. But what about the role of architecture for general patient well being? Until now, it has not been clearly demonstrated that the surrounding environment plays a role in healing the patient by reducing his stress. This does not only apply to aging patients for whom moving from home to hospital is a major trauma, but also to all other kinds of inpatients. For this reason, this issue’s article on the impact of design on the patient’s environment which positively affects patient recovery will certainly interest you. On this subject, it is mainly possible to present overarching ideas and case studies because culture is key to the nature of design. In addition, the last of our articles makes a very interesting presentation of a hospital design concept that is translated to seven different cultures and environments. This article provides an outstanding summary of the possibility of mixing a universal approach with specific tailored solutions.

In addition to the architecture focused articles readers will be able to find some other interesting subjects like the on-going challenges of adopting innovation. Although this article focuses on IT, it is obvious that lessons and recommendations on mobilizing stakeholders can be used for a larger spectrum of issues including architecture at its early stage when the assessment and the design of facilities is needed. Like for IT, when architecture design is not well supported by key stakeholders it will not provide an effective environment for undertaking the necessary healthcare activities. However what is more specific to IT is that the poor adoption of a new IT based process will derail the organization with strong incentives to revisit the whole process, while architecture users will adapt the environment to best serve their practice.

If it is obvious that stake holder involvement at an early stage is important for the success of an innovation; particular attention needs to be paid to team work, especially at top level. The IT innovations, like the adoption of an electronic medical record, are a good field for implementing effective coordination at top level. The feedback from four hospitals of different nature is very clear in explaining the critical elements of success coming from such an effective coordination. With this article which echoes the one on stake holders involvement in innovation we get a sense of the importance of a bottom up and top down approach while making sure that the top speaks with one voice.

In the current situation of endless crisis I am sure that our readers will also pay a special attention to the articles emphasizing the need to better rationalize expenses. In the 1990s, most large companies found that significant savings could be made by reducing expenses; a generation of cost killer managers was born. Almost 20 years later, it is still very relevant to engage on this path for health care facilities. The featured article is just tipping the top of the iceberg because significant productivity gains will only be noticed when healthcare decision makers will really get serious in addressing the healthcare production process from a cost killer perspective.
Last but not least, you will be able to read an article on how globalization is affecting the health system in a middle income country like Egypt. This country is well known for the important migration of its health workers in the Gulf countries. It is interesting to understand why and how it has a major interest in becoming a medical tourism destination competing with the Gulf countries. For IHF which recently had its second leadership summit in Chicago (June 1-2, 2010 – more information is available on www.ihf-fih.org) engaging a world wide discussion on the consequences of globalization is central to its mission as a platform for knowledge sharing and performance advancement. This article provides a good example on how all major issues are linked to making a health system approach a determinant of possible progresses in health care to populations.

This edition that you may have received either as a hard copy or in an electronic format is going to be the last one under this format. After this summer break, you will discover a new formula but I leave it for my next editorial to share more on this.

I wish you a pleasant and fruitful reading as well as a good rest for those who will enjoy some holidays in the coming months.
# Readership Survey for World Hospitals and Health Services

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**World Hospitals and Health Services readership survey**
The C-Suite-EHR Value Link: strategic conversations help ensure lasting success

JOHN M BUELL
WRITER, HEALTHCARE EXECUTIVE

ABSTRACT. For purposes of this article, Healthcare Information and Management Systems Society's (HIMSS') definition of an electronic health record (EHR) is used. The EHR represents the ability to easily share medical information among stakeholders and to have a patient’s information follow him or her through the various modalities of care engaged by that individual.

Any hospital with the means to do so can purchase an electronic health record (EHR) and implement it. But to ensure the system’s value – increased quality of care, patient satisfaction, physician satisfaction, employee satisfaction and even improved financial performance – is sustainable requires effective conversations among C-suite leaders.

Executives from four hospitals of varying size and that are at Stage 6 of 7 on HIMSS Analytics' EMR (electronic medical record) Adoption Model told Healthcare Executive the secret to their success lies in a multitude of factors. But one element rose above all others in importance: the ability of the CEO, chief information officer (CIO), chief financial officer and other members of the C-suite to communicate at all stages of the EHR process, which, by the way, is a journey that never ends.

There are no step-by-step instructions on the kind of conversations the C-suite should have to get the most value out of an EHR. Each hospital is unique, and the conversations senior leaders have will be just as distinctive. But if all levels of the organization support the decisions made by the C-suite, then achieving value from an EHR can be expected.

The following are examples of the role the C-suite played at four hospitals – one small, two midsize and one large – and how their conversations have led to getting the most value from their EHR systems.

Small hospital
Parkview Adventist Medical Center, Brunswick, Maine, 55 Beds

When Theodore M Lewis, FACHE, was hired as president and CEO of Parkview Adventist Medical Center in October 2002, he inherited a financially unstable hospital and inefficient information technology systems that contributed greatly to the instability. During the next few months, however, conversations among Lewis and senior executives would play a significant role in improving the hospital’s situation. These discussions laid the foundation for Parkview eventually implementing an EHR system that would become the talk of the healthcare field.

The decision to go with an EHR was made following conversations Lewis had with the hospital’s CIO, Bill McQuaid, and chief financial officer. The executives weighed their options: lease an IT system, upgrade Parkview’s existing IT systems or go with an integrated approach using one technology provider. After investigating each option, the choice was easy: an integrated EHR from a single vendor.

“Not only was the first option – leasing – costlier but it would only provide basic functionality,” says Lewis. “The second option also was expensive.”

The next important discussion the three leaders had was to determine how to educate the board members, physicians and department heads why an integrated system was the best approach. McQuaid said it was agreed that the only way to gain buy-in was to show the entire organization, especially physicians, how much better an EHR system would be than what was currently being used.

“The pathologists, for example, really loved what they had with their existing IT system,” says McQuaid. “But I explained to them the single vendor concept and spent time with them and got their input on how to make the EHR even better. And when they used the EHR demos, they saw the system’s benefits and how it was better than what they were using. They ended up supporting the new system and other areas of the hospital did as well. And we were able to show to the board of directors the wide support the integrated approach was getting.”

Now that Lewis and his team of senior executives had everyone’s support, the next conversation was about how to implement the EHR system. For McQuaid, the answer was simple: Hospital staff members would do it themselves, and they would use a big-bang approach, which meant going live with most of the system’s applications on the same day. These two decisions would prove to be the most important.

“To me it was a win-win situation,” says McQuaid. "Besides, I
didn’t even realize this approach was unique until a few years later.”

During the nine months leading up to going live with the system, Parkview’s CIO, chief financial officer (CFO), chief nursing officer (CNO), CIO and others met each week and received a full update on the system’s progress.

“When you meet every week, you can come up with solutions together,” says Lewis. For example, a security issue that arose during testing was brought to senior leaders’ attention in which staff members using workstations on wheels, or WOWs, were still logged in when they stepped away from their WOWs for a few minutes. Staff members would forget to log off.

Seniors leaders discussed the situation but didn’t immediately have a solution. McQuaid then had an idea. “Why can’t we use the same technology as on automatic flush toilets?” He searched the Internet for the maker of the technology, and it turned out the same technology could be used with WOWs. “It’s based on sonar and signs you off automatically after three minutes if you are not in front of the computer,” says McQuaid.

The benefits the hospital has achieved are many and were made possible from the groundwork set through initial conversations with the C-suite. One of the major outcomes is 70% of physician orders are entered via the EHR system. “To get higher than that would be difficult because many orders are called in over the phone,” says McQuaid. “But we went from 40 to 70% in four months.”

Computershovel magazine was so impressed with McQuaid’s performance that it named him as one of its 2010 Premier 100 Information Technology (IT) Leaders.

Midsize hospital
Children’s Medical Center Dallas, 314 Beds

Children’s Medical Center Dallas has used information technology for many years, and when the opportunity arose in 2005 to invest in an EHR system, hospital executives jumped at the chance.

C-suite executives approached the undertaking with the same prospect, analytics and conversations as with any large-scale decision; it wasn’t a foreign process, but the order of magnitude was,” says Christopher J Durovich, FACHE, president and CEO. “This was a multimillion dollar investment and a five- to seven-year plan. We knew this was a journey of discovery, and that by virtue of ingenuity and perseverance we would prevail.”

A 25-member executive team developed objective and alternative hypotheses to determine the specifics of what was needed in the EHR system. Once that was accomplished, the default question became: Why not this system? “You must be able to explain why not this system,” says Durovich.

Subsequent conversations were usually based on information that flowed to the team from frontline staff members. The team discussed any issues and made decisions, which were then carried out by frontline staff.

The team was made up of titles you would expect to see such as CEO, CFO, CNO, chief medical information officer and chief operating officer. But other just-as-critical members included physicians and nonphysicians with clinical backgrounds who worked in administration. Each title owned a piece of the EHR implementation process.

Different people were responsible for pharmacy, quality and quality measurement, nursing, surgical disciplines, the various medical disciplines and our three physician affiliate organizations. In addition, one executive organized the business plan and strategy around how to make the EHR available to the hundreds of physicians who refer patients to the hospital,” says Durovich.

“The ripple effect touched all sides of the wave tank, and there were different people responsible for different elements of that wave.”

During conversations, the executive team used a structured performance feedback process to determine how EHR activities in each department progressed. This practice provided valuable context in terms of how what was being done would impact the organization.

“For us, these conversations were a perfect mesh of understanding our business needs and potential technology solutions to support those needs,” says Durovich. A big mistake hospitals will make in implementing an EHR, he explains, is making hardware and software decisions without first talking through what their needs are. “And then they wonder why the system doesn’t do what they thought it would do,” he says. “Our selection process for EHR expenditures is based on determining what we need as an output from technology, and then we choose the technology provider. After that, we decide what hardware structure to use: whether it will be actual computing systems, backup-data support, remote locations and the like.”

The discussion process worked well, says Durovich. “It challenged our assumptions about how the organization functions. It informed our choices about how we do things, and it led to improvements by virtue of being a forum that provided a more focused way to think about how to get the best value out of our EHR system.”

The organization monitors its progress through monthly dashboard reports that its EHR vendor provides. These reports benefit Children’s Medical Center Dallas in a number of ways. “First, the reports identify challenges, concerns, and future project risks and project accomplishments,” says Durovich. “Second, we benefit from the structure the vendor provides. And finally, we can use the information from the reports as a comparative basis of our implementation in terms of timing and performance.”

Midsize hospital
Mills-Peninsula Health Services, Burlingame, California, 389 Beds

Like Children’s Medical Center Dallas, Mills-Peninsula Health Services – a Sutter Health System hospital – formed a senior executive leadership team that focused on thoroughly investigating which EHR system would best fit the organization before hospital executives made any decision to move forward.

“We wanted to make sure from a qualitative perspective that the EHR system would meet the needs of patients and providers,” says Carrie Owen Plietz, FACHE, chief operating officer of Mills-Peninsula Health Services. “And the team didn’t just analyze the system from a financial perspective. That is why we didn’t have the missteps some other hospitals had in having to stop implementation and start over. This was always in the back of everyone’s mind during those senior leader meetings; we didn’t want that to happen to us. We wanted to make the right choice for the right reasons.”

Early on, prior to implementation, the team established a benefits-realization strategy that forecasted the clinical and
financial benefits to be expected from an EHR implementation based on the results other hospitals had realized. “We had a structure that looked at the clinical outcomes, and we had committees that looked at both financial and clinical optimization efforts,” says Plietz. “We kept a close eye on that ball.”

Benefits realization stayed at the forefront of all conversations the team had. One person was dedicated to this task from a Sutter-wide organizational perspective and provided a global view of how the EHR would impact all Sutter hospitals. “Every time we made a change or looked at a process, that benefits-realization person would make sure the mind-set of ‘We’ve always done it this way’ was put to the sidelines,” says Plietz. “And this person attended each one of the executive leadership team meetings.”

One of the key issues the executive team discussed early on in the process and that played a critical role in bringing out the best value of the EHR system was physician engagement, says Dolores Gomez, vice president of Acute Care Services and chief nursing officer.

“We did have a group within the executive leadership team that was heavily focused on physician engagement, knowing that full deployment of the EHR which included physicians entering orders and full physician documentation, could only succeed if we had physician buy-in.”

Another early conversation among senior leaders related to workflow redesign. “You don’t implement an EHR without critically looking at workflow,” says Gomez.

Says Mike Reandeau, chief information officer, “When you get into implementation, the executive leadership team’s focus should be on execution of the plan. But no matter how good the plan is, life happens. There will be a multitude of things not happening the way you would like. That’s why it is important to manage on a collaborative basis all of those factors in a way that keeps everything on target so that we realize the plan benefits.”

To foster collaboration, key leaders of each component of the EHR project routinely gave status reports: “One purpose of the team was to discuss whether more resources were needed to make sure we were staying on time and within budget,” says Plietz. “Another goal for the team was to stay within the charter we established, which was our mission and vision of what we wanted the EHR system to end up looking like so that it was effective for patients and user-friendly.”

Large hospital/health system
Clarian Health, Indianapolis, 1380 Beds

Conversations the C-suite had early on were crucial in preventing major interruptions from occurring while Clarian Health implemented its EHR.

The first question executives discussed was why the organization needed an EHR, says Samuel L. Odle, FACHE, executive vice president and chief operating officer. “Our answer was to improve the clinical outcomes of our patients and safety,” he says. “That is our mantra we use today on why we are doing it. It’s not a productivity issue; it’s about outcomes and safety.”

The second question the C-suite needed to answer was who was going to be the technology provider? “You have to make a careful, well-informed decision about the right vendor/partner,” he says. “It can’t be a vendor relationship. It has to be a partnership because there is no system that works exactly the way you want it to. You’re going to get a basic system, and you will have to adapt that system to your facilities, services and work force.

“You have to make sure that your vendor has the same vision and philosophy about what an EHR looks like when it’s all done,” he says. “And the vendor has to have the intellectual and financial wherewithal to be there for the journey. They have to have the resources for the long haul.”

Clarian Health began its EHR journey in 2001. After going through the process and selecting its vendor, C-suite executives, nurses and physicians spent a great deal of time forging a partnership with the vendor. This included spending time at the vendor’s headquarters and the vendor in turn spending a great deal of time with executives and clinicians at Clarian. In addition, both parties visited other hospitals that had formed effective partnerships with their vendors. The visits’ goal was to ensure from a business and clinical and informatics standpoint that Clarian and the vendor could form “the right kind of marriage” as well, according to Odle.

Once all parties agreed how the system would match up with the organization’s needs, it was time to implement the EHR system. Meetings with the C-suite and physician leaders were monthly at first, and then the C-suite met on a quarterly basis to review the progress being made. A semiannual report was given to the board of directors.

The point person between the executive leaders and the vendor was the chief information officer. “All communications from the hospital went through him,” says Odle. “The CIO shares input from the vendor with the rest of the C-suite to make sure we are on the same page and that we are not all individually telling the vendor what to do.”

C-Suite talking points
The following are discussions to consider among senior executives before, during and after EHR implementation:

Weigh your options carefully whether to lease an EHR system, upgrade your existing system or replace what you have.

Answer the question, “Why not this system?”

Create an executive leadership team that focuses only on the EHR system.

Appoint a senior leader, usually the chief information officer, to serve as the liaison between the EHR vendor and hospital.

Discuss in detail how you will educate and train all who will use the system – most importantly physicians.

John M Buell is a writer with Healthcare Executive.
Globalization and the ethical implications for the Egyptian healthcare system

D ROB HALEY
ASSISTANT PROFESSOR, DEPARTMENT OF PUBLIC HEALTH, UNIVERSITY OF NORTH FLORIDA, JACKSONVILLE, USA

MOHAMED ADEL KHALIFAA
VICE PRESIDENT FOR GRADUATE STUDIES AND RESEARCH, TANTA UNIVERSITY, EL-GIESH ST., TANTA, GHARBIA, ARAB REPUBLIC OF EGYPT

SAMA A BÉG
UNIVERSITY OF NORTH FLORIDA, JACKSONVILLE, USA

NESMA SOBH
ASSISTANT PROFESSOR IN THE DEPARTMENT OF HEALTH SYSTEMS MANAGEMENT, RUSH UNIVERSITY, CHICAGO, USA

ABSTRACT: Globalization is creating an extraordinary transformation to the delivery, financing and access of healthcare throughout the world. Improving standards of treatment, based on higher international standards of care and the offering of far more affordable services, is positioning third-world countries as viable participants in a more global healthcare system. The Egyptian healthcare system is evolving to meet these higher expectations in an effort to attract wealthier international tourists. It is important to understand Egypt’s evolving transformation into a medical service destination so policymakers may understand the emerging ethical concerns this evolution may impose on this third-world and traditionally underserved population.

As the world transitions toward a more global economy, it is essential for countries to review their domestic and international policies in order to participate in this rapid transformation. Globalization is a term that is often used to describe the increasing interdependence and connectivity of the world’s markets. Technology has made it easier for people to travel, communicate and conduct business across the world. Increased price transparency, the reporting of quality indicators and the emphasis of consumer driven care is encouraging third-world countries to develop a new business model of healthcare delivery and financing. This model offers quality healthcare services to consumers at a cost that is often far less expensive than what is available in their home country. For example, western European countries are attracting infertile couples from the United States because fertility treatments cost approximately one-third of those provided in the US. Furthermore, elective surgery offered in India can cost between 10% to 20% less than identical treatment offered in western countries.

This globalization is resulting in a new type of industry called “medical tourism,” where patients travel to other countries to obtain a better value on their healthcare services. This industry is emerging as a very lucrative business for some developing, third-world nations with an estimated US$60 billion in annual revenues and 20% annual growth. In addition to India, countries such as Malaysia, Singapore, and Thailand have become well-established medical tourist destinations popular for patients seeking cardiac and orthopedic surgery. This trend is encouraging other developing countries, such as Egypt, to position itself as a medical tourism destination particularly among the Arab and Muslim populations.

The tourism industry produces approximately US$4 billion per year for the Egyptian population and accounts for over 11% of its gross domestic product (GDP). To supplement its traditional tourism market, Egypt is quickly evolving into a medical service destination predominantly for those seeking affordable cosmetic procedures in an effort to protect and increase its tourism market and bring additional wealth into its country. However, there is a significant gap in the literature regarding Egypt’s emerging presence within this global market and its ethical implications on the country’s most vulnerable population. Therefore, this paper explores Egypt’s participation in a globalized healthcare market as well as the ethical and policy implications that are imposed as limited healthcare resources often shift from a developing local population to an often wealthier international market.

The Egyptian healthcare system

The Egyptian healthcare system consists of various organizations that are primarily within government, public, and private sectors. The government sector includes the Ministry of Health and Population (MOHP), teaching and university hospitals, and the Ministries of Interior and Defense. The public sector consists of financially autonomous organizations owned by the government, the largest being the Health Insurance Organization (HIO) and Curative Care Organizations (CCO). The HIO is a social insurance organization that finances care to employees, students and widows. HIO also provides a delivery system through its own network of hospitals and clinics. There are six branches of CCO’s within the authority of the MOHP that operate independently and contract with individuals and companies to provide inpatient and outpatient curative care.
The MOHP is currently the main provider of primary, preventive, and curative care with approximately 5,000 healthcare facilities and more than 80,000 beds nationwide. Egypt’s public hospitals are owned directly by the MOHP, by public authorities, the Ministry of Higher Education and by universities. They provide free or lower cost medical services to patients regardless of their financial capabilities. Clinicians within this system are paid on a civil service salary scale as determined by the Central Agency for Organization and Administration (CAOA). These clinicians often charge additional fees to supplement their income. Despite this extensive public health network, approximately 60% of all primary care visits take place in private facilities. Egypt’s private sector is comprised of 2,024 outpatient facilities and approximately 22,847 inpatient beds, accounting for 16% of Egypt’s total inpatient bed capacity. It consists of both non-profit and for-profit clinicians, clinics, hospitals, pharmacies, mosques and churches. The financing of private health services occurs as out-of-pocket payments by the patient and on a fee-for-service basis to the provider for both ambulatory and inpatient care.

Egypt’s overall spending on healthcare is 3.7% of GDP and is considered low. While universal health coverage is being tested, there are currently no health insurance schemes that are available for the very poor or for those who are not in formal or organized occupations. The MOHP budget, as part of the entire Government budget, increased from 2.2% in 1995/1996 to 3.9% in 2000/2001. Of the GDP that is attributed to healthcare, a disproportionate share of 57% was attributed to the private sector and 43% to Egypt’s public healthcare system. As a result, many public healthcare facilities lack the supplies and resources they need to care for those most in need. One study found that over 50% percent of Egypt’s public health facilities had significant shortages of medical equipment as well as shortages of primary care clinicians. This is of particular concern for a country that is considered one of the most populous in the Middle East with approximately 80 million people. Moreover, Egypt has a high prevalence of infectious diseases, including Schistosomiasis, Hepatitis C, Trachoma, Acute Diarrhea and Respiratory Infections. As a result, Egypt’s health indicators for the general population are one of the lowest in the region with an average life expectancy of 59 years.

However, with all of these challenges, the Egyptian healthcare system does appear to have a few strengths. These strengths include an extensive infrastructure of physicians, clinics, and hospitals with approximately 95% of the population living within five kilometers of medical care. The emerging private healthcare industry is attracting medical tourists by marketing high quality and affordable care within Egypt’s popular tourist locations. The data indicates that Egypt’s private healthcare industry ranks higher in quality, clinical effectiveness and consumer satisfaction compared to public services.

Medical tourism and the Egyptian healthcare system

There are a growing number of less-affluent patients from developed countries who are traveling to third-world countries seeking high-quality medical care at affordable prices. For example, with the increasing number of uninsured as well as the emergence of consumer-driven care, Americans are personally financing more of their cost of health care. Approximately 6 million Americans have travelled abroad for treatment in 2009. While a majority of Americans travel to neighboring Latin American countries; they also travel to Singapore, India, and Thailand. Prices for treatment are particularly lower in developing hospitals because of lower labor costs, lesser involvement of insurance companies and governments, increased price transparency, lower costs for malpractice litigation, and the government employment of clinicians. Cardiac surgery, hip and knee replacement, and cosmetic surgery may cost 50% to 80% less than what is charged in the United States. These prices typically include all-inclusive packages with fixed prices for airfare, accommodations, and the medical procedure.

Improving standards of treatment within Egypt’s private healthcare sector and lower costs of care are popularizing Egypt as a medical tourism destination where a patient can combine treatment with a historic, cultural or seaside vacation. For example, one private healthcare facility markets to patients of all nationalities who are interested in receiving medical services and visiting the Red Sea. Other healthcare destinations include Dar al Fouad and Esthetica in Giza, the Cleopatra, Nile Badrawi and Al- Oyoun Al-Dawli International Eye hospitals in Cairo.

Policy implications

The globalization of healthcare will challenge policymakers of third-world countries to consider the increased investment and innovation that is likely to diffuse within its population with the negative ethical implications that often arise as resources are likely transferred from the care of its most vulnerable populations. For example, medical tourism can increase a country’s GDP as the resulting revenue can be utilized to improve the access and quality of care available for all of its citizens. This investment may convince clinicians who might otherwise relocate to more developed nations to remain and practice within their own country. Globalization may also encourage third-world healthcare facilities to adopt policies that assure a higher standard of care. Hospitals seeking to attract foreign patients could market their quality by obtaining accreditation from organizations like the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). These accredited facilities would have to collect and report outcome data on services rendered as well as quality indicators, procedural standards, guidelines and clinical pathways in an effort to receive and maintain their accreditation.

Alternatively, globalization may exacerbate an already unequal access to quality healthcare for Egypt’s most vulnerable citizens. Private hospitals who market to foreigners are often unaffordable to the majority of citizens in third-world countries, further strengthening an already bifurcated healthcare system. Current policies allow Egyptian physicians to use public facilities to consult with their private-pay patients after their public service hours of duty are complete. These policies encourage physicians to provide care disproportionately to the wealthy as these physicians earn over 80% of their income from private practice. This is of particular concern as there continues to be tremendous disparity between the health of Egypt’s wealthy citizens and those who are considered poor. Policies should be established that encourage the redistribution of resources from the safety-net public sector to a more exclusive private sector.
sector. In India, for instance, there is a phenomenal shortage of 600,000 doctors, 1 million nurses and 200,000 dental surgeons in the public sector. Resources that could support the public sector have instead shifted to India’s private sector as over 75% of the human resources and advanced medical technology, 68% of the hospitals and 37% of total beds in the country are in the private sector. For the majority of India’s citizens, the public health system is difficult to access due to distance, lack of money or lack of confidence in the system. Similarly, most of Egypt’s rural villages lack basic services such as healthcare centers, family planning units, governmental hospitals and ambulance centers. The Egyptian government should therefore explore policies that encourage physicians to provide affordable and accessible primary care in locations where it is most needed.

Conclusion
As Egypt strives to participate in a more global healthcare marketplace, it must develop policies that assure the quality of care within its healthcare system. It must also address potential ethical issues that emerge as limited healthcare resources begin to shift from a local to an often wealthier medical tourist population. Improved standards of treatment, investment in technology and medical tourism revenue can diffuse into a host country’s healthcare system and improve the quality and delivery of care for all citizens. However, globalization may result in the shifting of services away from a country’s fragile safety-net program that provide essential services to the country’s most vulnerable population. Developing countries choosing to participate in a global marketplace must establish policies that prevent the shift of limited resources from the public healthcare system to fund a private system that often caters to a wealthier and foreign population. While governments may see tremendous economic benefit to participate in the global market, policymakers must not overlook the adverse and ethical impacts that this decision can have on a country’s most vulnerable population.

H.A. Kaddar

Dr. Haley is an Assistant Professor at the University of North Florida’s College of Health and Director of UNF’s Health Administration Programs. He is a Fulbright Senior Specialist in Global and Public Health and President of StrategyGen international strategic consulting firm, where he consults with business and government officials on healthcare policy, leadership, and reform.

Sama Bég is a graduate student at the University of North Florida pursuing her Master’s in Health Administration. She graduated from Syracuse University in 2008 with a bachelor’s of science in biology. Sama is passionate about healthcare and is very interested in learning about and comparing healthcare systems across countries.

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A method to evaluate the role of stakeholder dynamics in IT based innovation adoption processes

TIM POSTEMA
UNIVERSITY OF TWENTE

ABSTRACT: The introduction of new information technology in organizations seems to lead to mixed results in practice. Innovation adoption success is dependent on user commitment and absorption of the innovation in work processes. For that reason, much can be gained in insights in the role of stakeholders during innovation adoption. We argue that a stakeholder’s capacity and intentions together determine his role involvement and influence on innovation adoption more as a process than just a discrete decision in time. He describes innovation adoption as “the process through which an individual or other decision making unit passes from first knowledge of an innovation, to forming an attitude toward the innovation, to a decision to adopt or reject, to implementation of the new idea, and to confirmation of this decision.”

In this article we are presenting an evaluation method for stakeholder dynamics during the IT based innovation journey in relation to innovation adoption predictors. The method covers two evaluation elements of these stakeholder dynamics; (a) the changing nature of stakeholder salience and changing role involvements of stakeholders on the one hand, and (b) the changing nature of stakeholder-innovation interaction during the adoption processes on the other. It is argued that a stakeholder’s capacity and intentions together determine his role involvement and influence on innovation adoption and thus its decision making unit membership. To further enhance usability of the described method, we propose the use of structured implementation activities and their effect during different phases of the innovation journey on the decision making unit as constructed through stakeholder analysis.

The introduction of new information technology in organizations seems to lead to mixed success results in practice. Project managers continuously have to decide when and how to engage stakeholders within the innovation process, for improving the innovation outcomes or the process of innovation. The adoption of technological innovations both by the organization as a whole and its individuals is a crucial prerequisite for organizational embedding of the innovation into work processes. By innovation, we refer to a new technology that is introduced to potential users in an organization. In this article we are focusing on IT based innovations, where IT innovations often support process innovations. Apparently, the success of an innovation depends on the involvement and commitment of individuals. However, not all individuals are necessarily stakeholders in the adoption of an innovation. On the other hand, not all stakeholders or individuals are necessarily potential users. Even though a variety of empirical research has been done in the area of individual technology acceptance predictors, little is known about stakeholder and stakeholder group salience and its influences on innovation adoption factors.

IT based innovation
An enormous amount of research has been done in the area of innovation adoption and diffusion. In this paragraph we will highlight some key concepts and findings in research relevant for our proposed evaluation method.

As described by Frambach (2002), product innovation adoption is the decision of any individual or organization to make use of an innovation. In his dissertations, Rogers (1995) considers innovation adoption more as a process than just a discrete decision in time. He describes innovation adoption as “the process through which an individual or other decision making unit passes from first knowledge of an innovation, to forming an attitude toward the innovation, to a decision to adopt or reject, to implementation of the new idea, and to confirmation of this decision.”

Pelz (1983) presents evidence in his research that suggests a more complex nonlinear model for organizational innovations that are originated or highly adapted, or those that are complex and uncertain, the staging will appear overlapping and disorderly. This means that different parts of an organization are likely to be at different stages in the innovation adoption process at the same point in time. This strengthens the earlier notion of stakeholder dynamics (and salience changes) during the process. The above dissertation implicates that innovation adoption is measurable by the willingness of the adopter to actually use an innovation. Eventually it must be an integrated part of an adopter’s work processes. However, this willingness does not implicate any level of success of an innovation. An innovation can have high usage, with high levels of willingness among stakeholders, and still can be a failure because it does not bring what it was supposed to. For that reason, we are considering performance fidelity as major outcome measure. This means reaching prolonged high levels of congruence between intended performance criteria and goals and actual performance outcomes.

Multiple levels of analysis
Not all individual technological acceptance decisions do have the same kind of impact on the organizational adoption. The degree of impact depends on for example environmental factors or salience factors (the degree of influence of a stakeholder in the organizational context). To account for the latter, it seems profitable to evaluate the stakeholder salience dynamics during the process, in order to predict adoption outcomes more reliably and bring the individual
Table 1: Innovation predictors

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Predictor</th>
<th>Operationalization/explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual characteristics</td>
<td>Computer experience</td>
<td>Computer experience of an individual determines an individual’s understandability of a new IT innovation and decreases uncertainty with respect to perceived ease of use.</td>
</tr>
<tr>
<td></td>
<td>Behavioral intention</td>
<td>Behavioral intention is the measure of the strength of one’s intention to perform a specified behavior.</td>
</tr>
<tr>
<td>Innovation characteristics</td>
<td>Perceived usefulness</td>
<td>The degree to which a person believes that using a particular system will enhance his or her job performance.</td>
</tr>
<tr>
<td>Organizational characteristics</td>
<td>Top management support</td>
<td>Relates to a.o. commitment to change management, empowering of employees, involvement in requirement analysis, etc.</td>
</tr>
<tr>
<td></td>
<td>User support</td>
<td>All activities that support the user in understanding and using the innovation for the intended purpose and goals.</td>
</tr>
<tr>
<td></td>
<td>Professionalism of IS unit</td>
<td>Professionalism can be related to the level of maturity of the capability maturity model (CMM) as proposed by Paulk et al. (1993).</td>
</tr>
<tr>
<td></td>
<td>External information sources</td>
<td>Relates to the availability, source credibility and argument quality of external information sources. (Sussman and Siegal 2003)</td>
</tr>
<tr>
<td>Environment characteristics</td>
<td>External pressure</td>
<td>Mitropoulos et al. (2000); Institutional requirement, Competitive advantage or technological opportunity (technology push)</td>
</tr>
</tbody>
</table>

and organizational level of analysis together. Organizational adoption of an innovation is dependable on the decision making unit, as also mentioned in Rogers’ (1995) definition. This decision making unit, consisting of innovation influencers or as will be clarified later on, stakeholders with active role involvement, is composed of salient stakeholder groups. This connects to the findings of Ferlie et al. (2005) where is shown that in multiprofessional organizations, professionals have the power to block change, so that it is crucial that they must be engaged in the change process. We define the construct decision making unit in this article as the salient internal stakeholder community, which is crucial for successful innovation adoption.

Predictors for innovation adoption

Jeyaraj (2008) concludes in his extensive literature review that four dimensions of individual and organizational adoption predictors can be synthesized from the large body of IT innovation adoption research available, consisting of a large variety of independent variables (eg. from technology acceptance models like TAM, TAM2 and UTAUT). Jeyaraj (2008) distinguishes between individual, innovation, organizational and environmental characteristics, leading to two sets of predictors for individual IT based innovation adoption on the one hand and organizational IT adoption on the other. This is in line with the research of Hu et al. (1999) and Schooder (2007), who also distinguished comparable domains for innovation adoption variables. These aggregated sets can be summarized and operationalized as follows:

Stakeholder dynamics

For the definition of a stakeholder we first evaluate the much used description of Freeman (1984): a stakeholder in an organization is by definition any group or individual who can affect or is affected by the achievement of the organization’s objective. Clarkson (1995) extends the concept of stakeholder to “a person or groups that have, or claim, ownership, rights, or interests in a corporation and its activities, past, present, or future”. Stakeholders thus are internal and external of the organization, with some sort of interest and stake with respect to the innovation at hand. Lewis (1993) stated that different parts of the organization are likely to be at different stages in the innovation adoption process at the same point in time. Each of possible changes during the innovation adoption process may be more salient or less salient for each user or work group, and each may differentially influence the attention and behaviour of the user or work group. This in turn, might lead to a change of stakeholder salience over the innovation adoption process, according to stakeholder theory. As noted before, a stakeholder’s role may change over time and the set and number of stakeholders are context- and time-dependent and viewpoints and wishes of stakeholders may change over time. In other words, the earlier mentioned decision making unit is susceptible to continuous change. This matches the continuous process view on innovation adoption processes as described above. By executing a stakeholder analysis (on multiple time intervals) a better insight in the influences of the decision making unit can be gained in relation to the specific innovation. In the light of the here proposed method, stakeholder dynamics can be defined as the changing configuration of stakeholder clusters configuration as a result of changes in stakeholder capacity or intentions.

Stakeholder analysis: identification versus classification

As described by Vos et al. (2006) identification is mostly about determining which stakeholder is salient with respect to the issue of investigation. These authors describe a method focusing on identifying stakeholders in the particular context of innovation projects. In our research, we roughly distinguish two phases in stakeholder analysis methodology, based on this method; the preliminary identification (shortlist) and following the classification of stakeholders, based on stakeholder capacities and intentions. The classification of stakeholders determines whether the stakeholder is a member of the decision making unit or not. In practice, these two seemingly separate activities will be executed in congruence. For the above reason, stakeholder classification means placing the right stakeholders in the right “salience” cluster. As described by Savage et al. (1991) stakeholder assessments should include the capacity,
opportunity and willingness of a stakeholder in relation to the issue (in our case: innovation)\textsuperscript{13}.\\n\\n**Stakeholder’s role involvement: a question of capacity and intentions**\\nThe population of potential adopters plays a crucial part in organization IT based innovation adoption. This population may consist of a variety of different stakeholder groups and stakeholders. From the process perspective, the interplay between events and people at each stage of the process influences events in subsequent stages, determining whether the adoption process will continue or not\textsuperscript{14}. According to this approach, specific tasks and roles of organizational participants change as the process of innovation continues in an organization\textsuperscript{15}. A stakeholder’s role, however, only really matters when the stakeholder is salient with respect to the innovation adoption’s success. In other words, both a stakeholder’s capacity as well as, following, its intentions are relevant for the evaluation of innovation adoption processes.\\n\\n**Stakeholder capacity**\\nAs mentioned in dynamic stakeholder theory, the attributes urgency, power and legitimacy are positively correlated to this mentioned salience of stakeholders. This salience is described by Mitchell (1997) and Bourne (2005) as “the degree to which managers give priority to competing stakeholder claims”. The three classifying attributes make it possible to describe a stakeholder’s formal (eg. hierarchical position) and emergent (eg. urgency, proximity and informal power) involvement, combined describing a stakeholder’s capacity. A definitive stakeholder possesses all three attributes; an expectant stakeholder possesses two; a latent stakeholder possesses one; and a non-stakeholder possesses none. Stakeholders may shift from one class to another over time and across the issues facing the organization\textsuperscript{16}.\\n\\n**Stakeholder intention**\\nAs also noted by Savage et al. (1991), beside a stakeholder’s salience, a stakeholder’s intentions and values are essential to monitor to assess the potential impact of the stakeholder on the innovation at hand. Roles may be used to define what kind of intentions a stakeholder may have. This can be done by a set of role typologies that may help in classifying the decision making unit in distinguishable clusters\textsuperscript{17,18}. The role typology of a stakeholder can be seen in combination with a stakeholders’ coping tactics with respect to an innovation. Coping tactics are relatively specific behaviors engaged in to achieve specific goals. Lewis et al. (1993) describe three possible coping strategies. A stakeholder’s role can either enhance performance, reduce uncertainty or protect norms\textsuperscript{19}. A stakeholders’ coping tactic may in turn have an effect on a stakeholders’ role in the innovation adoption process. The role typology model may reveal that in a certain point of time the salient stakeholder community or decision making unit lacks certain roles or that one stakeholder fulfills too many roles, which may require corrective action. The role typologies can help in shaping corrective implementation activities to optimize innovation adoption predictor values.\\n\\n**Evaluation of stakeholder dynamics; a synthesis**\\n**Stakeholder assessment method: determining decision making unit composition**\\nThe above dissertation gives insights in the development of a dynamic decision making unit construction method. This method combines both capacity as intention elements. In this way it synthesis a variety of insights of stakeholder theory and an addition on the model as discussed by Mitchell (1997).\\n\\n**Structured implementation activities**\\nStructured implementation activities are activities designed and
12-15 stakeholder dynamics in IT based innovation adoption processes

enacted by internal and external change agents to specify usage of innovations and influence stakeholders’ innovation-role-involvement. Structured implementation activities (SIAs) are triggered by the formal decision to adopt the innovation that is made at some level of the organization. The structured implementation activities as described by Lewis (1993) may be mapped according the four-phase model by Vos et al. (2008).

We could use these six activities as measurement points, since they are likely to be present in all kinds of IT based innovation implementation projects. A goal of these implementation activities is to socialize stakeholders in their role as users of the innovation. This may shape a stakeholders’ intentions and are therefore very interesting measurement points.

The evaluation method

In conclusion, the fluctuation in stakeholder salience may have an impact (interaction) on innovation adoption predictors. When we combine the decision making unit composition dynamics with IT innovation predictors, we are able to construct an evaluation framework through which we can (a) get insights in decision making unit developments and (b) evaluate the influence of decision making unit stakeholders on innovation adoption predictors. This can be done by evaluating decision making unit changes as a result of structured implementation activities, and measuring the new values on the different IT innovation adoption predictors as mentioned in this article. For individual predictors we only evaluate those stakeholders that are a member of the decision making unit.

This leads to the following phases of evaluation: (1) identify and execute structured implementation activities, (2) determine the composition of the decision making unit (using the here described method), (3) evaluate the scores on the set of innovation adoption predictors based on stakeholders within the decision making unit, (4) evaluate predicted outcomes on innovation adoption based on the scores on the predictors. By executing the phases at several points in time, dynamics in decision making unit development can be noted and its effects on the predictors and outcome can be monitored. This makes it possible to evaluate the effects of the structured implementation activities.

Discussion

Even though the separate used concepts are grounded sufficiently in academic literature, there’s still much debate about for example the tickous and ambiguous identification and classification of stakeholders in general. Furthermore, the validity of IT innovation predictors are often highly dependent on definitions used and the granularity of the concepts tested. Whether the model will fit a variety of situations or even non-IT based innovations is a subject for further research.

Conclusion and suggestions for further research

In this article, we proposed a method for the evaluation of stakeholder dynamics in relation to IT based innovation adoption processes. We combined stakeholder theory concepts together with key findings grounded in innovation and technology acceptance theory. The here proposed method can be used to evaluate the evolvement and composition of the decision making unit with respect to the IT based innovation and subsequently the impact of the changed decision making unit on IT based innovation adoption predictors, through the use structured implementation activities.

Empirical research needs to be done to test and evaluate the method as a whole and its usefulness in practice. The method might require considerable amounts of time and effort in relation to its benefits. Furthermore, operationalization of the concepts used in the here proposed method may result in complex empirical methodologies to ensure validity and objectivity. Finally, the boundaries of the decision making unit may need considerable study.

Tim Postema, MSc, is currently doing his PhD at the University of Twente in The Netherlands, on the theme of Stakeholder dynamics in healthcare during design and implementation of IT based innovations. He has years of project experience as a healthcare consultant for Electronic Health Records and IT architecture for hospitals in The Netherlands.

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ABSTRACT: The need to focus internally on cost management has largely replaced the revenue growth model of the past two decades and the external pursuit of opportunities for market and service expansion, according to Stephen R. Mayfield, DHA, senior vice president of quality and performance improvement for the American Hospital Association. Outside financial pressure from primarily uncontrollable forces – the potential bundling of Medicare reimbursements to hospitals and non-payments for readmissions and adverse events, to name a few – have compelled healthcare organizations to spend more time looking inward to finetune existing capabilities. As a result, quality improvement is evolving into a strategy for fiscal stability as well as a critical priority in itself.

Revenue is being peeled away by external forces,” says Mayfield. “It is imperative that we manage the internal costs, much of which can be attributed to inefficiency and rework. As a result, healthcare leaders are having to quickly absorb the tools and techniques that contribute to effectiveness in this realm.” Healthcare Executive spoke with a cross-section of healthcare leaders to learn how they are tackling quality, efficiency and cost management in difficult times to improve outcomes, increase value to patients and remain financially sound.

ThedaCare

The ability to create lasting improvement in patient care while reducing waste and managing costs has required nothing short of a cultural upheaval, according to John S. Toussaint, MD, President/CEO Emeritus of ThedaCare, Appleton, Wis., a community-owned health system consisting of four hospitals, a large group practice and other health services, and, with 5,400 employees, the largest employer in Northeast Wisconsin. “If you don’t have the fundamental cultural underpinnings at the heart of what you are doing, then you won’t transform the organization and achieve enduring change,” he says. “Anybody who is not focused on building the cultural aspects of a continuous improvement transformation will not succeed in bringing about quality improvement.”

At ThedaCare, the cultural conversion has been a major long-term journey that began several years ago, and the transformation is still not complete. At the heart of the change has been the systemwide adoption of the Toyota Production System manufacturing methodology and the core values of respect for people and continuous improvement on which that methodology is based.

The transition to a lean culture has required, among other things, a fundamental shift from the traditional command and control healthcare leadership process to one of continuous improvement management in which senior management’s primary role is defining the purpose for which the organization exists and clearly communicating that purpose to every staff member, says Toussaint.

Real change in patient care quality and cost efficiency could not have taken place without this rudimentary alteration in mind-set, he says. “We’ve had to fundamentally change the way we think and behave.” The change has come more naturally to nurses because they are trained in problem solving, but everyone has been expected to make the leap. As a result of quality initiatives based on Lean, ThedaCare has achieved a 30% reduction in the cost of care, 50% reductions in Occupational Safety and Health Administration recordable staff injuries, and fall and medication reconciliation rates of zero on its redesigned inpatient Collaborative Care unit.

A critical part of senior management’s responsibility is the careful selection of a manageable number of quality improvement performance indicators at a time. A 10-page document filled with 100 different performance metrics does nothing to engage staff, Toussaint says; narrowing goals down to three or four targets is much more likely to win commitment.

Current quality performance indicators at ThedaCare, for example, include medication errors, productivity and implementation of staff ideas at the front line. Each business unit – clinic, hospital, surgery center, home care – has its own productivity metric. The system has an organizationwide goal of 10% productivity improvement year over year, with each percentage point representing US$2.5 million in improved...
implement change across the organization so that we are a "single, cohesive entity."

The large provider adopted a systemic approach to quality improvement by understanding current best practices and then spreading those best practices uniformly across the organization.

Banner Health, a Phoenix-based system with 22 hospitals in Arizona, has reached a laboratory specimen tube labeling error rate of 3.4 per million, a level that achieves Six Sigma quality. "If it stays at that level, then there is no need to work on it because there are many more problems to deal with," Toussaint says. ThedaCare has begun to share the lessons it has learned through the nonprofit ThedaCare Center for Healthcare Value, which Toussaint leads as CEO. The center facilitates collaborative networks of healthcare leaders to "accelerate the learning curve of organizations committed to looking at business in a transformative fashion and moving from an antiquated to a new management process," says Toussaint.

"What's missing in healthcare is the widespread use of a methodology to achieve 100% reliability for patients," Toussaint says. "We're trying to get people interested in learning from each other to perform as close to identically as possible across the company," says John Hensing, MD, executive vice president and chief medical officer. "Everyone is incentivized on the basis of how Banner performs," he says. "As much as we can, we want to be one organization delivering services at 22 acute-care sites."

Hensing notes that Banner has had the advantage of starting with this organizational structure rather than having to reinvent itself. "One of the drugs for many other not-for-profit providers is their inability to act as a single organization," he says. "It's not that we're smarter, but because we're a relatively new organization that came together in 1999, we were able to start with a clean sheet of paper and structure ourselves differently." Note: Peter S. Fine, FACHE, Banner's CEO: "We have done an excellent job of linking organizational financial health to clinical outcomes. This has been done by moving the organizational mind-set from being a healthcare delivery company to a clinical quality company. We have accomplished this by using our strategic initiatives and management incentive programme to stimulate the change in thinking."

At Banner, organizational structure and management incentives are set at a system level. Chief financial officers, chief medical officers and other senior leaders (with the exception of chief nursing officers) at the hospital report to a corporate leader and have only a dotted-line reporting relationship with the CEO at their institutions.

A single governing body has both fiduciary and quality accountability for the entire organization. This model serves as a framework upon which we can build a variety of team-based structures, including a care-management council, an objective metric to determine our success, and a balanced scorecard of management incentives and facility performance that drives how our managers are paid and how the board assesses our organization," Hensing says. Patient-care-quality goals are also set systemwide. Banner has begun rolling out an electronic medical record (EMR) with a uniform order set on a single platform located in its Phoenix data center, for example. Says Hensing, "All 22 hospitals are currently operating on our EMR with six hospitals having implemented computerized order entry with the full paper-light conversion and the remaining 16 scheduled to be on board within the next 24 months. "There really are differences in facilities," Hensing says. "Tertiary pediatrics, for example, is not offered at all locations. But as much as we can, particularly for services provided at multiple sites, such as obstetrics and cardiology, we strive for as much consistency as possible. That gives us the platform from which we can change our order sets and identify areas for improvement. It also lets us operationalize change across the organization in a much more efficient fashion."

Several years ago, Banner recognized that two of its five cardiac surgery programs were not performing as well as the other three units, although these programmes met national benchmarks. The system brought together leading cardiac surgeons from each of the five programs to sift through volumes of data that had been collected over several years. After evaluating countless variables related to surgery, anesthesia, ventilation time and other areas, the group could not find any identifiable explanation for the differences.

"We ended up concluding that the best way to improve would be to forget about trying to find the reasons behind the variability and to look instead at best practices and whether we were complying with them," Hensing says. The system adopted the 14...
World Hospitals and Health Services Vol. 46 No. 2

16-19 Quality, cost efficiency

Management, quality and cost efficiency

best practices for cardiac surgery of the American College of Cardiology on everything from skin preparation for surgery to postoperative antibiotics.

“We ended up actually reducing mortality rates at all five cardiac surgery programmes,” Hersing says. “It taught us that we shouldn’t be looking for poor performers; we should be looking for a standardized approach of adopting well-established, evidence-based principles across the entire organization. It isn’t a matter of finding Nurse Jones or Doctor Smith as an underperformer. It’s how reliably we comply with evidence-based practices and avoid patient injury. That is quality.” Since then, Banner has used the same approach for pneumonia prevention and a host of other performance improvement initiatives. In obstetrics, for example, the system convened a consensus group of obstetricians from across the organization to evaluate claims data. Based on the findings, the group implemented a sophisticated clinical decision support-based EMR exclusively for obstetrics patients. “Now we have an electronic platform from which all obstetrics caregivers receive e-warnings about drug reactions, patients eligible for c-sections, changes in fetal monitoring and other factors that drive improvements in obstetric care,” Hersing says. Liability costs have declined as a result and are now third behind surgery and emergency claims. The group continues to meet, has recently adopted a standard approach for the administration of oxytocin, and is implementing the protocol systemwide. When a problem arises at one hospital, the facility performs a root cause analysis and shares what it has learned with the rest of the organization.

The lesson learned may have potential for application across Banner, in which case it will be used to drive continuous improvement. If root cause analyses do not have global implications, however—and many do not—they are not adopted systemwide. Still, the ability to share lessons across the system is inherent in the organizational structure. Each year, senior management adopts about a dozen strategic management initiatives that do have systemic implications, takes them to the board of directors for generic approval and then runs them through a process of metrics approval. Management incentive plans hinge on those initiatives.

One recent initiative focused on the variability of costs associated with asthma care across the system. Banner designed a metric to reduce variability and drive costs at each of the hospitals closer to a mean consistent with its most highly efficient providers. “We targeted our own best performance,” says Hersing. Some goals may take two or three years to reach, so initiatives often are carried over to the following year. Others are taken off the list when goals are reached, but results continue to be monitored and reported to the board. “We want to maintain the gain,” says Hersing. “They’re no longer strategic targets, so we no longer focus the same level of resources on them. We work hard to keep the number of strategic initiatives down, and once we achieve our goals, we move on. There are too many things to work on.”

Moses Cone Health System

Moses Cone Health System, Greensboro, N.C., expects a range of clinical safety and quality initiatives emphasizing avoidable harm to yield cost savings this year along with significant improvements in patient care. Goals include 15% reductions in MRSA infections, ventilator-associated pneumonias, sentinel events, wound infections and readmissions. The system embraced Six Sigma six years ago, and the process improvement tool “gives us the ability to focus talent in areas (where we see problems),” says R Timothy Rice, FACHE, president and CEO. Currently, a Six Sigma team is drilling down into the data to find root causes of and new strategies for reducing MRSA infections, and an incentive plan based on the system’s ability to reach these goals is in place for senior management.

While focusing internally on quality improvement to increase value to patients, Moses Cone has built strong relationships with the larger healthcare community; looks frequently to it for ideas, resources and support on quality-and safety-related issues; and generously shares its own lessons with other providers. The system collaborates closely and transparently shares data with other VA hospitals in the region. Members communicate regularly about best practices and new findings, and Rice teleconferences with other CEOs in the region on what is and is not working at their institutions.

Central to Moses Cone’s quality initiatives is its participation in the Just Culture programme of the North Carolina Hospital Association and the North Carolina Board of Nursing. A just culture holds individuals accountable for gross misconduct or negligence but recognizes that caregivers and other frontline employees should not be held responsible for systemic problems beyond their control.

The system recently had an H1N1 case that made national news in which a respiratory therapist who contracted the virus potentially exposed 33 neonates (none of whom were infected). “We were very public about it, but I don’t know who the respiratory therapist was,” says Rice. “It wasn’t her fault, and I have no interest. The error was in our processes at that point around H1N1.” The system’s openness and willingness to accept responsibility for correcting a process rather than assigning blame to an individual illustrate a just culture in action, Rice says. “How you handle these situations lets the rest of the employees know how you want them to behave. ”It is important that leaders can articulate the linkage of all of these various efforts. For instance, how does a just culture lead to improved quality or reduced errors, and how does that translate into not only better care, but cost savings to our community? We need to be able to make those connections and to articulate them to employees and our community.”

Lawrence & Memorial Hospital

The realization that “cost efficiency and quality can and should move in the same direction” began to replace the traditionally inverse relationship between the two variables about a decade ago, observes Bruce D. Cummings, FACHE, president and CEO of Lawrence & Memorial Hospital, a 280-bed, nonprofit, acute-care provider in New London, Conn. But the knowledge within healthcare that “better care can be delivered at lower cost” – and that higher quality actually can drive cost reductions – has grown particularly strong within the past couple of years, he says.

Lawrence & Memorial’s commitment to reducing the cost of care and improving quality has taken several forms within a relatively short time. Chief among them is the hospital’s participation beginning this past year in a national collaborative of 165 providers spearheaded by Premier hospital alliance and the
Institute for Healthcare Improvement known as QUEST (Quality, Efficiency, Safety, Transparency): High-Performing Hospitals. “This universe of hospitals came together out of the shared belief that we can have better quality, safety and cost with transparency,” Cummings explains. The three-year programme provides innovative data mining software tools for reducing errors, mortality and inefficiency and improving patient safety and satisfaction. Hospitals then share their data and benchmark against individual and national results. In the first year, participants saved an estimated total of $8,043 lives and $US$577 million, according to Premier.

At Lawrence & Memorial, “we’ve used QUEST as a way to help organize and animate our own philosophy of providing better quality at a lower cost,” says Cummings. “We thought we’d be more likely to do that if we were working in cooperation with other hospitals as opposed to doing it on our own.” Among the shared tools whose potential Lawrence & Memorial has begun to tap is a system that generates “robust, comprehensive, physicianspecific information on costs, outcomes, complication rates, antibiotic usage, device usage” and countless other variables, Cummings says. “We can organize this data in a way that allows us to show individual physicians how they compare with their colleagues here and their peers in hospitals across the United States.” Installed a year ago, the system is being implemented in phases to help physicians become comfortable with the process. At present, physicians can view their own data and that of their peers but are unable to access reports. Eventually, the medical staff will be able to view the reports, which will give them the opportunity to see how they are doing in relation to each other. “Right now, we’re in the phase of inviting physicians to critique the tool. Ultimately, it will be used as an adjunct to the Joint Commission’s requirements. We are some distance away, but that is the trajectory,” Cummings says.

Because of the system’s newness, legitimate technical questions about accuracy have arisen. If doctor A admits a patient, but it’s doctor B who follows that patient and doctor C who writes the discharge order, “we’re having to scrub the data to be sure we’re able to match the right data with the right physician,” he says. Morbidity and mortality and resource utilization are of particular interest. “This is where cost comes into play,” Cummings says. “Is doctor A ordering a lot more tests or choosing drugs at variance with what his or her peers are doing? Is length of stay higher or lower on a physician-specific or diagnosis-specific basis?” Cummings is confident that the system will drive change because “physicians are trained in the scientific method, so they respond well to good data. If you can show them that the implant they’re using is three times as expensive but doesn’t get better results, they’ll pay attention to that.” Lawrence & Memorial also has embraced the process innovation methodology of the Toyota Production System. “Our bias is that if the improvements in patient flow have had less to do with the teletracking tool itself than with the process of ‘deconstructing these very complex processes with many moving parts and players and then improving them in segments. As a result, patients are getting out of the ER faster, discharges are earlier, length of stay is shorter and costs are going down.”

Process innovation – and a major shift in thinking – has enabled the hospital to lower its incidence of pressure ulcers to less than 1% from 13%. A similar approach, including rigorous training in the consistent use of new patient lifting devices, enabled the hospital to reduce back injuries among caregivers to just two in one year from 160. “All of these imperatives around quality, safety and cost need to be owned by senior management,” Cummings stresses. In the patientlifting initiative, for example, “the inspiration to reduce back injuries came from clinical personnel, but until senior management got behind it and said ‘Let’s make a substantial investment in high-tech lifting devices and hire an RN-led firm to train all of the nurses and patient transporters until it’s firmly embedded,’ it probably wouldn’t have happened.”

Susan Birk is a Chicago-based freelance writer specializing in medicine, science and healthcare. She is a frequent contributor to Healthcare Executives, the magazine of the American College of Healthcare Executives. Dawe’s International Medical News Group, and other print and online healthcare publications.
Evidence-based design

ABSTRACT: A brief reflection on the principles of evidence-based design (EBD) led to a topical survey study designed and coordinated by the author. The survey focuses on patient preferences with respect to hospital room features, namely the number of beds per room. The results are interesting as they show that the hospital building environment has a different impact on hospitalized citizens with respect to citizens as potential hospital patients.

As a professional involved in hospital design, my interest in evidence-based design (EBD) in healthcare initially stemmed from A Cochrane’s new design method based on evidence-based medicine. This long-standing cultural movement focuses on research evidence and patient preferences mediated by clinical healthcare professionals as the means to improve healthcare strategies.

Due to its intrinsic complexity, hospital design can sometimes be self-referential. One way of overcoming this problem is an evidence-based design method addressing the many technological advances in the healthcare sector. EBD, devised for shopping centre planning, has been widely implemented in the design of hospitals and other medical care facilities.

The following definitions of EBD and statements taken from the many literature publications on the topic (see References) offer a brief introduction to this survey:

- EBD was devised for use not only by planners but also by managers (giving rise to research and multidisciplinary planning teams);
- EBD is based on the search for the “best” evidence available at the time;
- EBD requires informed critical appraisal;
- the aims of EBD span design in the broadest sense of the term (economic performance, productivity, customer satisfaction).

The four components of an EBD process aim to:

- gather qualitative and quantitative intelligence;
- map strategic, cultural and research goals;
- hypothesize outcomes, innovate and implement translational design;
- measure and share outcomes.

Plainly, all the EBD criteria are widely shared and many of them should form the basis of optimal hospital planning.

The Center for Health Design (www.healthdesign.org) is very active among the North American community of design professionals. The Center is an ad hoc professional association for the circulation and development of EBD to improve the quality of healthcare through the built environment using evidence-based design principles.

The Center for Health Design has produced a wealth of literature contributing to the definition of EBD certification of design projects, as already occurred for the Leed and Lean methods. The principles embraced by EBD include the proposal to adopt single bed rooms on hospital wards. This proposal has also been advocated in Europe for the following reasons:

- reduced nosocomial infections;
- reduced patient falls (-70%);
- greater healthcare flexibility (rooms equipped for intensive care);
- better reception for patients’ relatives;
- greater environmental control (air conditioning, noise);
- greater patient satisfaction.

According to Ulrich (Ulrich and Zimring, 2004; Ulrich, 2005), other important objectives of EBD projects are:

- more use of natural light even in complex buildings (imaging department, surgical suites, etc);
- less spatial disorientation (better signage, more friendly buildings);
- less noise (better use of noise protection systems);
- more impact of nature and positive distractions (access to gardens, paintings and works of art in hospitals and healthcare facilities) (cf. Ulrich, 2005).

Rosalyn Cama claims that “of 40 firms surveyed 37 engage in EBD” (Cama, 2009, p 235). Kirk Hamilton, another of the authors...
with a major interest in EBD calls for care and caution in interpreting evidence:
- you must use critical thinking to interpret the implication of research;
- there will never be an answer to your specific problem;
- be wary if the data appears one-sided;
- stay current; new findings appear continuously. (Hamilton, 2006).

Hamilton offers another series of recommendations, emphasizing “the need, if necessary, to do your own research”.

Hamilton’s advice on using caution in interpreting evidence and Ulrich’s comments on hospital rooms introduce the topic of this survey. The study was proposed and coordinated by the author in conjunction with the Zanetti Association (see insert on the Mario Zanetti Association) and co-authored by Dr G Pieroni, Prof A Montini and Dr E Casadio. The methods and tools of the survey were based on EBD principles and yielded a different outcome, thereby confirming Hamilton’s views.

The survey aimed to analyze patient preferences with respect to hospital room features, not only the number of beds per room, but also patient satisfaction with the physical and functional features of hospital rooms. The conviction underlying the study was that the hospital built environment has a different impact on hospitalized patients with respect to citizens as potential hospital patients. In Italy, the current legal minimum structural requirements for hospital rooms with only one bed (11%) and three beds (10%) (Table 1). This was followed by four beds (19%), one bed (11%) and three beds (10%) (Table 1). This was the first outcome without considering the socio-demographic characteristics of the inpatients and the survey setting (i.e. the size of the room during the interview).

However, inpatients’ preferences seem to be correlated with relational aspects and needs linked to inpatient status. These aspects led most patients to favour a double room.

Sex seems to be a significant driver for inpatient preference: women preferred single rooms less than men (7.7% versus 14.7%). However, by considering the sex variable, there were no major differences regarding rooms with two or three beds. Inpatients’ educational level has more impact than the sex variable with respect to the preferred size of room. The higher the patient’s educational level was the higher the preference for a single room and the lower the preference for a four bed room. However, the double room maintained the highest preference when all educational levels are considered. A more specific breakdown of the linkages between preferences, room and degree of satisfaction with hospitalization, and social characteristics of the interviewed patient was done by multiple correspondence analysis. The analysis showed that the two bed room size was not associated with a particular socio-demographic characteristic. This result shows that the double room is the single feature best satisfying the heterogeneous characteristics of the inpatient population.

Patients’ answers on their room size preference in terms of the number of beds at the time of the interview showed a high propensity to prefer the same room only in the case of a double room (about three quarters of inpatients hospitalized in double rooms indicated this size as the ideal room) (Table 2).

Considering all other situations – with the exception of a single room (or with a single user) – there appears to be a general preference to “downsize” toward smaller and hence less crowded rooms. However, the case of single room

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<tr>
<th>Table 1: Size of Hospital Room Preferred by the Inpatients Interviewed – Relative Frequency Distribution (%)</th>
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<td>No. of beds per room</td>
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<td>2 beds</td>
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<td>4 beds</td>
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<td>Uncertain (including, from 1 to 3)</td>
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<td>Uncertain (not single)</td>
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This survey on patient preferences was carried out by interviewing hospital inpatients, i.e. by considering people during a hospitalization period. The survey was conducted during spring 2002 in four hospitals of the Emilia-Romagna region, one of the wealthiest areas in Italy and with a well-run regional health system.

The wards were chosen to ensure a wide range of hospital room sizes. Thus we considered wards with a number of beds per room ranging from 1 to 6. The hospital quality was medium-high level despite the fact that during the survey some rooms were exceptionally overcrowded (with added beds), thereby broadening the range of the sample.

Obviously, we excluded wards in which disease severity made administration of the questionnaires inappropriate. The survey was undertaken by personal interviews involving 788 inpatients selected with a stratified sample design by hospital and ward. The interviewers were external with respect to the hospital staff and used the Computer Assisted Personal Interviewing (CAPI) method.

Sample size allocation was proportional to the number of yearly admissions in each stratum and is therefore representative of the inpatients/admissions’ population in the hospitals surveyed. The corresponding margin of error for the estimation of sample proportions was 3.4%.

The sample survey showed that the preferred size of hospital room is one with two beds (51%) followed by four beds (19%), one bed (11%) and three beds (10%) (Table 1). This was the first outcome without considering the socio-demographic characteristics of the inpatients and the survey setting (i.e. the size of the room during the interview).

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<table>
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<th>Table 2: Preferred Room by Number of Beds Occupied in the Room – Relative Frequency Distribution (%)</th>
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<td>Preferred room size</td>
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<td>Uncertain, not single</td>
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<td>Including single</td>
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<td>Uncertain, not single, room not occupied</td>
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<td>Total inpatients interviewed</td>
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prefer a double room size but a large number of them (31.6%) indicated a single room as the preferred room size. Finally, this EBD-based survey analyzed patient preferences with respect to hospital room features. Although the outcomes differ from those of most EBD studies, our findings offer an overview of the Italian hospital setting, focusing on the impact of the hospital built environment on hospitalized citizens with respect to citizens as potential hospital patients.

Gabriele Zingaretti graduated in Mechanical Engineering and subsequently specialized in Biomedical Technologies (Bologna University School of Medicine). Since 1974 he has worked as a hospital designer and has been involved in planning and consultancy work for more than 120 hospitals in Italy and Europe. He is currently a board member of CNETO (Centro Nazionale Edilizia Tecnica Ospedaliera) and a board member of Associazione Zanetti.

The Mario Zanetti Association (www.assozanetti.it) for the development of knowledge in Public Health was set up in Bologna (Italy) by Prof. Mario Zanetti’s family and his students (founding members). The Association aims to provide continuity in the scientific, cultural and educational training of persons involved in the development of Public Health, according to the modalities and in agreement with the principles taught by Professor Zanetti. The Association plans to use the skills of key professional figures such as physicians for the organization of hospitals and territorial services, flanked by other experts like epidemiologists, engineers, economists and health lawyers. In particular, the Mario Zanetti Association promotes the organization, management and evaluation of health services and public health in general.

References
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Hamilton D.K., Certification for Evidence-Based Design, Healthcare Design cit.

A new vision for hospital design –
current reflections via seven projects

ABSTRACT: From Brittany to China, from Spain to Africa – one concept, seven places and many more in gestation. This concept not only deals with the assembly of thousands of rooms, the need for proximity, and medical constraints, it is the architecture that defines the spatial quality, the meaning of the project. The identity is renewed each time.

In the domain of hospital design, and as we intend it, the architectural practice takes on its true value of utility and the architect his genuine role for the benefit of the society.

Everyday medical progress, constant improvement of the technical quality of healthcare, the advent of new technologies, particularly in automatic functioning, make the hospital a universe of research and evolution in constant movement.

Our concern is to define how architecture can accompany the dynamics of progress. We have, via the seven projects presented here, explored different angles whose principal ambition is to constantly place the individual at the center of the hospital apparatus by way of its architecture.

Indeed, no matter its technical progress, its performance level and its efficiency, a hospital remains a place where people care for and treat other people and the relationship of these people to the architecture is crucial.

The patients are individuals that are physically and psychologically weakened by their illness, whose emotions in the face of their built environment may be sharper than that of a healthy person. The medical staff is made up of individuals faced with stressful working situations for whom the quality of spaces, light, distances, comfort, and meeting places are extremely important in order to foster the serenity required for their profession.

It is also and above all, the dignity of those who use the hospital, how, through the architecture, they feel concerned and respected and how they can project and identify themselves within it.

Finally, it’s about how to guarantee the technical performance of the hospital “machine,” its flexibility, its capacity to evolve, without impeding the quality of the spaces required for well-being.

Thus, four major objectives have guided our architectural reflections. Throughout our projects, they have been, applied, varied and developed according to the specificities of each one.

They are as follows:

- Develop the patient’s comfort.
- Human scale, quality of the spaces, reference points.
- Increase the hospital “machine’s” performance.
- Compactness, capacity to evolve, flexibility.
- Propose optimal working conditions for the medical staff.
- Lighting, ergonomics, shortened distances.
- Proffer a genuine architectural identity.

The design concept which results after much experimentation is based on the display of the duality between hospitality and medical efficiency.

That is to say, we propose that the patient accommodations be treated as a hotel-type structure that hosts the patients with the quality of the sojourn and the scale of the individual in mind; and on the other hand that the diagnostic and treatment functions be inspired by industrial efficiency, flexibility, having a capacity to evolve, and as much as possible, free from...
construction constraints. These two parts are linked by a spacious area, well-defined and welcoming, that permits users, patients, visitors and staff to benefit from distinct circulation routes and a clear perception of the ensemble – a kind of active frontier.

This design concept is the backbone of our reflection and of our work as architects from which each project, according to the place, the program, the cultural and historic context becomes unique – a place that future users will appropriate.

We will begin however with a hospital project prior to the elaboration of this concept that nevertheless represents an important stage in defining the role that the environment and spatial organization should play. The project, located in Montmartre, is a 245-bed geriatrics centre whose challenge was to propose a reassuring and domestic scale to persons rendered vulnerable by their age, within a highly efficient medical process.

This was achieved by gathering the patient rooms into “small houses,” around a common kitchen and living room that facilitate participating in social life and take the form of pavilions at the scale of the neighbouring buildings. The openness towards the exterior, the views to the hustle and bustle of the city or to a children’s playground, the presence of a garden with its seasonal changes as well as an interior street with a bistro, a hair salon and a place for worship give those who are restricted to the hospital a desire to live.

The quest for a minimum of autonomy for the elderly, often disoriented, led us to create a specific signage design – limit choices to two options, create reference points by different colors and facilitate closed circuits without obstacles.

The following projects – Le Havre, Lorient, Gonesse, N’Djamena, Vigo and Shenzhen, incorporate our reflections on the person and his relationship to the space and are variations of the dual concept of hospitality/efficiency.

Le Havre Hospital, a private 365-bed institution handed over in 2010, is the first of which we have implemented the organizational device of physically distinguishing the patient accommodations from the diagnostic and treatment functions. The diagnostic and treatment functions are built within a large-span steel structure with spacious plenums that allow the mechanical, electrical and plumbing systems to be located directly above the surgery wards, thus reducing the risks in hygiene and allowing for future developments. One operating room can be undergoing a technical intervention while the one next to it can keep functioning.

The patient accommodations are not superposed with the diagnostic and treatment functions so that their geometry and layout are free to be organized in a hotel-like manner and in such a way as to enhance the identity of the different wards while allowing them to adjust their limits according to the evolution of the hospital’s activities.

Its architecture is inspired by a maritime esthetics taken from the port activity of Le Havre – the use of metal cladding, the shape of the main façade evokes an ocean liner and the wind-facing façade is taken from the windbreaker of the “France” in Le Havre Port.

The Lorient Hospital in Brittany, a facility of 575 beds that is currently under construction, proposes a long undulating façade, facing the ocean, which enhances the panoramas for a maximum number of rooms. This improvement with respect to Le Havre is the increase in the number of rooms with a view.

The interior circulation of the patient accommodations ward is connected at four intersections with central medical circuit in order to access the diagnostic and treatment functions.

The sinusoidal movement that evokes a wave and gives the...
The Vigo Hospital for the Galicia Region on the north-west coast of Spain that is currently under design for Sergas is a landscape in itself. Stair-stepped into a steep slope, it is embodied by a succession of terraces formed out of roughly squared blocks of granite, topped off by a succession of six white sails that echo the maritime past of this port city.

The principle of the differentiation of the major functions of the hospital adapts itself to the slope of the site (a 30-meter difference in altitude across the width of the hospital). And so, the diagnosis and treatment functions are situated on the last levels of the patient accommodations (1500 beds) by a sliding effect along the central circulation space.

The geometric layout of the patient accommodations within the successive waves (the white sails) allows a panoramic view for 100% of the rooms.

An interior street irrigates the project across its length beginning with the reception area, and throughout all the levels with a patient circuit on the accommodation side and a medical circuit on the diagnostic and treatment function side.

Architectural emblem for the region, highly effective visual comfort for the rooms, efficiency in differentiating the functions, a clear organization, the Vigo Hospital is one of the most significant projects within our repertoire.

The 500-bed N’Djamena Hospital in Chad, currently being designed, is a gift of King Abdallah Al Jaoud and is at the centre of a vast national sanitation project.

Based on the general principles developed by Valode & Pistre, this project adapts itself to the extreme climate – the heat capable of rising above 50°C (122°F) in the shade and violent wind storms from the Sahara in the north.

A double roof that projects its shadow onto the building, double main façade its character is taken from a the diagonal lines of the French garden where exotic vegetation from the French India Trading Company were acclimatized back in the 17th century.

The façade cladding of carefully crafted white polished concrete confer the quality and attention that is reassuring to the patients. The scale of each ward is embodied by each wave of the undulation.

A horizontal band engraved into each wave of the undulation underlines the different wards with a colored lighting effect that gives the main façade a playful quality and lessens the intimidation often associated with hospitals.

The 500-bed Gonesse Hospital, which is under construction near Roissy, is a major development for this vast hospital campus that has grown since the 15th century. It is immersed in a park that unifies the entire site.

Our response is to achieve a pavilion scale in harmony with the historical buildings on the site. Thus, like a calm residential neighborhood, it aligns a succession of lofty pavilions on a powerful base lining a vast prairie.

The arrangement of the accommodations allows for 75% of the rooms to have a panoramic view to the park and, as in Le Havre Hospital, the ward limits can be made to vary.

The diagnosis and treatment functions, organized onto three levels – one of which is almost entirely dedicated to the logistics robots, are completely modular and multi-functional. During the design phase, it was possible to modify the interior organization three times in response to programmatic changes, without impacting the project, the cost or the schedule.

The architecture is voluntarily sober and serene as it faces the park – white polished concrete bands and cladding, horizontal wood-grained façades, peripheral balconies that accentuate the small pavilion effect.

Thus, the project can be read on two levels – a powerful 300-metre (985-foot) long base that expresses the institution’s importance and reassures on a medical level, and the pavilions that evoke a hospitable scale, reassuring for the individuals.
Valode & Pistre Architectes is an international architectural practice, founded in 1980 by its current partners, covering expertise in interior design, urban design and engineering. Particular concerns are for the quality of the working environment, the respect of the contextual and ecological dimension and the appropriate use of new technologies and ideas. The reputation of the office is founded on projects resulting from this process; Valode & Pistre develop and build projects in many countries.

façades made of terracotta, a natural ventilation system based on a series of courtyard with a fountain give it its architectural character.

This character is underlined by the pattern of the terracotta cladding that is inspired by the woven reeds typical of rural houses.

The organization and layout of the interior spaces were designed with the African cultural practices in mind. The fitting-out and equipment were conceived for low-maintenance requirements.

The 600-bed Shenzhen Hospital, in the Ping Shan neighborhood, has an outpatient sector that is the same size as the inpatient accommodations. Valode & Pistre won the international competition in January 2010; construction is due to begin in September 2010 and should take only two years.

The swiftness is characteristic of Chinese projects but does not exclude their thorough analysis of the concepts; for this reason, the client adhered to the principle of differentiating the functions, with a panoramic view for 100% of the rooms and a compact and efficient diagnosis and treatment function area.

In addition to these principals, curved forms were consistently used in compliance to Feng-shui ideals – right angles are perceived as aggressive and cutting, so go against the idea of a hospital as a reassuring place.

The building is expressed in ample curvilinear forms – the garden plan follows the same principals. The city of Shenzhen intends to make a symbol of the resulting identity.

Yet, a project’s identity should not only be a symbol for the city or the region, but a place that the users can identify with, and especially where patients who may feel alienated can feel at home.

Thus, Valode & Pistre has worked on a particular aspect concerning the identity of place – the signage. The two examples presented here, the Lorient Hospital and the Gonesse Hospital use signage as a basic component of the interior design and as an element that forges the identity of the place.

In Lorient, the history of the French India Trading Company with its fabulous images of cargos and ships, symbolic objects from the various origins, is the theme used for the signage design. Thus, images of Siam elephants, diamonds from Pondichery, porcelain from Canton, serve as a reference for each level or ward. Combined with a colour scheme and directional signage elements, they accompany the visitor to their destination.

For the Gonesse Hospital, the signage design promotes a voyage in time throughout the last five centuries. A collection of historical buildings dating as far back as the 15th century is the theme of the window shapes and becomes the leitmotif of the signage design that varies according to the level and the ward – in the form of painted panels or engraved glass.

So, from Brittany to China, from Spain to Africa – one concept, seven places and many more in gestation. This concept not only deals with the assembly of thousands of rooms, the need for proximity, and medical constraints, it is the architecture that defines the spatial quality, the meaning of the project. The identity is renewed each time.

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An overview of healing environments

ABSTRACT: Stress is a major obstacle to the healing process and it is partly linked to the quality of the environment. Many examples of healing environments throughout time can confirm the primitive human need for healing or therapeutic facilities. Since the Modern Movement of architecture, hospital design has evolved and adjusted to the changing needs. Nowadays, it is considered to be a function of multiple variables. It is an architect’s duty to design an environment (the term environment in this case includes all of its interpretations; natural, built, interior and exterior) that will propose security and will positively affect the recovering patient.

The hospitalization process is inevitably a source of stress for an individual. This is caused due to “the absence of a familiar setting, the insecurity of the future, the fear of unknown medical tests or surgery, the pain, the restriction of social and everyday life that automatically affect the patient”1. At an obvious level it is widely known that stress inhibits healing. Health is an overall condition that apart from the physical state depends on environmental, psychological, social and emotional factors. Therefore, the environment can have positive effects on a recovering patient. The terms “healing” or “therapeutic” environment are rather broad and of great importance. A healing environment can be defined as a place that can calm and cure both the body and the mind.

Since the primitives societies existed, there are enough examples from around the world that confirm the human need for healing or therapeutic facilities. In ancient Greece, these facilities where known as “Asklepieia”, named after Asklepios (son of Apollo). They were large complexes, located in stunning natural settings, secluded from other habitations. Their concept was based on surrounding the patients with nature, music and art “…in order to restore harmony and promote healing”2. At the Asklepieia there were no discriminations, everyone was admitted. Certain hygiene rules though applied; “other settlements or buildings weren’t allowed in their environs, pets were not allowed in the premises and entrance to the sanctuary was forbidden to the terminally ill and to pregnant women”3. An Asklepieion resembled a contemporary healthcare facility that offered healing both for the body and the mind similar to today’s holistic approaches. Nowadays alternative medicine, homeopathy or modern spa facilities can offer to the patient a psychosomatic experience dedicated in the liberation of sentiments, in the achievement of individual wishes, in the awakening of mechanisms of thought and creativity as means of essential communication both between people and their environment. The Roman Valetudinarian and military hospitals also agree to this model.

Chinese philosophy embraces a similar equilibrium between a healthy body and mind in association with both nature and landscape. In early ancient times as Ge Lun and Qi Daiwei point out “…people had recognized the interaction between internal and external factors as well as the maintenance of physical and mental health by adjusting the internal factors in various ways”.4 The healing powers of herbs, water and natural landscape were used for therapeutic purposes.

The development of hospital buildings throughout time can reveal much about the human needs and the civilization. Hospitals aren’t just plain buildings, they consist of smaller units, they adapt
on the demands, they are like a living form, like a village, after all “...there are analogies between a city and a hospital”. During medieval times the main hospital model is the monastic one. In the Renaissance hospitals transformed into massive and enclosed buildings, originating from the medieval temples and neoclassical revival of architecture. It was at some point in the 19th century that hospital design was influenced by the work of Florence Nightingale (the Nightingale ward – 1853). She developed hospital design in the United Kingdom by relating the patient’s condition with the environment. As R Glanville highlights “…in her pavilion hospitals she linked control of infection with ventilation systems, sunlight and views...her requirements were a rectilinear pavilion with large windows along each side which could regulate the spacing of beds on the wall sections between the windows”. Architecture in the beginning of the 20th century is characterized by the domination of the Modern Movement. Factors as functionality, human scale, linkage of interior and exterior spaces and the importance of materials became the basic principles in architecture design. “The Modern Movement characterized an era in the planning of the city and the design of its buildings...after the Second World War, a huge research was conducted in order to deeply study health facility planning and design. The results were innovative hospital buildings based on functionality, control of scale, quality of materials and friendlier environment”. Later on, during the 1960s and 1970s hospital design gradually adjusted to the changing quality of life and the medical needs. It was in the 1980s when the environmental psychologist, Roger Ulrich developed the theory of psychologically supportive design. “He identified stress as a major obstacle to healing and advocated that healthcare facilities should be designed to support patients in coping with stress by providing a sense of control of their environment; access to social support and to positive distractions in the physical surroundings”. Nowadays, the technological evolution, the high standards of everyday life and other economical or even ecological matters turn hospital design and its future into a function of multiple variables. The new medical technology has effects on functional and
physical planning. In the future, due to "the continuous diffusion of innovations, the improved imaging technology, the improved diagnostic and surgical methods, the innovative biotechnology and the communication technology" the present role of a hospital and its figure will drastically change. "The future hospital may become the command post from which images are ordered and analyzed". It is an architect’s duty to develop a sustainable model that includes all the factors that surround the patient, family, healthcare practitioner and community; to create a medical caregiving centre as well as a communications centre.

As mentioned before, the environment is a significant parameter in hospital design. The term environment in this case includes all of its interpretations: natural, built, interior and exterior. The natural environment defines the physical context of a facility. Local climate and building orientation specify the main guidelines of the design.

The right position to the sunny side and to the main direction of the wind is of great importance for the patient’s healing process. One of the basic criteria of an effective healing environment is also direct contact with nature.

People experience the built environment in different ways depending on "their social, cultural and economical background but also on their psychology and disposition". The built environment of hospitals could be roughly defined by the scale, the form, the morphology, the complexity, the façades and the materials. An efficient architectural project should offer the harmonious coexistence of the built and the environment. The human scale of a facility suggests a secure and friendly environment when experienced. According to H E Gatemann "architects today, try to make the building look less severe, to construct low buildings with few floors and to ensure a human scale. The idea is an appealing structure of masses as well as an attractive façade". The front view of a building or complex should create a unique visual impact to the viewer. The outcomes of contemporary architectural trends in hospital buildings aren’t the massive buildings of the past that invaded their surroundings. Most of them are elegant and significant structures that come in unique architectural forms, which give a powerful and monumental essence.

At present, there are mainly two types of hospitals according to their morphology, the "village-like" and the "mall-like" ones; which according to literature originate from the ancient Asklepieion and the medieval temple. Both of the models offer many opportunities to the patient but their difference is detected in the scale size (the hospital-village usually consists of smaller scale buildings), the evolvement of the natural element (also found in the hospital-village) and the organized traffic network. As Charles Jencks notices in his book "Architecture 2000 and beyond", "not only has mall-culture invaded the downtown, the skyscraper, the airport and housing but it has also begun to penetrate the hospital".

Nowadays though, the role of the hospital is constantly reappraised and other units outside the hospital complex are developed, hospital design focuses more on high technology services, surgery and acute inpatient care. Under these circumstances one could say that the village like model is applied more often.

The smooth transition from an exterior space to an interior and the opposite is crucial in the design of healthcare facilities because it can affect both patients and visitors. Spatial organization of healthcare facilities relies on the continuity of spaces. Well designed exterior spaces like small parks and other open air spaces are likely to encourage social interactions. A hospital’s park can be considered as a relaxing and amusing place for patients,

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**Figure 6:** Leith community treatment centre, Edinburgh, UK, architect: Designlab (photo: Vavili F)

**Figure 7:** Hospital Maison Blanche, Paris, France, architect: AIR (photo: Vavili F)
as well as a place open to public that can play an essential role. Its purpose is to eliminate or reduce pain and isolation feelings.

Regarding the interior space accessibility, lighting, views, materials, aesthetics and art are vital factors. Easy access and clear signage are fundamental elements in hospital interiors. Legible access and easily approachable routes are of supreme importance for the users. Moreover, light whether natural or artificial can develop the circulation layout. Studies have shown that interior artificial lighting can also address spatial orientation by working along with the transitions of natural light. But light, is also an effective parameter as a powerful regulator of the body and its daily functions. The quality of lighting in hospitals can positively affect the emotional and medical state of a patient; it can also support well being and stimulate recovery.

Zooming in the interior spaces, some details are critical in designing a healing environment. The main entrance of a hospital building is always a prominent space; it is a fact that the first impression of a lobby is decisive for the patient’s feeling of well-being. Moreover, the qualities in a patient’s room should propose tranquility and security. People recovering from illness do not like it. And also must not for psychological reasons be left in a place, a cage, with unsuitable lighting and austere form. “A bedroom should be calm and restful and provide interesting view encouraging the patient to leave his bed... and go back to normal life.”

There are many examples of healthcare facilities that use art in all of its forms (fine arts, music, theatre, etc.), in order to encourage the psychology of patients and positively effect the healing process. Many studies and opinion surveys have proved that visual and performing arts contributed to changes of mood and easing of stress levels. The choice of the artworks, their adequacy and their installation should be a part of the designing process. The appropriate configuration of spaces with artworks would give a better result.

The selection of materials and colours of the interior is always related to the use of the space and the people who will be using it. Architects who design and plan healthcare facilities know that ”healing qualities depend on the choice of materials and colours”. The proper choice can create an effective impact on the patient or the visitor. For example in an obstetric facility, according to C.Gatermann “…it is important that the access area looks friendly and that the entrance hall with its brightness and colours spreads a reassuring atmosphere.” Or in a private clinic, as H Egggen points out “…in contrast to the neutral bed wards with almost no colours for the very sick patients I suggest in the cafeteria... strong colours and materials which encourages patient to think about how it will be at home”. Materials and colours can also enhance the functionality of a space; In the diagnostic and treatment area of the hospital, “…above all medical and hygienic requirements determine the design, the surfaces of the walls, floors and ceilings as well as the equipment.”

Summarizing, the increasing need for health services is a fact. Thus hospital design is a major chapter in current architectural trends. Fortunately, there are examples that have successfully combined functionality, aesthetics and high quality. Architecture nowadays is gradually marking some progress in healthcare facility design as in other public buildings. Each case of a healing environment is unique due to the multiplicity of its users. When it comes to designing a healthcare facility there are many points of view (groups of patients, visitors, staff), various approaches, several parameters and different priorities that need to be carefully examined; it is a challenge that architects have to answer in order to create out of the art health care facilities.

Professor Fani Vavili-Tsinika graduated from the School of Architecture, Aristotle University of Thessaloniki, with a Master of Arts in Health Facility Planning, Metropolitan University of London and a Ph.D. from the School of Architecture A.U.Th. She is practicing and teaching architectural design. Her work includes health care facilities planning & design. Member of: Technical Chamber of Greece, Greek Association of Architects, Greek Red Cross (bronze metal), IHF, UIA Greek Board, UIA-Public Health Group executive member, guplas, until today and also member of the board of trustees for the National Library of Greece, Regional Board for Health Services N Greece etc. She has published many articles, research results and other publications. Among them are two books on relevant subjects: designing for the elderly and designing for mental health.

Krykou Artemis graduated from the American College of Thessaloniki (1999), the department of Renovation and Restoration of Buildings and Complexes at the Technological Institute of Patras (2004) and the School of Architecture in Aristotle University of Thessaloniki (2009). She is a member of Technical Chamber of Greece, of Macedonian Museum of Contemporary Art and of the Alumni Association of Anatolia College.

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COMMENT LES CADRES DIRIGEANTS PEUVENT TIRER LE MEILLEUR PARTI DES EHR DES DISCUSSIONS STRATEGIQUES FAVORISANT UN SUCCES DURABLE
(The C-Suite-EHR Value Link: strategic conversations help ensure lasting success)

Tout hôpital qui en a les moyens peut acquérir un système de dossiers médicaux électroniques (EHR) et le mettre en place. Mais s’assurer de la viabilité de l’intérêt du système – amélioration de la qualité des soins, satisfaction du patient, satisfaction du médecin, satisfaction des employés et même, amélioration des performances financières – exige des discussions bien menées entre les cadres dirigeants.

Les cadres de 4 hôpitaux de différentes tailles qui en sont au stade 6 sur 7 du modèle d’adoption HIMSS Analytics’ EMR (dossiers médicaux électroniques) ont révélé au directeur des services de santé que le secret de leur réussite tient à une multiplicité de facteurs. Mais un seul élément domine tous les autres par son importance: les possibilités, pour tous les cadres dirigeants (PDG, chef des services d’information, directeur des finances et autres membres de l’encadrement) de communiquer à tous les stades du processus d’EHR qui est, soit dit en passant, une démarche qui ne finit jamais.

Il n’existe pas de mode d’emploi point par point sur le genre de discussions que les cadres supérieurs doivent avoir pour tirer le meilleur parti d’un système d’EHR. Chaque hôpital est unique en son genre, et les conversations entre les cadres seniors seront tout aussi distinctes. Mais si tous les niveaux de l’entreprise appuient les décisions des chefs, on peut s’attendre à ce que le système d’EHR porte ses fruits.

LA MONDIALISATION ET SES IMPLICATIONS ETHIQUES POUR LE SYSTEME DE SANTE EGYPTIEN
(Globalization and the ethical implications for the Egyptian healthcare system)

La mondialisation est en train de révolutionner les prestations, le financement et l’accès aux soins médicaux dans le monde entier. La hausse des critères de traitement, basés sur des normes internationales de soins plus élevées et l’offre de services beaucoup plus abordables positionnent les pays du tiers monde parmi les participants viables d’un système de santé plus mondial.

Le système de santé égyptien est en train d’évoluer pour répondre à des attentes plus exigeantes dans le but d’attirer les touristes internationaux aisés. Il importe de bien comprendre cette transformation actuelle de l’Egypte visant à en faire une destination de soins médicaux pour que les décideurs comprennent mieux les préoccupations éthiques résultantes que cette évolution peut imposer à cette population du tiers monde traditionnellement mal desservie.

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Mots clés: Egypte, Ministère de la santé et de la population, mondialisation, tourisme médical, réforme du système de santé

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COMMENT EVALUER LE ROLE DE LA DYNAMIQUE DES PARTIES PRENANTES DANS LES PROCESSUS D’ADOPTION REPONissant SUR L’INNOVATION
(A method to evaluate the role of stakeholder dynamics in IT based innovation adoption)

L’Introduction des nouvelles technologies de l’information dans les entreprises semble avoir en pratique des résultats mitigés. La réussite de l’adoption d’innovations dépend des engagements des utilisateurs et de l’absorption de l’innovation dans les processus de travail. C’est pourquoi il y a beaucoup à gagner à observer le rôle des différents acteurs ou parties prises lorsqu’il s’agit d’adopter des innovations.

Dans cet article, nous présentons une méthode d’évaluation de la dynamique des acteurs pendant le parcours d’innovation basé sur l’informatique à l’aide d’indices d’adoption d’innovation. Cette méthode couvre deux éléments d’innovation de cette dynamique: (a) d’une part, la nature changeante de la proéminence des acteurs et la nature changeante de leur implication, et (b) d’autre part, la nature changeante des interactions acteurs-innovation au cours du processus d’adoption. On peut argumenter que la capacité et les intentions d’un acteur déterminent ensemble sa participation et influencent l’adoption de l’innovation, donc les membres de l’équipe de décideurs. Pour mieux démontrer l’ergonomie informatique de la méthode décrite, nous proposons de faire appel à des activités structurées de mise en œuvre et d’observer leurs effets à diverses phases du parcours d’innovation sur l’équipe de décideurs par le truchement de l’analyse des acteurs.

DES AMELIORATIONS SUR L’ENSEMBLE DU SYSTEME PEUVENT ETRE FINANCIEREMENT BENEFIQUES
(Quality, cost efficiency, the new quality-cost imperative: systemwide improvements can yield financial gains)

D’après Stephen R. Mayfield, DHA, senior vice président de l’amélioration de la qualité et des performances de l’American Hospital Association, le besoin de se concentrer sur la gestion des coûts a largement remplacé au niveau interne le modèle de croissance des revenus des deux dernières décennies et au niveau extérieur, la recherche d’opportunités pour une expansion
de marchés et de services. Des contraintes financières externes émanant de forces essentiellement incontrôlables—l’intégration éventuelle des remboursements de Medicare aux hôpitaux et le non paiement pour réhospitalisation et effets adverses, pour n’en citer que quelques-uns— ont obligé les entreprises de santé à consacrer davantage de temps à essayer d’affiner de l’intérieur leurs capacités existantes. Il en résulte que l’amélioration de la qualité évolue vers une stratégie de stabilisation fiscale et devient en soi une priorité cruciale. "Les revenus sont érodés par des forces extérieures," explique Mayfield. "Il est impératif que nous réussissions à gérer nos coûts internes, dont beaucoup sont imputables à l’inefficacité et à la nécessité de refaire. De ce fait, les dirigeants des services de santé doivent absorber rapidement les outils et techniques qui contribuent à l’efficacité dans ce domaine." Healthcare Executive a discuté avec divers cadres supérieurs de santé pour apprendre comment ils combinent la qualité, l’efficacité et la gestion des coûts quand les temps sont difficiles pour améliorer les résultats, offrir de meilleurs services aux clients tout en restant financièrement solides.

SPECIAL FEATURE ON ARCHITECTURE (3 articles)

CONCEPTION BASEE SUR LES PREUVES
(Evidence-based design)

Une brève réflexion sur le principe de la conception basée sur preuves a conduit l’auteur à préparer et à coordonner une enquête topique. L’enquête est centrée sur les préférences des patients concernant les caractéristiques de la chambre d’hôpital, à savoir le nombre de lits par salle. Les résultats sont intéressants car ils montrent que l’environnement du bâtiment hospitalier a un impact différent sur les personnes hospitalisées en comparaison avec les gens qui sont des patients potentiels.

NOUVELLE vision DE L’ARCHITECTURE HOSPITALIERE
reflexions ACTUELLES D’APRES 7 projets

(A new vision for hospital design – current reflections via seven projects)

De la Bretagne à la Chine, de l’Espagne à l’Afrique – un concept unique, sept sites et bien plus en gestation. Ce concept ne porte pas seulement sur l’assemblage de milliers de pièces, le besoin de proximité et les contraintes médicales, c’est l’architecture qui définit la qualité spatiale, le sens du projet. L’identité se renouvelle chaque fois.

En matière de conception hospitalière, et au sens où nous l’entendons, l’art architectural prend sa vraie valeur utilitaire et l’architecte son vrai rôle au service de la société.

APERCU SUR LES ENVIRONNEMENTS DE GUERISON

(An overview of healing environments)

Le stress constitue un obstacle majeur au processus de guérison, et il est en partie lié à la qualité de l’environnement. Il existe dans le temps de nombreux exemples d’environnements de guérison qui peuvent confirmer le besoin humain fondamental de guérison ou d’établissements thérapeutiques. Depuis l’ére moderne de l’architecture, la conception des hôpitaux a changé et s’est adaptée aux besoins changeants. Aujourd’hui, elle est considérée comme une fonction aux variables multiples. Il est du devoir de l’architecte de créer un environnement (et ici, ce terme comprend toutes ses interprétations : naturel, bâti, intérieur et extérieur) qui offrira la sécurité et affectera positivement la guérison du patient.

32 World Hospitals and Health Services Vol. 46 No. 2
World Hospitals and Health Services 2009 Volume 46 Number 2

Resumen en Español

EL VÍNCULO ENTRE LOS MIEMBROS DE LA SUITE C Y LAS HISTORIAS CLÍNICAS ELECTRONICAS (HCE) LAS CONVERSACIONES ESTRATEGICAS AYUDAN A GARANTIZAR UN ÉXITO DURADERO
(The C-Suite-EHR Value Link: strategic conversations help ensure lasting success)

Cualquier hospital con los recursos necesarios está en situación de adquirir una historia clínica electrónica (HCE) y ponerla en servicio. No obstante, con el fin de garantizar que su utilidad – mejor calidad de los cuidados asistenciales, satisfacción del paciente, satisfacción de los médicos, satisfacción del personal y una mejora de los resultados financieros – es sostenible, es necesario que los dirigentes de la Suite C mantengan conversaciones eficaces.

Un grupo de gerentes de cuatro hospitales de diferente tamaño y que se encuentran en la fase 6 (de 7) del Modelo Analítico HIMSS de HCE, declaró a las Autoridades Sanitarias que el secreto de su éxito estriba en numerosos factores, aunque uno de estos elementos supiera a todos los demás en importancia: la habilidad del director general, el jefe de información, el jefe de asuntos financieros y demás miembros de la Suite C a la hora de comunicarse en todas y cada una de las etapas del proceso de la historia clínica electrónica, tarea que, a decir verdad, no tiene fin.

No hay unas instrucciones paso a paso sobre la clase de conversaciones que los miembros de la Suite C deben mantener con el fin de obtener los mejores resultados de una HCE. Cada hospital es único, por lo que las conversaciones de los gerentes serán igualmente diversas. No obstante, si todos los niveles de la organización apoyan las decisiones adoptadas por la Suite C, cabe esperar que los HCE tengan un resultado positivo.

LA GLOBALIZACION Y LAS REPERCUSSIONES ETICAS PARA EL SISTEMA DE ATENCION DE LA SALUD DE EGIPTO
(Globalization and the ethical implications for the Egyptian healthcare system)

La globalización está transformando la prestación, la financiación y el acceso de la atención de la salud de todo el mundo de una manera extraordinaria. La mejora en el nivel del tratamiento, en base a unas normas internacionales más elevadas de los cuidados de la salud y la oferta de unos servicios más permisibles, está haciendo que los países del tercer mundo se posicionen como participantes viables en un sistema de atención de la salud más internacional. El sistema de salud de Egipto está evolucionando con el fin de hacer frente a estas nuevas expectativas en un esfuerzo por atraer turistas internacionales más adinerados. Es importante que se reconozca la evolución de Egipto y su transformación en un destino con fines médicos de manera que los responsables de la política sean capaces de comprender las nuevas preocupaciones éticas que esta evolución puede imponer sobre esta población tercermundista y tradicionalmente subadquirida.

Palabras clave: Egipto, Ministerio de Salud y Población, Globalización, Turismo médico, Reformas sanitarias

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UN METODO DESTINADO A EVALUAR EL PAPEL DE LA DINAMICA DE LOS INTERESADOS EN LOS PROCESOS DE ADOPCION DE LA INNOVACION BASADOS EN LA TECNOLOGIA INFORMATICA
(A method to evaluate the role of stakeholder dynamics in IT based innovation adoption)

La introducción de nuevas tecnologías informáticas en las organizaciones parece tener unos resultados muy variados en la práctica. El éxito de la adopción de métodos de innovación depende del compromiso por parte del usuario y de la absorción de la innovación en los procesos laborales. Por lo tanto, los beneficios pueden ser muy elevados si se reconoce el papel que desempeñan los interesados en la adopción de la innovación.

En este artículo se ofrece un método de evaluación de la dinámica del interesado durante el proceso de adopción de la innovación basado en la tecnología informática. El método comprende dos elementos de evaluación de dicha dinámica; (a) la naturaleza cambiante de la prominencia de los interesados y la evolución y la implicación en el desempeño de los interesados por un lado, y (b) la naturaleza cambiante de la interacción de los interesados y la innovación durante los procesos de adopción por el otro. Se dice que la capacidad y las intenciones de los interesados determinan su implicación e influencia sobre la adopción de la innovación y por tanto la adopción de decisiones de la participación unitaria. Con el fin de mejorar la utilidad de este método, se propone el uso de una aplicación estructurada de actividades y su efecto durante las distintas fases del proceso de innovación sobre el órgano de la toma de decisiones mediante un análisis de los interesados.

LAS MEJORAS GENERALES DEL SISTEMA PUEDEN RENDIR BENEFICIOS ECONOMICOS
(Quality, cost efficiency: the new quality-cost imperative: systemwide improvement can yield financial gains)

La necesidad de concentrarse en la gestión de costos a nivel
internamente ha sustituido en gran parte al modelo de crecimiento de ingresos de los últimos veinte años y a la búsqueda exterior de oportunidades para la expansión de los negocios y servicios, según Stephen R. Mayfield, DHA, Director General Adjunto del departamento para la mejora de la calidad y el rendimiento de la Asociación Americana de Hospitales. Más allá de las dificultades económicas derivadas de factores principalmente incontrolables – el posible errodeo de los reembolsos de Medicare a los hospitales y el incumplimiento en los pagos por las readmisiones y otros hechos adversos, para mencionar solo algunos – han obligado a las organizaciones sanitarias a dedicar más tiempo mirando hacia dentro con el fin de armonizar sus posibilidades actuales. En consecuencia, la mejora de la calidad se está convirtiendo en una estrategia para la estabilidad financiera, además de representar una prioridad crucial por sí misma. “Los ingresos están sufriendo una desaceleración debido a factores externos”, ha dicho Mayfield. “Es imprescindible que controlemos los gastos internos que se deben en gran parte a la ineficiencia y los rechos. Como consecuencia, la dirección sanitaria se está viendo obligada a absorber rápidamente todas las herramientas y técnicas que contribuyen a la eficacia en esta esfera”. Healthcare Executive realizó un estudio multisectorial entre dirigentes sanitarios con el fin de averiguar la manera en la que están abordando temas tales como la calidad, la eficiencia y la gestión de costos en estos tiempos tan difíciles, con miras a mejorar los resultados, mejorar los cuidados de los pacientes y seguir manteniendo una situación financiera sólida.

INFORMACIÓN GENERAL SOBRE ENTORNOS CURATIVOS

(An overview of healing environments)

El estrés es uno de los principales obstáculos para el proceso de curación y en cierto modo está relacionado con la calidad del entorno. A lo largo de los tiempos hay muchos ejemplos de entornos curativos que pueden confirmar la necesidad primitiva del género humano de unos recursos curativos o terapéuticos. Desde el Movimiento Moderno de la arquitectura, el diseño hospitalario ha evolucionado para ajustarse a las nuevas exigencias. Hoy en día, se considera que se trata de una función del término entorno comprende todas las interpretaciones: natural, edificio, interior y exterior) que represente seguridad e influye de manera positiva para la recuperación del paciente.
Dates for your diary

2010
26-30 July
MDR-TB Training Seminar for Hospital Managers
Rio de Janeiro, Brazil
sheila@ihf-fih.org

2011
37th IHF World Hospital Congress*
Dubai, United Arab Emirates
info@ihf-fih.org

IHF NATIONAL HOSPITAL ASSOCIATION MEMBERS EVENTS DIARY:
2010
Argentina
21 October – Cámara Argentina de Empresas de Salud (CAES)
International Annual Congress
Health, Crisis and Reform: Equity and Social Exclusion, Hotel Sheraton Libertador, Buenos Aires – Argentina, 20 October – Latin American Hospital Federation, Experts meeting: Latin America and Ibero American Countries, Fundación Docencia e Investigación para la Salud, Buenos Aires – Argentina
Tel: + 54 11 4373 2375 / +54 11 4372 5915
larrocan@caes.org.ar / grondonam@caes.org.ar / linarescarlos@yahoo.com.ar

Australia
22-24 September
Australian Healthcare and Hospitals Association
2010 Congress
Adelaide, South Australia
ahha2010@sapmea.asn.au

Peru
2–5 November
6th Latin American Congress of Health Service Administrators
(VI Congreso Latinoamericano de Administradores de Salud)
Guadalajara, Mexico
congresocimt2010@fepas.org.pe
www.6TO.CLAS.COM

2011
Switzerland
November – H+ Les Hôpitaux de Suisse
National Association congress
Bern, Switzerland
Tel: +41 (0) 31 335 11 33
reinhard.voegelin@hplus.ch

COLLABORATIVE EVENTS:
2010
19 & 20 August
Hospital Management Asia 2010
Seoul, Korea
www.hospitalmanagementasia.com

28-29 September
Joint ICN/IHF/WMA MDR-TB Training Seminar – Francophone Africa
Health Care Worker Safety in the Context of Drug-resistant TB in Low and Middle Income Countries
Cotonou, Republic of Benin
sheila@ihf-fih.org

Events marked* are interpreted into English, French and Spanish. All other events will be in English/host country language only. IHF members will automatically receive brochures and registration forms on all the above events approximately 6 months before the start date. IHF members will be entitled to a discount on IHF Congresses, pan-regional conferences and field study courses.

For further details contact the:
International Hospital Federation, Immeuble JB Say, 13 Chemin du Levant, 01210 Ferney Voltaire, France; E-Mail: info@ihf-fih.org
Or visit the IHF website: http://www.ihf-fih.org
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- Access to IHF policy and advocacy communications
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Corporate Partnership Package
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