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

Editorial

Health care innovation in the Asian Tigers and their Cubs
Process reengineering of preoperative verification, site marking and time-out for patient safety

A census study exploring the training need of nurses working in Kwong Wah Hospital and Wong Tai Sin Hospital in Hong Kong, China

Increasing productivity by reducing average lengths of stay (ALOS) in Apollo Gleneagles Hospitals, Kolkata, India

The Antimicrobial Stewardship Programme: Where have we been...Where are we going?

Voice of the Customer – A roadmap for service improvement

A study of patient satisfaction at a tertiary care hospital in Hyderabad, India

The tele-interpreter service at the Bangkok Hospital Medical Center, Thailand

Opinion matters
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Contents volume 49 number 2

03 Editorial
Eric de Roodenbeke and Alexander S Preker

Health care innovation in the Asian Tigers and their Cubs

04 Process reengineering of preoperative verification, site marking and time-out for patient safety
Jacqueline Cristy Diaz Dayuta, Lay Teng Ong, Nguk Lan Pang, Soon Noi Chia, Henry Kun Kiang Tan, Joseph Manuel Gomez and Kok Hian Tan

10 A census study exploring the training needs of nurses working in Kwong Wah Hospital and Wong Tai Sin Hospital in Hong Kong, China
Yuk-wah Lai

16 Increasing productivity by reducing average length of stay (ALOS) in Apollo Gleneagles Hospitals, Kolkata, India
Sujoy Kar and Rupali Basu

18 The Antimicrobial Stewardship Programme: Where have we been… Where are we going?
Joseph Kay-Yan Tsang, Owen Tak-Yin Tsang, Rosa Yao and Selma Lai

22 Voice of the Customer – A roadmap for service improvement
Ravinder S Uberoi, Yogamaya Nayak, Pritindira Sachdeva and Anupam Sibal

26 A study of patient satisfaction at a tertiary care hospital in Hyderabad, India
Syed Murtaza Hussain Bakshi

30 The tele-interpreter service at the Bangkok Hospital Medical Center, Thailand
Boonthida Jaroensawat and Som sak Wankijcharoen

Opinion matters

33 Financing health care in the United Arab Emirates
Nabilah Fahed Taha, Amer Ahmad Sharif and Iain Blair

Reference

40 Language abstracts

45 IHF corporate partners

47 IHF events calendar

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If it’s really serious. **We do it.**
The “Asian Tigers” or “Asian Dragons” is a term used to describe the highly developed economies of Taiwan, South Korea, Singapore and Hong Kong. The “Tiger Cub” economies are so named because they follow the same export-driven model of economic development. Together with China, these countries are notable for maintaining exceptionally high growth rates (in excess of 7% a year) and rapid industrialization between the early 1960s and 1990s.

Today, these and other countries in South East Asia are notable not just for their economic achievements but also for an associated “Asian Miracle” in health care. Several have already achieved universal coverage. China, Hong Kong and Singapore are not only among the world’s leading financial centres but they are also the home of innovation in pharmaceutical production, medical technology and health care information systems. China and other countries have become major exporters of pharmaceuticals and technology as well as know how on hospital construction and management.

In this issue of World Hospitals and Health Services (WHHS) we feature several articles that showcase some of the innovative developments in health care in South East Asia. The diversity of subjects reflects the current dynamism of health care. This selection of articles is just a sample of the many initiatives that are presented annually during Hospital Management Asia conference. (http://hospitalmanagementasia.com/)

In “Process reengineering of preoperative verification”, the authors Dayuta et al. describe innovations in managing a major operating theatre (MOT) in Singapore. The authors describe the implementation of WHO’s “High 5s Project Correct Site Surgery Standard (CSS) protocol.”

In “A census study exploring the training need of nurses,” the author Yuk-Wah Lai describes a survey technique used to develop a new training programme for nurses in Hong Kong. The programme focuses on real development needs, and promotes active staff engagement in the process of designing and delivering training.

In “Increasing productivity by reduction of average length of stay” the authors Kar and Basu describe new clinical care procedures for reducing length of stay in the Apollo Hospitals Group in India.

In the article “Antimicrobial Stewardship Programme,” the authors Tsang et al. describe a programme used to address the misuse or overuse of antibiotics at the Princess Margaret Hospital in Hong Kong.

“Voice of the Customer,” by Ravinder Ubersi and others looks how a Voice of the Customer (VOC) Survey (patient satisfaction survey) can be used to improve care and patient satisfaction in India.

In “A study of patient satisfaction,” the author Murtaza Badohi from India describe how hospitals and health care providers are increasingly shifting from viewing patients as uneducated, having little health care choice, to educated consumers with many service demands and health care choices available to them.

The best way to provide a translation service is considered by Boonthida Jaroenasawat and Somsak Wankijcharoen and shows how the Bangkok Hospital Medical Center is coping with Thailand’s reputation as one of the best known international medical centres in South East Asia. Their innovative use of advanced translation services has helped the hospital provide high quality services to a large patient population that is not English speaking.

Finally, under the opinion matters of this issue of World Hospitals and Health Services, in “Financing health care in the United Arab Emirates,” the authors Taha et al. describe how the Emirates have become one of the highest performing regions in the world in terms of life expectancy, child mortality and broad-based access to care. The issue provides a fascinating example of how lessons learned from technological advances and improved business processes in other areas of the economies of the Asian Tigers and its Cubs can be successfully applied to achieving better access to quality health care in the health sector.

Any one who would like to learn more about these innovations and others should visit the service improvement knowledge base (http://www.hospitalmanagementasia.com/knowledgebase/).

This year, the International Hospital Federation will partner again with Hospital Management Asia; a relationship it has kept up since the launch of this annual event 12 years ago. We certainly hope to see you in Bangkok Thailand on 13-14 September 2013.
ABSTRACT: In this article, we describe our hospital’s journey in implementing the WHO High 5s Project Correct Site Surgery Standard (CSS) protocol. We discuss how we incorporated the protocol into our system by revising the pre-existing checklist, reengineering the existing processes on preoperative verification, site marking and time-out at the Major Operating Theatre (MOT), and performing audit and feedback to ensure effective compliance. We also reflect on the importance of leadership and ministry support, benchmarking and tailoring the practice for each discipline in the pursuit of improving patient safety within the hospital.

The incidents of wrong-site surgery are potentially grave and severe and should never occur. These are procedures performed on the opposite side, incorrect site, or incorrect level of the body; or performed on the wrong patient; or the wrong procedure (Seiden and Barach 2006). Early studies showed that the most common cause of wrong-site surgery is lack of critical preventive measures during preoperative period and recent root-cause analyses revealed that measures are reflected in the policy but performed inconsistently (WHO 2011). Multiple independent checks of critical information are the key to prevent wrong-site surgery (Clarke et al. 2008).

The High 5s Project was established by World Health Organization (WHO) in 2007. It is an international collaboration carried out in seven countries: Australia, Germany, France, The Netherlands, Singapore, Trinidad & Tobago and the United States of America. Canada and the United Kingdom contributed to the development of the High 5s Project but no longer participate in the Project. Lead Technical Agencies in each participating country coordinated the national activities of the project. Its global activities are coordinated by the WHO Collaborating Centre on Patient Safety, The Joint Commission. The High 5s Project has been designed to explore the impact of standardization in health care. The Mission of the High 5s Project is to facilitate implementation and evaluation of standardized patient safety solutions within a global learning community to achieve measurable, significant and sustainable reductions in high risk patient safety problems.

One of its protocols is Correct Site Surgery (CSS) emphasizing consistent and effective implementation of steps in preoperative preparation for surgical patients, namely, preoperative verification, site marking and time-out. In May 2009, Singapore became one of the participating countries implementing this protocol. The Ministry of Health (MOH) set up a local High 5s network consisting of all the participating hospitals and funded each institution with an executive who would be in-charge of project coordination and auditing (Soh et al. 2012). In December 2009, KK Women’s and Children’s Hospital (KKH) embarked on the protocol concurring that while local incidents are rare, the fact that these medical errors are avoidable makes their prevention a priority (Garnerin 2007). It endeavours not only to prevent such cases but also ensure that patient safety practice is strengthened with effective compliance of these three elements. The project was implemented in the Major Operating Theatre (MOT) leading to comprehensive reengineering of the existing processes. Monthly retrospective documentation and real-time observational audits were conducted for continuous monitoring.

Objective
Our objective was to reengineer processes on preoperative verification, site marking and time-out for cases carried out at MOT and to ensure effective compliance.

Methodology
Pre-implementation Phase
KKH formed a High 5s team including surgeons, clinicians, nurses,
Involving all surgeons, anesthetists, nurses and administrators producing materials for promotion and reinforcement of the sustaining evaluation by regular audits and providing feedback.

There was left undocumented. There was also a vast usage of special equipment and implants, although being done routinely, incomplete details on all three steps. Checking for availability of orthopaedic equipment was considered a cultural change that took time to be accepted and educate the staff about the protocol became apparent. This was not read the details aloud. Some surgeons were marking the extremities with "X", a common practice and largely depended on each surgeon's preference. Some surgeons were marking the extremities with "X",技术上或解剖上不可能或不切实际标记的部位；

Exemptions
- Premature infants, for whom the mark may cause a permanent tattoo;
- Technically or anatomically impossible or impractical to mark the site (perineum, premature infants);
- Life-threatening emergencies;
- Note: Any discrepancy must be reconciled before Time Out and must be documented.

Final time-out
- Conducted in the location where the procedure will be done.
- Patient properly positioned, just before starting the procedure.
- Must involve the entire operative team, using Active Communication.
- Other activities are suspended to the extent possible without compromising patient's safety.

Time Out must include:
- Correct patient identity;
- Correct side and site;
- Procedure to be done;
- Correct patient position;
- Availability of correct implants and any special equipments.
- Conducted in a "fail-safe" mode;
- Procedure is not started until any discrepancies, questions or concerns are resolved.
- For two or more different procedures done by different teams, Time Out MUST be done for each procedure.
- Must be properly and completely documented on the peri-operative checklist.

A pre-implementation blinded observational assessment was conducted at MOT from September to October 2010 to evaluate the baseline compliance. KKH provides surgical services for both women and children; thus the auditor observed cases from both services including elective and emergency cases performed during office hours.

Pre-implementation assessment findings
Based on the protocol (Figure 1), the existing checklist had incomplete details on special equipment and implants, although being done routinely, was left undocumented. There was also a vast usage of abbreviations on the MOT listing.

In the UK, a study reported that site marking practices varied according to specialty. Surgeons were divided on the value of marking and varied in their practices (Giles et al 2006). Similar findings were noted at our institution. Site marking was not a common practice and largely depended on each surgeon's preference. Some surgeons were marking the extremities with "X", circle or arrow. For eye cases, an adhesive tape was being attached above the involved eye.

In conducting time-out, the scrub nurse would initiate the process and the anesthetist would read out the details. However, there was neither standard practice nor consistency. Some anesthetists recite the patient's name, identification number and the nature of procedure, while others omit the identification number. The surgical team had no interactive involvement as other members were not paying attention and some anesthetists would not read the details aloud.

With these findings, the necessity to improve overall compliance and educate the staff about the protocol became apparent. This was considered a cultural change that took time to be accepted by many.

Process redesign and pilot test
The High 5s team approached relevant departments for process redesign and documentation enhancement. The existing checklist underwent a few revisions to meet the protocol's requirements. This was to ensure that vital details were incorporated instead of developing another form. The revised checklist included
information on availability of implants, special equipment and images. The staff made modifications to the operating list to avoid using abbreviations. The nature of operation field in the Surginet system was extended to have the acronyms or abbreviations spelled out. The case listings were also modified to reflect the extended field length.

The policy for site marking was modified such that the site should be marked by the primary surgeon or assisting doctor who will participate in the procedure before the patient is brought to the operating theatre. The practice was standardized by making use of an arrow symbol pointing towards the intended site using a permanent marker. Documentation was also improved.

The time-out process was redesigned to achieve a more interactive communication and the policy was also amended. The revised process involved the anesthetist reading out the elements and designated member verifying and acknowledging accordingly. A time-out pictorial script was created by the MOT nursing leaders to serve as a guide. Availability of implants, images and special equipment and correct patient position were...
time-out process redesign (Figure 2); site marking updates through hospital-wide forum.

A study suggested that full compliance could be accomplished if the elements of the policies and procedures become deeply ingrained as the norm and expected behaviour of each staff member (Mallett et al 2012). Full implementation of the protocol commenced from January 2011. The period until April 2011 was considered a transition phase allowing the staff to adjust to the changes and initiatives introduced including:

- time-out process redesign (Figure 2);
- training of the staff on the redesigned processes of site marking reminder signage (Figure 3) & time-out pictorial script (Figure 4);
- reinforcement of protocol through senior management via emails and presentations during medical board meetings and regular updates;
- focused group sessions to gather feedback and identify issues that need review;
- video demonstration of proper time-out;
- site marking updates through hospital-wide forum.

Results
Audit and feedbacks
Retrospective documentation audits (Figure 5) were done monthly. From January 2011 to date, approximately 14,000 cases have been audited with all specialties represented. From January to August 2011, a total population of about 1,000 per month was included in the audit. From September 2011 onwards, the audit size was reduced to a sample of 360 around a third of the total number of cases monthly. In selecting the samples, all cases carried out at MOT were first extracted from the KKH Systems Application Programming (SAP), followed by random selection from each specialty. Then, the checklists of the selected cases were retrieved from the common drive and audited. The auditor provided feedback, analysis of results, and recommendations to the stakeholders and the High 5s team. The data were then submitted to MOH for validation and keyed into the WHO High 5s Website.

Starting in March 2011, real-time observation audits (Figure 6) were conducted where the auditor observed to ensure that preoperative verification, site marking and time-out were done correctly. She observed 20 cases per month by randomly following one patient at a time from the reception area through the induction room and into the operating room. She provided coaching to the nurses if gaps were identified and briefly discussed the findings with the nurse managers. This aimed to address any discrepancies noted during the process.

Compliance rates
During pre-implementation, the rate for complete preoperative verification (Figure 6) was 0% as the checklist was incomplete, lacking information on availability of implants and special equipment. After integration of these details on the checklist during the pilot test, it improved to 92%. This increased further to 97% from January 2011 and 98% thereafter. The 2% non-compliance was mostly due to improper or incomplete ticking of the checklist.

The compliance rate for site marking (Figure 7) gradually increased from 40% to about 60% during transition phase from January to April 2011 as resistance to change was encountered. There was a great deal of struggle with spine cases and
surgeons whose cases had discrepancies on site markings.

introduced. The auditor provided feedback emails to primary

were initially unfamiliar with the protocol.

November 2011, attributed to new doctors joining the service who

a decrease in the number of cases that needed site marking and in

November 2011, January and April 2012 which were attributed to

openly and generally was not to be marked, and the surgeon would indicate “to keep in view”

or through midline laparotomy) before proceeding to the

therapeutic part of the procedure, site marking is of less use and

may be misleading as well (if the examined diseased site turned out
to be of different laterality from the marked site of the less accurate

preoperatively ultrasound imaging). With this, the hospital had a
deliberation and sought the view of the College of Obstetricians
and Gynecologists (O&G), Singapore. Subsequently, the hospital
and the High 5s team arrived at a consensus that once the
surgeon indicated definite laterality on the consent form, the site
should not be marked, and the surgeon would indicate “to keep in view”
(KIV) on the consent form.

This was implemented and the rate increased to 80% starting in
May 2011. There was an increasing trend except for the dips in
September 2011, January and April 2012 which were attributed to
a decrease in the number of cases that needed site marking and in
November 2011, attributed to new doctors joining the service who
were initially unfamiliar with the protocol.

During the second quarter of 2012, approximately over a year
after the protocol had been fully implemented, more initiatives were
introduced. The auditor provided feedback emails to primary
surgeons whose cases had discrepancies on site markings.

Detailed breakdown of data was presented to the
surgical heads and shared with MOT nursing leaders to
communicate compliance to protocol in each area. Surgical heads took it upon themselves to make
improvements in their own services. Nursing leaders
took a strong stand and empowered the nurses to
prevent patients without proper site marking from entering the operating room. For such cases, site
marking signage will be displayed on patient’s casenote
and surgeons will be contacted to mark the site before
patient is brought in. A positive effect was achieved
reaching an average of 91% over the last half of 2012,
with latest rate of 97% in December.

The time-out redesign (Figure 8) attained open
communication among the surgical team members. The anesthetist would read out each detail and
the corresponding member would acknowledge
accordingly. Documentation was also revised to make it
more complete and user-friendly. The compliance rate
increased from 92% during the pilot test to about 98–
99% after the implementation of new initiatives.

Lessons learnt

Studies have stated that no protocol will prevent all
wrong-site surgery cases (Rogers et al 2004) and there
is no simple answer to the dilemma of its occurrence,
but the resilience already present in the system can be
enhanced (Kwaan et al 2006). In doing this, barriers
such as resistance to change, difficulty getting buy-in
and full leadership support, may be encountered initially.

Another study suggested that it is unlikely that surgeons would be
persuaded to change their practice without central authority – one
urologist explained that what had prompted the change in his
practice is that the recommendations came through the hospital
and full leadership support at first, but as data analyses and improvements were
presented at the management meetings, the senior management
gave full support and reinforced the protocol instantaneously. It is
also essential to tailor the practice for each discipline in consultation
with relevant staff as different specialties have different practices.

Conclusion

In redesigning processes, audit and feedback with benchmarking
provide motivation and help to get staff to buy-in. The MOH’s
initiative of funding each institution with an executive and facilitating
platforms for sharing of experiences among institutions
implementing the protocol help determine areas for improvement
and sustain the practice. Cooperative culture, consistent
reinforcement, tailoring to specific practices, and teamwork are
keys to success.

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Seider, Samuel C and Baschi, Paul. 2006. “Wrong-Site/Wrong-Site, Wrong Procedures, and Wrong/Patient Adverse Events: Are They Preventable?” Arch Surg (141) 501-509
The movement of experienced nursing personnel away from public hospitals has created a great impact on the workload and morale of nursing staff, as well as the provision of services for patients. In response to this change, initiatives focusing on strengthening the proficiency of new graduates and retaining the current frontline staff by enhancing manpower strength, expanding training and development chances, boosting career progression opportunities and improving the quality of work life were rolled out in a corporate approach.

To support professional developmental needs and promote staff engagement, the needs of frontline nursing staff were considered a very top priority. TNA is well-acknowledged as an important step in training and development (Salas and Cannon-Bowers 2001) to determine who and what should be trained, and how the training should be delivered. Pennington (2011) identified that TNA can help create a positive learning environment and promote effective leadership in education.

To achieve the aim, a research study was designed with two objectives:

a. To explore the training needs of the nursing staff (i) from the frontline staff perspective and (ii) from the management perspective; and,

b. To provide information for the coordination of appropriate training initiatives and tailor mechanism for supporting nursing staff in their clinical duties.

The study

Questionnaires were sent via internal mail to targeted participants.

Returns were received from 645 (64%) frontline nurses, 168 (70%) nursing supervisors and 8 (62%) nurse managers. Among these, 626, 164 and 8 questionnaires from the above groups respectively were valid for the purposes of the survey.

Training need for ENs

Obvious disagreement exists in the perceived training needs on common pharmacology; a high percentage of nurse managers thought that such training is needed as compared with frontline supervisors and self-perception from ENs. In contrast, more ENs expressed their training needs on Chinese medicine nursing whereas less frontline supervisors and nurse managers perceived this as required. Training on assessment and care of respiratory systems and cardiovascular systems were of comparable percentage of choice amongst the three groups. Moderate disagreement is noted in other items.

Table 1: Training needs for clinical competence of ENs as perceived by nurses of different ranks

<table>
<thead>
<tr>
<th>Training Need</th>
<th>ENs (%)</th>
<th>Supervisors (%)</th>
<th>Managers (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment and care of respiratory system</td>
<td>75%</td>
<td>63%</td>
<td>41%</td>
</tr>
<tr>
<td>Assessment and care of cardiovascular system</td>
<td>70%</td>
<td>50%</td>
<td>41%</td>
</tr>
<tr>
<td>Assessment and management for decrease level of consciousness</td>
<td>65%</td>
<td>60%</td>
<td>65%</td>
</tr>
<tr>
<td>Intravenous therapy – fluid and electrolyte management</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Laboratory findings interpretation</td>
<td>41%</td>
<td>38%</td>
<td>38%</td>
</tr>
<tr>
<td>Common pharmacology</td>
<td>50%</td>
<td>46%</td>
<td>44%</td>
</tr>
<tr>
<td>Inter and Intra-hospital transport of clinically unstable patients</td>
<td>27%</td>
<td>27%</td>
<td>27%</td>
</tr>
<tr>
<td>Chinese medicine nursing</td>
<td>50%</td>
<td>41%</td>
<td>6%</td>
</tr>
<tr>
<td>Others</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>
For non-clinical topics, communication skills, complaint handling and managing stress are the top three choices amongst the three groups with slight to moderate variations. Obvious variations in the percentage of choice were noted in the leadership for change and innovation, presentation skills and reflection skills.

Training need for RMs
Generally, the self-perceived training needs of RMs is far more extensive as compared with that of frontline supervisors and nurse managers. Obvious disagreement exists in choice of most clinical topics. Laboratory findings interpretation and Chinese medicine nursing are the highest percentage (67%) of choice amongst the self-perceived training needs, follow by assessment and care of major body systems (50%) and common pharmacology (50%).

For non-clinical topics, marked discrepancy appears in the training needs of critical thinking skills, communication skills and reflection skills. Slight to moderate discrepancy appears in complaint handling. Leadership for change and innovation and presentation skills are both at a lower weight of choice in all three groups.

Training needs for RNs and RNM
Registered Nurse (RN) and Registered Nurse Midwife (RNM), who is an RN who has completed midwifery training and licensed to practice both as general registered nurse and a midwife under Hong Kong legislation, composed the major part of nursing resource in the hospital. Most RNMs work in the Department of Obstetrics and Gynaecology or the Accident and Emergency Department, applying their specialty knowledge to take care of patients who need midwifery care. Some RNMs are serving in other clinical units as a general RN. However, both groups bear common core competency as RNs. In this study, returns from 465 RNs and 89 RNMs were obtained and matched well the general profile of frontline nurses.

### Table 2: Training needs for non-clinical competence of RNs as perceived by nurses of different ranks

<table>
<thead>
<tr>
<th>Topic</th>
<th>Managers</th>
<th>Supervisors</th>
<th>RNs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership for change and innovation</td>
<td>15%</td>
<td>14%</td>
<td>16%</td>
</tr>
<tr>
<td>Communication skills</td>
<td>30%</td>
<td>34%</td>
<td>32%</td>
</tr>
<tr>
<td>Assessment skills</td>
<td>40%</td>
<td>40%</td>
<td>38%</td>
</tr>
<tr>
<td>Laboratory findings interpretation</td>
<td>50%</td>
<td>45%</td>
<td>52%</td>
</tr>
<tr>
<td>Chinese medicine nursing</td>
<td>50%</td>
<td>52%</td>
<td>50%</td>
</tr>
<tr>
<td>Others</td>
<td>6%</td>
<td>6%</td>
<td>8%</td>
</tr>
</tbody>
</table>

### Table 3: Training needs for clinical competence of RMs as perceived by nurses of different ranks

<table>
<thead>
<tr>
<th>Topic</th>
<th>Managers</th>
<th>Supervisors</th>
<th>RM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment of maintenance systems</td>
<td>25%</td>
<td>30%</td>
<td>35%</td>
</tr>
<tr>
<td>Management of maintenance systems</td>
<td>20%</td>
<td>15%</td>
<td>17%</td>
</tr>
<tr>
<td>Respiratory system management</td>
<td>15%</td>
<td>13%</td>
<td>14%</td>
</tr>
<tr>
<td>Cardiovascular system management</td>
<td>25%</td>
<td>22%</td>
<td>25%</td>
</tr>
<tr>
<td>Intravenous therapy - fluid &amp; electrolyte</td>
<td>30%</td>
<td>35%</td>
<td>32%</td>
</tr>
<tr>
<td>Critical thinking skills</td>
<td>50%</td>
<td>55%</td>
<td>57%</td>
</tr>
<tr>
<td>Reflection on stress</td>
<td>13%</td>
<td>11%</td>
<td>11%</td>
</tr>
<tr>
<td>Mentoring</td>
<td>37%</td>
<td>33%</td>
<td>39%</td>
</tr>
<tr>
<td>Managing stress</td>
<td>46%</td>
<td>63%</td>
<td>50%</td>
</tr>
<tr>
<td>Critical interpretation of laboratory findings</td>
<td>11%</td>
<td>6%</td>
<td>42%</td>
</tr>
<tr>
<td>Critical interpretation of hospital transport</td>
<td>20%</td>
<td>13%</td>
<td>20%</td>
</tr>
<tr>
<td>Critical interpretation of unstable patients</td>
<td>28%</td>
<td>25%</td>
<td>30%</td>
</tr>
<tr>
<td>Communication skills</td>
<td>33%</td>
<td>33%</td>
<td>33%</td>
</tr>
<tr>
<td>Complain handling</td>
<td>46%</td>
<td>63%</td>
<td>50%</td>
</tr>
<tr>
<td>Reflection on decrease in level of consciousness</td>
<td>11%</td>
<td>6%</td>
<td>42%</td>
</tr>
<tr>
<td>Pharmacology</td>
<td>24%</td>
<td>24%</td>
<td>25%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
<td>0%</td>
<td>2%</td>
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</tbody>
</table>

### Table 4: Training needs for non-clinical competence of RNs as perceived by nurses of different ranks

<table>
<thead>
<tr>
<th>Topic</th>
<th>Managers</th>
<th>Supervisors</th>
<th>RNs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership for change and innovation</td>
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<td>16%</td>
</tr>
<tr>
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<td>34%</td>
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</tr>
<tr>
<td>Assessment skills</td>
<td>40%</td>
<td>40%</td>
<td>38%</td>
</tr>
<tr>
<td>Laboratory findings interpretation</td>
<td>50%</td>
<td>45%</td>
<td>52%</td>
</tr>
<tr>
<td>Chinese medicine nursing</td>
<td>50%</td>
<td>52%</td>
<td>50%</td>
</tr>
<tr>
<td>Others</td>
<td>6%</td>
<td>6%</td>
<td>8%</td>
</tr>
</tbody>
</table>

### Table 5: Self-perceived training needs for clinical competence by RMs & RNMs

<table>
<thead>
<tr>
<th>Topic</th>
<th>RNs</th>
<th>RNM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership for change and innovation</td>
<td>15%</td>
<td>14%</td>
</tr>
<tr>
<td>Communication skills</td>
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<td>32%</td>
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</tr>
<tr>
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<td>50%</td>
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<td>8%</td>
</tr>
</tbody>
</table>

For non-clinical topics, communication skills, complaint handling and managing stress are the top three choices amongst the three groups with slight to moderate variations. Obvious variations in the percentage of choice were noted in the leadership for change and innovation, presentation skills and reflection skills.
health care innovation in the Asian Tigers and their Cubs

Table 6: Self-perceived training needs for non-clinical competence by RNs & RNMs

Table 7: Experience level breakdown for the RNs and RNMs

Table 8: Experience level breakdown for the RNs and RNMs

Table 9: Breakdown (according to years of experience) of self-perceived training needs for clinical competence by RNs & RNMs

Table 10: Breakdown (according to years of experience) of self perceived training needs for non-clinical competence by RNs & RNMs

nursing with clinical skills related training on assessment and care of major body systems and laboratory findings interpretation as a major concern, followed by common pharmacology. For non-clinical topics, complaint handling and communication skills are major concerns followed by critical thinking skills and managing stress. Scattered distribution in the level of experience is noted amongst the respondents in the RN and RNM population. 554 respondents were grouped according to their years of experience namely, (1) 0 to 3 years; (2) 4 to 6 years; (3) 7 years or above.

It is well understood that competence builds on accumulation and consolidation of experience and knowledge. However, how does the level of experience influence self-perceived training needs? See the below illustration for the breakdown of results. For clinical topics, in general, assessment and care of the cardiovascular system and the respiratory system are the major concern for all three groups. RNs and RNMs of 0 to 3 years of experience focused more on the trainings related to assessment of major body systems. Laboratory finding interpretation is another important choice for all three
For RNs and RNMs with 4 to 6 years of experience, training on assessing and managing respiratory system, cardiovascular system, and management of clinical conditions is a common important choice. All nurse managers choose communication skills as a training need for nurses in this group. The most obvious disagreement exists in the choice for training on managing stress, then followed by reflection skills. Training on complaint handling is a common important choice.

For RNs and RNMs with 4 to 6 years of experience, training on laboratory findings interpretation is a common choice followed by assessment and care of the respiratory system, and assessment and care of the cardiovascular system. The most obvious disagreement exists in the choice for training on inter- and intra-hospital transportation of clinically unstable patients whereas nurse managers.

When looking into the expectations of frontline nurses, their supervisors and managers, for RNs and RNMs with 0 to 3 years of experience, training on the assessment and care of major body systems was commonly chosen by nurses in all three groups. A higher percentage of choice from frontline supervisors and nurse managers is noted in most items as compared with frontline nurses. The most obvious disagreement exists in the choice for training on common pharmacology. All nurse managers opted for this item as a training need for nurses in this group in contrast with 60% from frontline supervisor group and 39% from the target group. An exception exists in the option for Chinese medicine nursing, where more frontline nurses expressed in such training than their supervisors and managers.

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For non-clinical topics, complaint handling and communication skills are important choices in the group with 0-3 years of experience and 7 years or above; critical thinking skills are mostly needed by the group with 4 to 6 years of experience. Among the three groups, nurses with experience of 7 years or above expressed more training needs on presentation skills and managing stress.

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For non-clinical topics, training on communication skills and critical thinking skills are common important choices. The most obvious disagreement exists in the choice for presentation skills, and then followed by mentorship skills and leadership for change and innovation.

For RNs and RNMs with 7 years of experience or above, a slight to moderate variation in expectation is observed in most clinical topics. The most obvious disagreement exists in the choice for training on inter- and intra-hospital transportation of clinically unstable patients, follow by common pharmacology.

For non-clinical topics, training on complaint handling and communication skills are common important choices. The most obvious disagreement exists in the choice for training on mentorship skills and leadership for change and innovation.

Training needs for Frontline Nurse Supervisors

For clinical topics, training on laboratory findings interpretation and common pharmacology are common choices; moderate discrepancy exists between the percentages of choice observed in the assessment and care of the respiratory system. Frontline nurse supervisors perceived slightly more training was needed for Chinese medicine nursing than that perceived by nurse managers. Among non-clinical topics, leadership for change and innovation and complaint handling are common choices. Remarkable disagreement is noted in presentation skills, communication skills, reflection skills and mentorship skills. Frontline nurse supervisors perceived slightly more training needs on managing stress than nurse managers.

Delivery of training

Preferred mode of training

Referring to the mode of training, seminars and lectures were the most common choices for nurses of all ranks, followed by workshops and short courses. Long courses were the least chosen. Though simulation training seemed to be a more preferred option for supervisors and managers, frontline nurses agreed that simulation training could be good in acute hospital settings; and web-based training can assist memory. Staff also suggested learning through visits to other hospitals and attending conventions.

Preferred length of training

It is observed that the frontline nurses’ perception on the duration of training in terms of "long courses" and "short courses" is extremely diverse. For long courses, preference in duration ranged from a half day to 90 days; and over 72% of choices fall within eight days. For short courses, preference in duration ranged from one hour to 72 hours; 74% of choices fall within six hours. In the frontline nurse supervisor group, perceptions on the duration of training is much the same. For long courses, 66% of choices fall within four days; for short courses, 73% of choices fall within five hours. In the nursing manager group on long courses, all choices fall within three days; for short courses, 57% of choices fall within ten hours.

Conclusion and follow-up strategies

This survey provided an opportunity for nurses to review and express their desires and suggestions, as well as their expectations on their own and/or their subordinates. Based on such multi-dimensional feedback, follow-up strategies were proposed as follows:

Building a sustainable learning environment for KWH and WTSH nurses in the professional development plan 2012-2015 Educational services should be designed and delivered in combination with active research to ensure practicability and sustainability. Staff should be helped to figure out their direction of development with a mechanism set up to allow staff to express their training needs and feedback on existing training services. Moreover, its impact on the clinical service should be tracked.
Establish a system to support the emergency service
needs To provide high quality patient care in clinical units with
high patient flows and mixed case acuity, nurses need to
master a combination of skills and knowledge. To maximize
the capacity of the nursing service and to relieve irregular work
pressures, a nurse-led emergency response team could be
considered as a support system to tackle emergency clinical
situations.

Bridging the expectation gap between nurses in different
rankings The survey suggested that an expectation gap on
training exists between nurses in different rankings.
Strengthening training on commonly focused topics (physical
examination, diagnostic skills, communication skills) and
facilitating mutual understanding and blending in areas where
variance in expectations exist (leadership skills, reflection skills)
would be beneficial to both the service and staff in reaching
their objectives.

Yuk-wah Lai is a senior nursing officer and also works as the
Hospital OSH Co-ordinator in KWH. He has a Master’s Degree in
Occupational Hygiene from The Chinese University of Hong
Kong, and he has been a MHKIOEH since 2006. Mr Lai won a
Silver Award in the 2009
Award Scheme for the Best
OSH Employee in Hong Kong
and the OSH Best Project
Award for the Academic Year
2009 (Occupational Safety
and Health Council, Hong
Kong) on the project
“Evaluating ISOBOOTH
removal efficiencies by
bioaerosol– surrogate
challenge test”.

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"Evaluating ISOBOOTH removal efficiencies by bioaerosols – surrogate challenge test".
Increasing productivity by reducing average length of stay (ALOS) in Apollo Gleneagles Hospitals, Kolkata, India

SUJOY KAR
HEAD – QUALITY AND CLINICAL RESEARCH, APOLLO GLENEAGLES HOSPITALS, KOLKATA, INDIA

RUPALI BASU
CHIEF EXECUTIVE OFFICER, APOLLO GLENEAGLES HOSPITALS, KOLKATA, INDIA AND CEO – EASTERN REGION, APOLLO HOSPITALS GROUP

ABSTRACT: Reduction of ALOS in the hospital through streamlined processes with validation for standardized work such as clinical pathways. The implementation of barcoding and streamlining laboratories with interface solutions has reduced the cycle time for the diagnostic areas. The long standing cases over seven days provided a trigger for the Medical Board, which helped in multidisciplinary care of these patients. Cohort of patients in respective wards according to discipline for almost 80% of patients have improved nursing and other paramedical services and had a definite impact on ALOS and other outcomes. Finally, the organization has a benefit of nearly USD 0.9 million for a period of nine months during this study. The organization has carried on the benefits of the ALOS reduction and currently has reduced ALOS to 4.5 days.

Length of stay following surgery or procedures determines the most effective post-operative care and rehabilitation, increased length of stay is associated with co-morbidities, complications and errors in delivery of care. The Apollo Hospitals Group designed the Apollo Clinical Excellence 25 parameters in 2009, which included monitoring of length of stay for major surgeries and procedures. The Apollo Gleneagles Hospitals is a 510 bed, multi-specialty hospital with over 2,500 inpatient admissions and nearly 1,200 surgeries every month. The average length of stay at The Apollo Gleneagles Hospital was higher (5.4 days) than the Apollo Hospital Group benchmark of 4.8 days when the project was undertaken. This project was undertaken from January to September 2011.

Methodology
The project was carried out at The Apollo Gleneagles Hospitals, Kolkata with support from Apollo Group Lean Six Sigma Team and Indian Statistical Institute, Chennai. The tools used included process mapping, process standardization – clinical pathways, pareto chart, hypothesis testing, process capability, voice of customer analysis etc. Clinical pathways were designed for major surgeries and procedures with the aim of discharging patients appropriately within specified ALOS. The cohort of cases according to specialties in the ward was taken up to deliver better and focused care. Potential long standing patients (beyond seven days) were identified and their discharges were planned with their family’s active participation. Apollo Gleneagles Hospitals started care team coordination meeting called the Medical Board, which integrated the treating physician, the Medical Department representatives and the patient’s family members in order to plan care and discharge. It was important to get the Consultant Physician’s “buy in” and prevent “rush” discharges. The organization established the concept of Service Line Managers in order to facilitate admission to discharge follow up of all surgical/procedural cases, care coordination with the junior medical staff, monitoring the clinical pathways, and reducing barriers for the patient with better coordination.

Observations
There were significant improvement in the compliance of clinical pathways like modified radical mastectomy, renal transplant, joint replacement surgery by timely assessment; improved laboratory turnaround times, surgical site marking, pre-anesthesia check, patient and family education and time out procedures. In one such pathway for trans urethral resection of prostrate – the compliance in patient family education, wound care, smooth recovery without pain and fever, the removal of the catheter had improved from 74% to 96% over the time period.

Cohorting the units according to specialty led to benefits for nursing services being made specialized, ensuring availability of department specific doctors and decreasing movement time for consultant physicians. This also reduced time taken in non-value added activities and non-bedside activities in wards from 44% to 21%. Spaghetti diagrams were used to determine the travel time and distance per shift for nurses.

One of the major areas identified was the mean time from admission of the patients to the ward to sending across their samples for laboratory investigations. During the initial phase of the study, admission to laboratory requisition was calculated to be an average of 3 hours and 16 minutes (n=236). The process involved admission and physical occupancy in the room, physician assessment and lab orders, and requisition being raised by ward nurses/secretaries. The mean time from laboratory requisition to physical availability of the sample at the laboratory was about another 3 hours. The process involved phlebotomy/nursing blood collection, physical transport of the sample to the laboratories and sample acknowledgement. The mean time from admission to physical availability of the sample at the Laboratory was about 6 hours and 17 minutes. This process was improved through better coordination with physicians, laboratory interfaces and barcoding.
One of the most significant factors associated with this project was that there was no key price escalation in this period which could impact on this. The lower length of stay actually indicated better turnaround time for laboratories and radiology, reduced hospital acquired infection and medication errors. The readmission rates to the hospital remained less than 0.5%. The voice of customer over the period rose from 2.17 Sigma level to 2.57 Sigma level on overall satisfaction levels.

Dr. Sujoy Kar is the General Manager and Head of Quality & Clinical Research at Apollo Gleneagles Hospitals, Kolkata and National Service Line Manager for Apollo Cancer Institutes. Following his medical graduation, Dr. Sujoy did his Masters in Microbiology and Infectious Diseases at Gauhati Medical College and subsequently certified Black Belt – Lean Six Sigma in Healthcare from the Indian Statistical Institute Chennai.

Health care innovation in the Asian Tigers and their Cubs

financial calculations
The revenue calculations were done with the Finance Department and data were validated by Apollo Group Corporate Finance and Lean Six Sigma teams. There was an increase in average revenue per patient to INR 51,727 from INR 44,521, which was attributed to the reduction of ALOS.

The increase of INR 7,206 over the average stay of 4.88 days works out to INR 1,476 per day. The decrease in ALOS from 5.53 to 4.88 would have resulted in a loss of revenue for 0.45 days on base RPPD (Revenue per Patient Days) of INR 8,353 which is INR 3,759 for the entire period of stay (4.88 days). Per day this works out to INR 770. Considering the per day accrual of INR 2,246 (1,476 and 770), if we consider the increase in number of patients in three quarters (January to September 2011) – 3,011, and an base ALOS of 4.88 days, the estimated total accrual amounts to INR 330,020.05 (incremental revenue for the increased number of patients). The total benefit of this project has been estimated at accrual from additional patients – INR 33 million and cost savings as per budget – INR 10.7 million. The total was estimated as INR 43.7 million or USD 0.9 million at exchange rate as on 30 September 2011.

Benefits to patients
One of the most significant factors associated with this project

system and was brought down to 4 hours and 13 minutes from admission to availability of samples at the laboratory. Similar improvements were found for the time from admission to drug indent – which was at 149 minutes, i.e., 2 hours and 30 minutes at the initial phase of the study. It improved to mean of 1 hour and 10 minutes during the course of the study. Similar gains were also observed in diagnostic radiology.

In improving VOC, special focus was given to the satisfaction level in the speed of patient discharge. The satisfaction for this indicator dipped to 67% in the month of February 2011. For this, the patient services team worked with medical administration, consultants, and pharmacy to ensure planned discharges happen smoothly. The VOC scores improved subsequently to 78%.

The overall length of stay decreased from 5.4 days to 4.9 days from the period of January 2011 to September 2011.

Dr. Rupali Basu and her medical degree at R G Kar Medical College, Kolkata, and opted for the challenging field of health care management. She did her Post Graduation in Health & Hospital Management from the National Institute of Health & Family Welfare Management and an advanced programme in hospital management from Harvard University, Boston, USA. Apart from being the Chairperson of the Health Care Sub Committee of CII Eastern Region, she is also a member of CII National Committee on Healthcare. She was the Chairperson of the Health Care Sub Committee of CII Eastern Region, she is also a member of CII National Committee on Healthcare, FICCI National Health Services Committee and FICCI Health Services sub-group on e-health and m-health. She is also a member in the Health Care Sub Committee of BCCI, Health Insurance committee in ICC. She is the Vice-President of Association of Hospitals in Eastern India, the nodal body of leading private health care providers.
The Antimicrobial Stewardship programme: Where have we been…Where are we going?

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ABSTRACT: The misuse or overuse of antibiotics has been widely documented as one of the major causes of the emergence and transmission of multi-drug resistant organisms (MDRO). Antimicrobial resistance posed significant impacts to the increase in morbidity, mortality and cost of health care. In response to the threat of antibiotic resistance which has increased dramatically over the past ten years and the very few new antibiotics in the pipeline, Princess Margaret Hospital set up a Steering Committee with senior level representatives from Infectious Disease, Microbiology and Pharmacy departments to devise an interventional programme called the Smart Use of Antibiotics Programme (SMAP) to offer guidance on the judicious use of antimicrobials. With concerted effort and support from hospital management and frontline clinicians, SMAP achieved significant monetary savings and a reduction in inappropriate antibiotic use. There was no adverse patient outcome in terms of mortality and morbidity.

The discovery of antimicrobial agents in the late 19th century has revolutionized medicine in many aspects. Countless lives have been saved and their discovery marked an important turning point in human history (Davies and Davies 2010). Studies had also shown that some antimicrobial agents carried unexpected non-antibiotic effects and they could offer a variety of additional therapeutic applications as antiviral, antitumor, or anticancer agents (Demain and Sanchez 2009). This further reinforced the discovery of different classes of antibiotics as one of the most significant health-related events of modern times.

Oversuse of antimicrobials has led to the development of antibiotic resistance among microorganisms causing various types of health care-associated infections (HAIs) which in turn pose a significant impact on the increase in overall morbidity, mortality and financial costs of health care services (Bronzwaer et al 2002; Cosgrove 2006 and Maragakis 2008). Meanwhile, the discovery of new agents has not kept pace with rapidly emerging antimicrobial-resistant bacterial threats (IDSA 2008). As a result, antibiotic resistance has become a serious and growing phenomenon in contemporary medicine and has emerged as one of the imminent public health concerns of the 21st century.

In response, many officials and professional organizations, including the World Health Organization (WHO), the European Centre for Disease Control and Prevention (ECDC), the Infectious Diseases Society of America (IDSA) and the Society for Healthcare Epidemiology of America (SHEA), have developed good practice recommendations and position papers on antimicrobial prescribing in health care settings so as to preserve the beneficial impact and utility of antibiotics for our current and future patients (World Health Organization 2012; European Centre for Disease Prevention and Control 2013 and Society of Healthcare Epidemiology of America 2012). Antimicrobial stewardship program (ASP) is one of the important strategies and interventions to monitor the selection, dosing, route of administration and duration of antimicrobial therapy.

Defined daily doses (DDD) is commonly adopted as a unit of measure for antimicrobial consumption. DDD is defined by the World Health Organization (WHO) as the assumed average maintenance dose per day for an antibiotic used for its main indication in adults. DDDs provide estimates of drug consumption and to perform comparisons between groups. DDDs were calculated monthly based on dispensing data from the pharmacy system. To calculate DDDs, the dispensed antimicrobial quantity (in grams) was divided by the WHO DDD factor. DDD = Dispensing Quantity x Unit Strength

This result was then divided by the patient bed days occupied and then multiplied by 1,000 to obtain DDD/1,000 Bed Days Occupied (BDO) which provides an estimate of the proportion of the inpatients treated with certain antibiotics per bed day. For example, the figure 15DDDs/1,000 BDO indicates that 1.5% of
Princess Margaret Hospital experiences

In February 1999, an antibiotic audit programme was initiated at Princess Margaret Hospital (PMH), a 1,400-bed acute general hospital under Kowloon West Cluster (KWC) Hospital Authority (HA) in Hong Kong. In order to address the issues of antibiotic resistance and to foster the good practice of a rational use of antibiotics, the HA pioneered the Antibiotic Stewardship Programme (ASP) across 16 major public hospitals in Hong Kong in 2005. A proper governance structure with a series of well-designed strategies was also established at head office level. Containing antibiotic resistance by means of optimal infection control combined with an ASP was adopted as corporate priority. Lines of responsibility and accountability were also clearly delineated. At hospital level, a multidisciplinary antibiotic management team was formed.

The KWC Antibiotic Subcommittee was established in 2005 together with the implementation of KWC ASP. Our multidisciplinary team, including infectious disease (ID) physicians, pharmacists and microbiologists, was formed to establish our internal policies, guidelines, auditing mechanisms and antibiotic resistance database. Prescribers were required to fill out an antibiotic order form for antibiotics monitored by the ASP team. These antibiotics were retrospectively audited 24–72 hours after antibiotic had been started in order to allow more clinical information such as bacterial culture results, radiological results and clinical response to the initial therapy. The ASP team would feedback on the appropriateness of antibiotic prescriptions (choice of agent, dosing, route and duration of therapy) and monitor the follow up actions by the prescribers. The disadvantages of such strategy are evident. It is manpower and labour-intensive to review every antibiotic prescription (Griffith et al. 2012; Reed et al. 2012; Chung 2013 and Dellit 2007).

Besides, it is even more difficult and less acceptable for the prescribers to de-escalate antibiotics according to the microbiological results especially when patients were responding well with the empirical antibiotics. The outcome of ASP is reported to the hospital management every quarter to ensure timely reporting on consumption, selection, clinical use and trends of antibiotic use.

In 2010, the ASP team observed an increasing trend of broad spectrum antibiotics usage. With the aim of ensuring cost-effective use of resources, the KWC Antibiotic Subcommittee members agreed that an enhancement of our existing antimicrobial stewardship operating mechanism was needed. Our team members decided on adopting a strategy of pre-authorization-based restriction on certain broad spectrum antibiotics and to pilot this strategy at Medicine & Geriatrics (M&G) Department. At PMH, the M&G Department contributes around 65% of the overall broad spectrum antibiotics consumption in our hospital. Therefore, close monitoring and timely and tailor specific antibiotic therapy for each of our patients right from the start of prescription would potentially have a significant impact on antibiotic usage. The Smart Use Antibiotics Programme (SMAP) was introduced and presented at medical grand round and hospital management meetings before its implementation. With the full support from our hospital management and the ID team, the pilot trial was finally rolled out in September 2010.

SMAP requires prescribers to get prior approval from ID physicians before prescribing the following eight broad spectrum antibiotics (i.e., preauthorization-based restriction) during office hours of 9 am to 5 pm: Cefepime, Cefazidime, Imipenem-clavulanate, Meropenem, Piperacillin-tazobactam, Ticarcillin-clavulanate, Ciprofloxacin and Levofloxacin. The objectives of such a strategy are to quickly curtail the unnecessary usage of broad spectrum antibiotics and reserve them for those who are critically ill or to poor responders to first line antibiotics. At the same time, it also promotes savings in broad spectrum antibiotics. SMAP optimizes the culture of prescribing broad spectrum antimicrobials, improves individual patient care, reduces hospital costs and slows down the spread of antimicrobial resistance. In addition, by improving antibiotic use, advancements in medication-safety and patient-safety can also be attained at the same time..

Cost reduction for the PMH M&G department was analyzed through the monthly expenditure report. The actual expenditure was captured from the dispensing history for each patient. Monthly ward returns of unused antibiotic injections has also been accounted for in preparing the report. Total net expenditure was then compared for Pre-SMAP and Post-SMAP year. By the end of the first SMAP year, the annual expenditure for the monitored broad spectrum antibiotics was significantly reduced from HKD 3.4million (Pre-SMAP year; September 2009 – August 2010) to HKD 1.6million (Post-SMAP year; September 2010 – August 2011) with annual saving of over HKD 1.8million (i.e. 53 % reduction). Likewise, the overall antibacterial expenditure was reduced from HKD 6.6million (Pre-SMAP year; September 2009 –
August 2010) to HKD 5.4million (Post-SMAP year; September 2010 – August 2011) with saving of HKD 1.2million (i.e. 18% reduction). In addition, to actual cost savings, the annual average usage density in terms of defined daily dose per 1,000 bed days occupied (DDD per 1,000 BDO) was also monitored. A great reduction from 55.17 (Pre-SMAP year; September 2009 – August 2010) to 25.41 (Post-SMAP year; September 2010 – August 2011) DDD per 1,000 BDO was observed (Figure 1). Hence, unnecessary usage of broad spectrum antibiotics was reduced and drug savings in measurable monetary value were achieved.

Moreover, with the adoption of this real time assessment approach, immediate concurrent feedback was optimized and patients were able to receive the optimal treatment regimen without delay. Meanwhile, we also analyzed and compared the 30 days mortality among the three groups of patients in M&G Department: Control group antibiotics (not under preauthorization-based restriction), SMAP group antibiotics (under preauthorization-based restriction) and Control plus SMAP Group antibiotics during Pre-SMAP year (September 2009 – August 2010) and Post-SMAP year (September 2010 – August 2011) by using the Chi-square test. There was no significant association between patient outcome status and pre- and post-SMAP periods noted (Table 1). In other words, there was no excess of overall 30-days mortality noted for pre- and post-SMAP periods by any cause of death. Besides, another important finding was that such pilot trial did not affect our overall patients’ length of hospital stay, i.e., 6.5 days, within this period of time.

In contrast to the success of achieving the above outcomes, we also noted the lack of an immediate association between antimicrobial restriction and improvement of micro-organism susceptibilities or resistance profile. It might be accounted for by the existence of many unknown complicating factors hindering such desired association and outcome to occur. Besides, studies have shown that the improvement in antimicrobial resistance sometimes could only be seen over a prolonged period of time when combining with other strategies (Lautenbach 2003 and Chi 2011). Therefore, in the near future, conducting a well designed study to demonstrate the impact of ASP on decreasing antimicrobial resistance would be one of the challenges to overcome.

In order to have better understanding and evaluation of the programme, a questionnaire was designed to measure the success of the programme and collect feedback from frontline staff. Of the 158 questionnaires completed by M&G physicians, M&G nurses, pharmacists and pharmacy dispensers, the majority (77% M&G physicians, 96%CI 62-92%; 90% M&G nurses, 95%CI 83-97%; 96% pharmacists and pharmacy dispensers, 95%CI 95-100%) of staff believed that “it is reasonable to have an antibiotic restriction policy for monitoring antibiotic consumption”. More than 60% of respondents agreed that “the approval system for helpful advice and education” and “The necessity to seek approval made the prescriber think carefully about antibiotic choice”. We believe the results of this survey are encouraging and demonstrate excellent support for the programme from top management to frontline colleagues. Without the endorsement of revised guidelines, policy and rollout plan of SMAP by our Drugs and Therapeutics Committee, Cluster Antibiotic Subcommittee and Department Management Committee, it would not have been a success. Repeated promulgation of its operational details during our departmental grand rounds and road shows in each individual wards helped us to receive a lot of invaluable feedback from our nursing staff and fellow colleagues to further refine our SMAP continuously.

**Discussion**

In Hong Kong, PMH took the first initiative to implement a series of different ASP strategies and interventions. The Smart Use Antibiotics Programme does not aim to be prescriptive but incorporates realistic, practical and evidence-based elements to influence and educate our junior physicians on antibiotics prescription. The SMAP project attained a win-win for all parties: patients, health care providers and hospitals in terms of rational antibiotic usage, cost effectiveness in patients’ clinical management and drug savings in measurable monetary value. Such significant monetary savings could then be further translated into optimizing other existing health care services.

Meanwhile, we did notice some limitations of the formulary restriction approach as in other parts of the world, such as concerns about antimicrobial therapy delays, the unintentional increase in non-restricted antibiotics (“squeezing the balloon” effect), prescribing restricted antibiotics outside office hours, concerns about time-consuming process for gaining antimicrobial approval and potential infringements of colleagues’ clinical autonomy throughout our pilot trial (Griffith et al 2012 and Reed et al 2012; Linkin et al 2006 and LaRosa et al 2007; Burke 1998, Rahul et al 1998 and Chung et al 2013). Thus, constant review, enhancement of communication mechanisms and appropriate modification on ASP strategy or intervention is always necessary in the process of shepherding our precious resources – antibiotics.

Similar to other quality improvement programmes, the sustained success of ASP is dependent on commitment of leaders at the corporate, hospital and department levels with clear lines of responsibility and accountability for implementing the programme smoothly (Owens et al 2009 and Duguid et al 2011). The benefits of the program should not only be articulated as cost-saving or curtailing antibiotics use or resistance, but also be focused on the perspective of patient risk management and safety at large (Owens et al 2009; Duguid et al 2011 and McGowan 2013).
Princess Margaret Hospital for their tremendous support in the implementation of this brand new ASP approach for our patients. Dr Joseph Kay-Yan Tsang received his medical degree from the Chinese University of Hong Kong. He started his Internal Medicine training in the United Christian Hospital where he was actively involved in the management of SARS victims from the Amoy Garden in 2003. He holds a fellowship in internal medicine and specialist qualifications in infectious disease in 2006. He has the opportunity to serve in both the Infection Control Branch and Surveillance Epidemiology Branch of the Centre for Health Protection, Hong Kong SAR from 2007–2008. Dr Tsang is actively involved in the local Antibiotic Stewardship and Outpatient Parenteral Antimicrobial Programs. He received training in the Centre for Medical Education at Harvard Medical School and is one of the founders of Hospital Authority Infectious Disease Simulation Training Centre. Dr Tsang is the Associate Consultant of the Department of Medicine and Geniatrics, Princess Margaret Hospital. He is also the Honorary Consultant and Honorary Clinical Assistant Professor at Department of Health, Hong Kong SAR and The Chinese University of Hong Kong respectively.

Dr Owen Tsang graduated from The Chinese University of Hong Kong in 1992. He received training in infectious diseases in the Princess Margaret Hospital, Hong Kong and Guy’s & St Thomas Hospital, London, UK. He obtained his Master Degree in Tropical Health in 1995 from the University of Queensland, Australia. Diploma in Tropical Medicine and Hygiene from the University of London, UK in 2005 and Master of Science in Infectious Disease from the University of London (External Programme), UK in 2009. Dr Tsang is the consultant in the Department of Medicine & Geniatrics, Princess Margaret Hospital. He has also taken up the post of Medical Director of the Hospital Authority Infectious disease Centre (IDC) at PMH since September 2011. Dr Tsang is also a member of the Scientific Committee on AIDS & Sexually Transmitted Infections, Centre for Health Protection, Department of Health and a council member of the Hong Kong Society for Infectious Disease. He has also become a member of the Advisory post of Medical Director of the Hospital Authority infectious Disease Centre.

Rosa Yao obtained her pharmacy degree in Canada. She then did her Masters degree in Public Administration and also received her Masters degree in Clinical Pharmacy in Hong Kong. Since 1992, Rosa has been in Princess Margaret Hospital where she was the Department Manager of the pharmacy. She is actively involved in pharmacy issues, serving on numerous committees and chairing the Hospital Authority (HA) Aseptic Suite Services Committee, Princess Margaret Hospital Pharmacy Committee and Kowloon West Cluster Pharmacy Committee. She is also actively involved in quality and risk management activities. Rosa was awarded the Hospital Authority Outstanding Staff in 1995. Rosa YAO is now the Kowloon West Cluster Clinical Stream Coordinator of pharmacy service and oversees eight hospitals in the cluster which serve around 25% of HA patients.

Selma Lai received her Bachelor of Science in Pharmacy from University of British Columbia. In 2006, she joined Hospital Authority as a pharmacist serving the Princess Margaret Hospital. In 2010, she completed her Master in Clinical Pharmacy from Chinese University of Hong Kong. She is currently a pharmacist responsible for antibiotic stewardship program at PMH where she is actively involved in the planning and management of the Antibiotic Stewardship Program for four acute general hospitals in Kowloon West Cluster.

References


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ABSTRACT: Patient satisfaction surveys help a great deal in identifying ways of improving a hospital's services. Ultimately, that translates into better care and happier patients. Moreover, it shows the staff and the community that the hospital is serious about quality and is looking for ways to improve. This article describes how the Voice of the Customer (VOC) Survey can be used as a tool for improving services. Regular monitoring of VOC scores is essential for minimizing the gaps between service delivery and patient expectations. The present study showcases the various initiatives undertaken to improve the VOC scores from an original 4.40 to 4.77 (on a 5 point scale) at the hospital under study.

The need for continuous improvements in quality and safety in the provision of patient care has become very evident. Patients and their relatives are the only source of data for assessing the quality of care delivered to the patient from the patient's perspective. Assessment, monitoring and analysis of patient satisfaction data and patient complaints can contribute to improvement of health care services and delivery. The Voice of the Customer (VOC) is an in-depth tool for capturing the patient's expectations and satisfaction levels using a customized questionnaire which gathers the patient's perceptions of all the services that we offer.

The VOC tool consisted of around 40 questions that cover all the departments and services in the hospital and the satisfaction data was gathered for all the touch points ranging from admission to discharge services. The patients were required to rate our services on a five point scale. The VOC was then analysed to identify the low performing areas in the context of process improvement to increase patient satisfaction. The departmental heads' meetings and medical services team meetings discussed the problems identified through tracers, facility audits, feedback forms and through incidents and complaints raised. The issues were discussed and the solutions postulated. These were then effectively implemented keeping a close eye on the VOC trends.

Out of the total 11 touch points for which the patients' perception was captured, the following were the important aspects of care, which drive the overall assessment of services rendered to the patient during their stay in the hospital.

1. Admission processes – Waiting to be taken to a room/ward/bed.
3. Physician and Nurse – Skills of the physician and nurses. Attention paid to the patients' special needs.
4. Meals – Patient's perception of the quality and presentation of the food served.
5. Communication – Focus on adequacy of information provided about the condition and treatment.
6. Treated with respect – Patients' views on whether hospital staff treated them with courtesy and respect.

The data presented in the graph (Figure 1) shows the older low-slung VOC scores in the year 2010–11 which represent a relatively low patient satisfaction level with the services provided.

Exposition

Touch Points for measuring patient satisfaction levels

The VOC form was offered to every patient at the time of discharge for completion. The VOC response rate was targeted at 50% of total patient discharges. Sealed boxes were provided in all wards for the completed VOC forms to be dropped into by the patients/attendants. These forms were then collected by the members of the quality team for data collation. The forms were analysed and the patient satisfaction scores were monitored on a weekly and monthly basis. Since the patients rate our services on a 5-point scale, the target for VOC was fixed at 4.50 for all departments to achieve and this was later revised to 4.70 in 2012–13. Each year, the targets for VOC are statistically derived, based on the previous year's performance and are then approved by the senior management team.

This paper studies the changes in the VOC scores during the period between 2011 and 2012 and the various initiatives taken to improve them. In 2010, the scores were not very robust and so enabled us to identify specific areas for improvement, as well as to design and implement strategies to address those issues. The data presented in the graph (Figure 1) shows the older low-slung VOC scores in the year 2010–11 which represent a relatively low patient satisfaction level with the services provided.
Health care innovation in the Asian Tigers and their Cubs

Privacy – Patients’ assessment of the extent to which their privacy was respected.
Responsiveness of staff – Patients’ experience on how long the nurses took to respond to a call.
Pain management – Patients’ perception on how well the pain was managed by the care team. The care team measures each patient’s pain on a 10-point VAS scale in every shift and undertakes interventions as required for pain relief.
Management of complaints – Patients’ assessments of how their complaints were handled.
Discharge and billing – Accuracy of information provided on billing at discharge.

Initiatives and interventions to improve patient satisfaction

The following interventions were undertaken to improve patient satisfaction levels:

Leading by the helm
The leadership of the hospital initiated the drive to improve the quality of care. What followed was the series of group activities encompassing the identification of the lacunae in the low scoring areas, brainstorming to identify the possible and feasible solutions, their implementation and the subsequent results. It required a cultural shift to a blame-free culture focusing on systems and not people. Ideas and opinions were received with an open mind; initiative and innovation replaced fear. The heads of department under the guidance of the managing director and the senior team met every Tuesday to review the weekly VOC scores and thus the whole team was engaged in a culture of customer service excellence (Figure 2).

GST (Greet, smile and thank you)
In the hospital services sector, the care function is as important as the cure function. In keeping with this dictum, a soft skills “velvet touch” training programme was established to inculcate empathy, courtesy and responsiveness in the staff. Training was imparted to all staff in the use of the GST (Greet, Smile and Thank you) principle. Apart from the normal telephone etiquette of introducing themselves and the organization to the caller which were based on Studer’s AIDET, the telephone operators were also sensitized to being soft and helpful for all calls routed to them.

Admissions
A bed transfer module was designed for regularization of the information about bed shifting and transfer. Strict adherence to patient cohorting was ensured.

Improvement in environment and facility – “Sparkle Rounds”
The whole hospital was divided into 22 zones and these zones were assigned to different teams to identify issues in the facility that needed attention. These were then taken up for corrective measures. The whole facility was thus in for minor and major renovation work. The end result was a better ambience and
Improvements in food services

Emphasis was laid on effective communication between the Food Services Department and dieticians so as to avoid the occurrence of dietary errors. Child-friendly special crockery sets as well as special menus for paediatric patients were introduced (Figure 4).

Changes in tests and treatment protocols

The morning sample collection that was conducted at 4 am in the morning was postponed to 6 am so as to reduce disturbance to the patient. Routine X-rays were scheduled at non-peak hours to reduce waiting times. Also, adherence to time frames for reporting of various scans was ensured.

Instituted “patient and family education cell”

A patient and family education cell was developed which interacted with patients on a daily basis regarding their disease process and also introduced patient and family education brochures for different ailments, symptoms, procedures and investigations. This improved patient information and patient trust towards the organization. An automated “Patient and Family Education” kiosk using the touchscreen technology was also put up at the entrance of the inpatient area.

Figure 3: Gifts for new borns

Figure 4: Special menu for children

4.9
4.8
4.7
4.6
4.5
4.4
4.3
4.2
4.1
4

Jan 11
Feb 11
Mar 11
Apr 11
May 11
June 11
July 11
Aug 11
Sep 11
Oct 11
Nov 11
Dec 11
Jan 12
Feb 12
Mar 12
Apr 12
May 12
June 12
July 12
Aug 12
Sept 12
Oct 12

VOC         Target        LCL
Before project

After project

Figure 5: Overall VOC score – Before and after project initiation

Other nursing initiatives

The nursing team incorporated the pre- and post-op custodian methodology to improve the surgical care of patients. Explanation of the various tests and treatments was undertaken to enhance the patient involvement in the care process. The nursing team caring for the patient also informed the patient of the anticipated time for treatment and delays if any.

Take away gifts for new-borns were also instituted (Figure 3).

Enhanced comfort. Moreover, regular facility maintenance of wards and washrooms was undertaken. Better signage was put up resulting in easier access to care. A new food court for patients’ attendants was opened.

Pain rounds

Pain management was aggressively addressed and sensitivity to recognition and management of pain was increased through the pain training of doctors and nurses, translating into effective reassessments and reavessments of pain for each patient.

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Prompt complaint redressal

The hospital ensured the prompt redress of patient complaints through a system of escalating levels for ensuring compliance. There was no delay in forwarding complaints to the next higher authority in case redress was not timely. No complaint was left unaddressed and the figures were evaluated on a weekly basis.

The above graph (Figure 5) shows the gradual but steady improvement in the VOC scores between 2011 and 2012.

Conclusion

The VOC helped the hospital to provide accessible and responsive services based on patients’ identified needs and wants, resulting in a safer health care environment, better patient care, fewer complaints and decreased length of stay in the hospital. The patient had access to a quality-focused organization where their rights were respected and protected. The patient received appropriate information and education regarding their care due to better communication which resulted in their being involved in their care decisions and processes with more focus on patient safety. At the onset of the project, in April 2011, the scores were as low as 4.40 and as the project progressed, the scores rose to 4.77 in December 2012, an overall 8.5% improvement so much so that it exceeded the target of 4.7 for 2012-13 (Figure 6).

Other payoffs included:
- Improved patient retention and patient loyalty.
- Better staff morale.
- Greater efficiency in care processes.
- Improved patient referrals.

The continuous emphasis of the senior leadership on the VOC scores and communication to all categories of staff during their weekly de-briefing sessions was instrumental in maintaining the focus on improving patient satisfaction as a constant endeavour for times to come. This invigorated the entire patient care team to strive further for achieving excellence in patient care.

With a determination starting at the leadership and percolating through to the rank and file of the organization, a once elusive score was not only achieved but greatly surpassed, making Indraprastha Apollo Hospitals a hospital with not only satisfied, but loyal, patients who left with good memories of their stay and a desire to return when they next needed care.

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Dr. Anupam Sibal is Group Medical Director of the Apollo Hospitals Group and an Adjunct Professor of Pediatrics at the School of Medicine, University of Queensland, Australia. As a pediatric gastroenterologist and hepatologist, he helped set up the first successful liver transplant programme in India in 1998. In the last 14 years, the Apollo Transplant Institute has performed 1,294 liver transplants (paediatric and adult). In the last three years, 851 transplants have been performed with a success rate of 90% (360 were performed in 2012 alone). Professor Sibal has also served as the only Asian Joint Commission International, Physician Surveyor for three years. He helped achieve the First International Accreditation of a hospital in India by JCI in 2005. He is currently a member of the Regional Middle East International Advisory Board of JCI.
ABSTRACT. The health care industry is fast changing and rapid transformation is required to meet the ever-increasing needs and demands of its patient population. Hospitals and health care providers are shifting from viewing patients as uneducated with few health care choices to educated consumers with many service demands and health care choices available. Modern health care organizations have identified the patient as an ultimate consumer of hospital services and understand the importance of patient satisfaction, establishing this as the yardstick. The present study is explorative in nature. This cross sectional study is aimed at collecting data regarding attitude of patients, assessing their satisfaction levels towards ease of getting care, facilities offered at the hospital, attitude of the staff at the hospital and overall status of the hospital. The research study revealed many insights regarding attributes that are important for doctors, nurses and hospitals which would match patient expectation and lead to satisfaction.

The health care industry is changing fast all over the world (Verma and Sarma 2000). In emerging countries like India the health care industry has undergone a rapid transformation to meet the ever-increasing needs and demands of its patient population. Hospitals are shifting from viewing patients as uneducated and with little health care choice, to recognizing that the educated consumer has many service demands and health care choices available (Howard 2000). Patients are the ultimate consumers of the hospital. They are the people in distress. They expect from the hospital comfort, care and cure. The patient forms certain expectations prior to a visit. Once the patient comes to the hospital and experiences the facilities, they may become either satisfied or dissatisfied. Patient satisfaction is one of the established yardsticks to measure success of the services being provided in the hospitals (Sreenivas and Prasad 2003). Evaluating to what extent patients are satisfied with health services is clinically relevant, as satisfied patients are more likely to comply with treatment (Marquis et al 1983). For a health care organization to be successful monitoring customer’s perceptions is a simple but important strategy to assess and improve their performance (Repert and Babakus 1998) and (Gombeski et al 1993). Patient satisfaction is the patient’s perception of care received compared with the care expected (Aiello et al 2000).

Materials and methods
A hospital-based cross sectional study was carried out at a 1,050 bed tertiary care teaching hospital in Hyderabad, Andhra Pradesh. The study was conducted from October 2012 to December 2012 among patients admitted in wards with a minimum hospital stay of two days. The Sampling method adopted in the study was simple
random sampling. The study is explorative and aimed to collect data regarding the attitudes of patients and assessing their satisfaction levels towards various services offered. Prior permission was obtained from the authorities of the hospital. Data was collected by using a questionnaire containing 15 questions. The questions addressed specific areas like ease of getting care, facilities offered at the hospital, attitude of the staff at the hospital and overall status of the hospital. The questionnaires were handed over to the respondents and collected back after they finished answering it. For the respondents who do not have any educational qualifications and paediatric patients, attendants of patients were given the questionnaire. Strict confidentiality was maintained. A scoring system was used for finding the satisfaction of the patient, with a minimum score of 1 and maximum score of 10. Depending on the score given by the patient, satisfaction was divided into 3 levels i.e. poor, average and satisfactory. Data collected was analyzed using SPSS software version 17.

Results and discussions
Table 1 shows details about the demographic variables. Total number of participants in the study were 300 out of which 145 were male and 155 female.

Table 2 shows the respondent’s satisfaction experiences of the behaviour of hospital staff. The hospital staff were divided into four categories: doctors, nurses, class III and class IV employees who are important component of the hospital workforce. The results revealed that about 66% of patients were satisfied with doctors, 52% were satisfied with nurses, whereas 44% were satisfied with class III employees but there was a great deal of dissatisfaction with class IV employees. On further investigation it was found that class IV employees were rude, not available when patients needed them and were not trained.

Table 3 shows the respondent’s satisfaction experiences with cleanliness in the hospital. Cleanliness was satisfactory in the patient care areas and wards but lavatory cleanliness was unsatisfactory. The other areas where respondents expressed dissatisfaction was the staircase which was not clean. The overall hospital campus was green with ample parking space and a neat ambience.

Table 4 shows the respondent’s satisfaction experiences with the quality of food and availability of drinking water which were average. On further investigation it was found out that the water filters were not working because of technical problems.

Table 5 shows the respondent’s satisfaction experiences with hospital services. The hospital services rating were average because of overcrowding in departments like obstetrics and gynecology, general medicine, surgical wards and paediatrics.

On further investigation with the respondents revealed the list of attributes that would lead to satisfaction and the list is shown in Table 6. It provides valuable insights into patient satisfaction with respect to the doctors’ performance in terms of necessary attributes like doctors’ professional skills, efficiency and knowledge, doctor’s communication, doctors’ kindness and

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**Table 1: Socio-demographic characteristics of patients**

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<tr>
<th>Variable</th>
<th>Number</th>
<th>Percentage (%)</th>
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</tr>
<tr>
<td>38-47</td>
<td>56</td>
<td>18.7</td>
</tr>
<tr>
<td>48-57</td>
<td>64</td>
<td>21.3</td>
</tr>
<tr>
<td>57 &amp; above</td>
<td>76</td>
<td>25.3</td>
</tr>
<tr>
<td>Total</td>
<td>300</td>
<td>100.0</td>
</tr>
<tr>
<td>Educational status</td>
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</tr>
<tr>
<td>Illiterate</td>
<td>3</td>
<td>1.0</td>
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<tr>
<td>Primary School</td>
<td>35</td>
<td>11.7</td>
</tr>
<tr>
<td>Secondary school</td>
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<td>11.0</td>
</tr>
<tr>
<td>Graduation</td>
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<td>48.3</td>
</tr>
<tr>
<td>Post Graduation</td>
<td>84</td>
<td>28.0</td>
</tr>
<tr>
<td>Total</td>
<td>300</td>
<td>100.0</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student</td>
<td>55</td>
<td>18.3</td>
</tr>
<tr>
<td>Government employee</td>
<td>21</td>
<td>7.0</td>
</tr>
<tr>
<td>Private employee</td>
<td>121</td>
<td>40.3</td>
</tr>
<tr>
<td>Housewife</td>
<td>45</td>
<td>15.0</td>
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<tr>
<td>Unemployed</td>
<td>58</td>
<td>19.3</td>
</tr>
<tr>
<td>Total</td>
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<td>100.0</td>
</tr>
<tr>
<td>Admission mode</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planned</td>
<td>97</td>
<td>32.3</td>
</tr>
<tr>
<td>No planned</td>
<td>203</td>
<td>67.7</td>
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<tr>
<td>Total</td>
<td>300</td>
<td>100.0</td>
</tr>
<tr>
<td>Previous admissions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>184</td>
<td>61.3</td>
</tr>
<tr>
<td>One time</td>
<td>32</td>
<td>10.7</td>
</tr>
<tr>
<td>More</td>
<td>84</td>
<td>28.0</td>
</tr>
<tr>
<td>Total</td>
<td>300</td>
<td>100.0</td>
</tr>
<tr>
<td>Length of stay</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Days</td>
<td>67</td>
<td>22.3</td>
</tr>
<tr>
<td>3-5 Days</td>
<td>156</td>
<td>52.0</td>
</tr>
<tr>
<td>More than 5 days</td>
<td>77</td>
<td>25.7</td>
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<tr>
<td>Total</td>
<td>300</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Table 2: Satisfaction of the patients regarding behaviour of hospital staff**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Poor (%)</th>
<th>Average (%)</th>
<th>Satisfactory (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctors</td>
<td>26</td>
<td>76</td>
<td>198</td>
<td>300</td>
</tr>
<tr>
<td>Nurses</td>
<td>8.7</td>
<td>25.3</td>
<td>66.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Class III employees</td>
<td>10.7</td>
<td>38.0</td>
<td>154</td>
<td>100.0</td>
</tr>
<tr>
<td>Class IV employees</td>
<td>15.0</td>
<td>41.0</td>
<td>44.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>142</td>
<td>123</td>
<td>35</td>
<td>300</td>
</tr>
</tbody>
</table>

World Hospitals and Health Services Vol. 49 No. 2 27
Table 3: Satisfaction of the patient regarding cleanliness in the hospital

<table>
<thead>
<tr>
<th>Patient area (%)</th>
<th>Wards (%)</th>
<th>Toilets (%)</th>
<th>Hospital campus (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>33</td>
<td>11.0</td>
<td>59</td>
</tr>
<tr>
<td>Average</td>
<td>187</td>
<td>62.3</td>
<td>49</td>
</tr>
<tr>
<td>Satisfactory</td>
<td>80</td>
<td>26.7</td>
<td>30.7</td>
</tr>
<tr>
<td>Total</td>
<td>300</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4: Satisfaction of the patient quality of food and availability of water in the hospital

<table>
<thead>
<tr>
<th>Quality of food (%)</th>
<th>Availability of drinking water (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>54                  43</td>
</tr>
<tr>
<td>Average</td>
<td>178                 59.3</td>
</tr>
<tr>
<td>Satisfactory</td>
<td>68                  22.7</td>
</tr>
<tr>
<td>Total</td>
<td>300                 100.0</td>
</tr>
</tbody>
</table>

Table 5: Satisfaction of the patients regarding hospital services

<table>
<thead>
<tr>
<th>Hospital services</th>
<th>Number of patients (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>49                    16.3</td>
</tr>
<tr>
<td>Average</td>
<td>178                   59.3</td>
</tr>
<tr>
<td>Satisfactory</td>
<td>73                    24.3</td>
</tr>
<tr>
<td>Total</td>
<td>300                   100.0</td>
</tr>
</tbody>
</table>

Table 6: Key patient satisfaction attribute

<table>
<thead>
<tr>
<th>Doctor</th>
<th>Nurses</th>
<th>Facilities Management</th>
<th>Cleanliness and Sanitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Doctors’ professional skills</td>
<td>1. Nurses’ professional skills</td>
<td>1. All Specialist services and diagnostic services under one roof</td>
<td>1. Waiting room’s cleanliness</td>
</tr>
<tr>
<td>2. Efficiency and Knowledge</td>
<td>2. Knowledge</td>
<td>2. Convenient office hours</td>
<td>2. Clean toilets with water supply</td>
</tr>
<tr>
<td>5. Language comfort and understandability</td>
<td>5. Language and understandability</td>
<td>5. Well-equipped Units</td>
<td>5. Regular janitorial service</td>
</tr>
<tr>
<td>8. Examination comfort</td>
<td>8. Queries Properly handled</td>
<td>8. Welcome and implement your suggestions</td>
<td>8. Dust boxes and spittoons provided</td>
</tr>
<tr>
<td>15. Listening skills</td>
<td>15. Space and comfort for physically handicapped and lift working</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Doctors’ respectful manners</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
politeness, impartial attitude, comforting language and understandability, listening skills, doctors' respectful manners, confidentiality which contribute to patient satisfaction. Whereas for nurses the attributes like nurses' professional skills, knowledge, cooperation, politeness, language, impartial attitude, communication, kindness and respectful manners are key variables related to satisfaction with nurses. The other key attributes are waiting room cleanliness, bedside cleanliness, an easy to use appointment system, all specialist services and diagnostic services under one roof, and convenient office hours are key factors that also contribute to patient satisfaction. The patient feels happy with the hygiene and cleanliness condition of different health care units. The key concerns of patient unhappiness were delayed process of admissions and discharges, long waiting times at diagnostics and radiological services.

Conclusion
Assessing patient satisfaction is simple and cost effective way for the evaluation of hospital services. When the respondents were questioned about satisfaction and behaviour towards the hospital staff, the majority of the patients were satisfied with the doctors and nurses, cleanliness in the hospital in patient care areas, wards, the quality of food and availability of drinking water was average. Most of the patients complained that lavatory cleanliness was unsatisfactory. The present study also listed key attributes that would lead to greater satisfaction such as the professional skills of doctors and nurses, communication, kindness and politeness, listening ability, cooperation, bedside cleanliness, an easy appointment system and specialist services and diagnostic services under one roof.

Recommendations
There is great scope for improving services in the hospital. Behaviour of class IV employees should be improved by conducting special sessions for behaviour change and communication. Emphasis should be given to improve cleanliness in the hospital especially in the toilets.

Limitations of the study
The present study is restricted to a select tertiary care hospital for evaluating hospital services. A continuous ongoing study is required to obtain definitive results.

Murtaza Bakshi is a life sciences graduate from Osmania University, Hyderabad, India. He obtained his Masters in Business Administration (MBA) with dual specializations in marketing and information systems from Osmania University and completed his MPhil from the Sri Venkateswara University. He has more than 13 years of experience in Academia and has worked as Assistant Professor in Hospital Administration and has undertaken various research projects. He has been associated with research projects and class room training in health care marketing, health and hospital management information systems, entrepreneurship and consultancy management.

References
Health care innovation in the Asian Tigers and their Cubs


The tele-interpreter service at the Bangkok Hospital Medical Center, Thailand

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HOSPITALITY DIRECTOR, BANGKOK HOSPITAL MEDICAL CENTER (BMC), BANGKOK, THAILAND

**SOMSAK WANKIJCHAROEN**
CIO, BANGKOK HOSPITAL MEDICAL CENTER

**ABSTRACT:** Thailand has become one of the most famous medical hub countries, which is reflected in the increasing number of international patients visiting the Bangkok Hospital Medical Center (BMC). In response, the Interpreter Department at BMC has been established to provide translation for non-English speaking patients. Over time the Interpreter Department frequently reaches maximum capacity when providing prompt services on demand, resulting in long waiting times and delayed medical treatment. BMC has foreseen the necessity to implement a tele-interpreter system via videoconferencing technology to provide effective translations in the medical environment where delay is usually not tolerated. Tele-interpretation allows doctors to simply select a language icon on their Wi-Fi IP telephone to instantly connect to an interpreter. After implementation in 2009, the overall customer satisfaction index for the Interpreter Department increased from 64.5% in Quarter 1 to 85.5% in Quarter 3 of 2011. The tele-interpretation system is currently the closest approximation to the face-to-face interpretation method.

The Bangkok Dusit Medical Service Public Company Limited (BDMS) is the third largest hospital network worldwide with 30 network hospitals providing over 5,000 beds. BDMS divides into five major hospital groups according to hospital location and branding position. BDMS Group 1 includes Bangkok Hospital Medical Center (BMC), Bangkok Hospital Huahin (BHH), and the upcoming Bangkok Hospital Chiangmai. The BMC in Bangkok is currently the largest and oldest private hospital in Thailand and has been providing tertiary health care services to Thai and international patients since 1972.

Over the past 42 years of providing medical services, the BMC has witnessed a significant transformation in patient demographics. As of 2013, BMC has patients coming in from 144 countries. Large numbers of patients come from Japan, the Middle East and Myanmar. In addition, the growing trend in medical tourism has made Thailand one of the most sought after medical hub countries. This is reflected in the international patients that visit BMC as medical tourists. These patients travel to Bangkok solely to receive medical treatment at BMC; the majority of international patients are from the Middle-East or European countries. The growth rates of international patients are constantly increasing; from 2005–09 the growth rate was 64.4%, and from 2009–12 the number of international visits is still growing at 34.94% (Table 1). As of 2013, the number of outpatient (OPD) visits at BMC is approximately between 3,000–3,500 visits daily, while International patients account for nearly 30% or around 1,300–1,500 patients of total outpatients. As for inpatient (IPD) service, BMC currently has 536 functional beds with overall occupancy rate of approximately 80%. The numbers of non-Thais occupying BMC beds is about 160–180 patients, which is 40% of the total number. BMC has continuously improved and developed new services as a response to the culturally diverse needs of international patients, for example, establishing an Arabic Medical Service (AMS) set up especially for Arabic patients and a Japanese Medical Service (JMS) for Japanese patients.

**Interpretation service**

With the vision to become a premier tertiary health care provider with customer focused care at an internationally accepted level, BMC recognizes the extreme importance of providing an interpreter service especially for patients from non-English speaking countries. This value-added service is fundamental to facilitate spontaneous and effective communication between patients, doctors and other staff in the hospital; therefore leading to safe and successful medical treatment and consequently high levels of customer satisfaction.

The Interpreter Department was established in the mid-1990s with responsibility for providing translation services in both verbal and written form to doctors, clinical teams, patients and family while receiving medical care at BMC. The service was available face-to-face or by traditional phone interpreting out of working hours. As BMC’s international market expanded overtime, the department initiated a 24-hour service by arranging night shift interpreters for the three main languages (English, Arabic and Japanese) and a scheduling roster for telephone interpretation support for other languages. As of 2013, the Interpreter Department at BMC has 28 languages available with 12 in-house languages and 16 out-of-house languages. An in-house language refers to a language where BMC hires an interpreter of that...
language to be stationed at the hospital, thus, patients and doctors are able to receive a prompt face-to-face service when requested. The out-of-house languages are available only by telephone through part-time interpreters. All 28 languages have been extended to other network hospitals where the 24-hour scheduled interpreter list is available in the contact centre database. However, with the continuous growth in the international market, face-to-face interpretation frequently reaches maximum capacity resulting in long waiting times and delayed medical treatment. On the other hand, the telephone interpretation service is not comprehensively for doctor consultation due to its limitations in providing simultaneously interpretation and conferencing among parties. Moreover, BMC currently offers all-inclusive onsite outpatient and inpatient service, for example, the pharmacy and radiology centre, hence, the increase in interpretation requests at the numerous patient service points other than just the doctor-patient consultation. These enormous interpretation requests have become a constant challenge in providing this service in a timely manner particularly in a medical emergency situation.

Tele-interpreter implementation

The Tele-interpretation Service was implemented at BMC in 2009 as an innovative solution to support the rapid growth in international patients. As face-to-face and telephone interpreter service experience limited availability, the tele-interpretation system via video conferencing technology is the next best alternative for face-to-face interpretation to provide prompt and effective service on demand in the medical environment where delayed service is usually not tolerated.

To offer effective operational service, the tele-interpretation system requires reliable video-conferencing technology which transmits live sound and images with fast and simple service request methods for users. The BMC Chief Information Officer (CIO) and the Information Technology (IT) team were brought together to find an outsource provider to establish the most suitable system for hospital use. The interpreter team contributed by advising on the unique needs of medical interpretation such as patient confidentiality, and also to specify the skills and interpretation experience required for working at the tele-interpreter station.

The selected interpretation system functions on an integrated video call technology, Internet Protocol (IP) Private Branch Exchange (PBX), a call centre system, IP and Wi-Fi IP telephone, web-camera, and an operation application. This system is user-friendly and operates by connecting Wi-Fi IP telephone with a web-camera attached to computer's monitor at both locations. The camera is placed at the computer in the doctor’s consultation room and the interpreter’s sound-proof working cubicle at the interpreter centre to produce a similar environment to face-to-face interpretation. When a patient requires an interpreter service Currently, there are approximately 500 Wi-Fi IP telephones and web-cameras installed at BMC for tele-interpretation in doctor’s consultation rooms and other patient service areas, for example, the pharmacy counter and the international service counter.

Tele-interpretation enhances service quality between doctor, patient and interpreter during consultation, as all parties are able to view one another person’s appearance and body language via a web-based camera. This instant service allows a more comfortable and sensible experience for both doctor and patient when discussing personal and medical issues. Furthermore, tele-interpretation has substantial advantages over conventional telephone interpretation, which consistently cause patients to feel uneasy and hesitant to communicate sensitive issues when they cannot see the interpreter’s face. Doctors also often question the quality and validity of the messages that are being translated. Thus, communicating through the tele-interpreter provides more accurate understanding of the message conveyed by all parties with close approximation to face-to-face interpretation.

The tele-interpreter service is also available to other hospitals in the network where the system is installed, for example, the Bangkok Hospital Huahin. The latest locations set up for tele-interpretation service are at four offices of the Immigration Bureau in Thailand to assist Thai immigration officers in general translation, which is the first location outside of the BDMS network group.

Service improvement with customers

Among an average of 35,000 interpreter job request per month in 2012, the tele-interpreter service accounts for almost 20% of the total interpretation jobs. The tele-interpretation service is commonly used in the oulying clinic centres where face-to-face interpretation is usually delayed and clinic centres such as the Dental Center and Skin and Aesthetics Center where consultation is generally brief and concise. For long and complicated consultations or patients with culturally sensitive needs from certain nationalities, face-to-face interpretation is still usually preferred.

The initiation of the tele-interpretation system has significantly improved the service for international patients with limited English proficiency such as Japanese and Arabic speakers. This videoconference system enables effective face-to-face interpretation service without waiting time. After the introduction in 2009, it took approximately one year to entirely install and integrate the system at all service points and educate all potential users. The customer satisfaction index subsequently increased. For example, the overall good service for the interpreter Department has increased from 64.5% in Quarter 1 to 85.5% in the third quarter of 2011. In the section on “Explain about what would happen during the service,” the percentage increased from 62.7% in the first quarter to 85.5% in the last quarter, while the section on “Waiting time of service” the

| TABLE 1: BANGKOK HOSPITAL MEDICAL CENTER (BMC) – CAMPUS VISITS 2005 – 2012 |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                 | 2005            | 2006            | 2007            | 2008            | 2009            | 2010            | 2011            | 2012            |
| CAMPUS VISITS   | 89,858          | 109,544         | 128,040         | 146,005         | 147,749         | 156,088         | 167,234         | 199,363         |
| Growth by Year  | 21.9%           | 16.9%           | 14.0%           | 1.2%            | 5.7%            | 7.2%            | 19.2%           |                 |
percentage increased to 82.6% in the third quarter from 62.7% in the first quarter (Table 2).

**Conclusion**

The tele-interpretation service has partially contributed to BMC’s success in providing excellent medical care to international patients by allowing medical information accuracy and quality at the closest approximation to face-to-face interpretation standards. To further enhance tele-interpretation service quality, the interpreter department is committed to improve medical competency among interpreters working at BMC by organizing training in internal and external medical terminology and specialty knowledge. Furthermore, the Interpreter Department has planned to expand the tele-interpretation service to be made available on other devices such as smart phones or tablets, which are now commonly used. The department wishes to continue supporting BMC’s mission to be a technologically advanced medical service provider and constantly searches for methods that will achieve the highest customers’ satisfaction as well as enable interpreter teams to maximize their service capacity requests in the most professional manner with high level of service quality. 

Boonthida Jaroensawat manages the multi-functional non-clinical service support of BMC, including the Thai and International Customer Service Department for both outpatients and inpatients. She also directs and supervises the Interpreter Department and Middle-East Service, as well as the established Royal Bangkok Club (VIP membership service) at BMC.

Somsak Wankijcharoen is the Chief Information Officer of the Bangkok Hospital Medical Center. He is responsible for the information technology and computer system that support the service process in the hospital.

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**TABLE 2: COMPARING 30 DAYS MORTALITY DATA BY CHI-SQUARE TEST**

<table>
<thead>
<tr>
<th>Good Service Results 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Patients</td>
</tr>
<tr>
<td>Jan 19</td>
</tr>
<tr>
<td>Feb 18</td>
</tr>
<tr>
<td>Mar 18</td>
</tr>
<tr>
<td>Apr 18</td>
</tr>
<tr>
<td>May 18</td>
</tr>
<tr>
<td>Jun 18</td>
</tr>
<tr>
<td>Jul 18</td>
</tr>
<tr>
<td>Aug 18</td>
</tr>
<tr>
<td>Sep 18</td>
</tr>
<tr>
<td>Oct 18</td>
</tr>
<tr>
<td>Nov 18</td>
</tr>
<tr>
<td>Dec 18</td>
</tr>
</tbody>
</table>

For nearly 30 years, University HealthSystem Consortium has supported university hospitals as a catalyzing force for performance improvement. UHC provides the comparative data, actionable insights, and innovative solutions that leaders need to achieve performance excellence in a rapidly changing health care environment.

For more information, please contact Barbara Anason at: anason@uhc.edu

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Financing health care in the United Arab Emirates

ABSTRACT: Newcomers to the United Arab Emirates (UAE) health care system often enquire about the way in which UAE health services are financed particularly when funding issues affect eligibility for treatment. The UAE ranks alongside many western counties on measures of life expectancy and child mortality but because of the unique population structure spends less of its national income on health. In the past as a wealthy country the UAE had no difficulty ensuring universal access to a comprehensive range of services but the health needs of the UAE population are becoming more complex and like many countries the UAE health system is facing the twin challenges of quality and cost. To meet these challenges new models of health care financing are being introduced. In this brief article we will describe the evolution of UAE health financing, its current state and likely future developments.

Newcomers to the United Arab Emirates (UAE) health care system usually want to learn about the population structure and the main causes of death and disease (Blair and Sharif 2012) so that they can better understand and meet the health needs of their patients. A common second area of enquiry concerns the way in which UAE health services are financed and this is of particular interest where funding issues affect eligibility for treatment.

In the UAE, in the past 40 years, health services have expanded and developed and there have been enormous improvements in population health. The UAE now ranks alongside many western counties on measures of life expectancy and child mortality (Table 1). The UAE is also a very wealthy country with a high per capita income but compared to countries of similar wealth it has a low expenditure on health both per capita and as a percentage of gross domestic product. One explanation for this is the unusual population structure in the UAE. Less than 3% of the population is aged over 60 years and half the population are expatriate males aged 20-59 so it would be expected that there would be a low use of health resources.

However the current and future health needs of the population are complex and, as in other countries, UAE decision-makers are now grappling with the twin challenges of maintaining quality while controlling costs. As in other countries, health system reform and structural change are being introduced and a new generation of health technocrats and advisers are overseeing efforts to ensure that the health system continues to develop to meet a unique set of circumstances.

Rising levels of morbidity amongst nationals will require the development of chronic disease management programmes that support screening, prevention and self-care and community based generalist services may be more effective than hospital based specialist services. The expatriate population also has unique health needs. This population has low morbidity so that ambulatory care, occupational health and preventative services may offer the greatest benefits. Good electronic health records will be required to avoid excessive and inappropriate use of services. This is all taking place in an environment where the hospital sector is growing strongly, fuelled by private sector investment and business cases predicated on population growth, high levels of morbidity, universal health insurance and medical tourism (Blair and Sharif 2011).

Since the UAE is a wealthy country, newcomers are often surprised that financial considerations dominate the health care debate. In this brief article, we will try and show why this is so by describing the evolution of UAE health financing, its current state and likely future developments.

Health care financing

The financing of health care so that all people have access to services and do not suffer financial hardship when paying for them has become a goal and priority for most countries, rich and poor. This goal is defined as universal coverage (WHO 2010) and while no single solution or policy option for universal coverage is applicable to all countries, certain principles apply.

In its simplest forms health care financing is the exchange of resources between the public, providers and third party administrators or governments. Revenues, or financial contributions, are collected either through general taxes (tax based), product specific taxes (on cigarettes, alcohol, airline tickets), or through a levy on employers, workers or the general population. Collection of revenues can be done in several ways that vary in complexity and equity. The most equitable
system requires the rich to subsidize the poor, the healthy to subsidize the sick and the young to subsidize the old. This ensures that no person has to choose between their physical health and financial health. In Germany for example, revenues are collected as a percentage of salaries, which ensures that high income individuals subsidize low income individuals, while in England, revenues from general taxes are used.

Once collected, revenues are pooled so that risks are shared and patients who are in the most need are always guaranteed access to services. The pooling of funds requires a feeling of strength. The seven Emirates that make up the United Arab Emirates (Abu Dhabi, Sharjah, Ajman, Umm al-Quwain, Ras al-Khaima, and Fujairah) are a federation of seven independent Emirates that vary in size, population and financial strength. The seven Emirates are: Abu Dhabi (which is also the capital of the country), Dubai, Sharjah, Ajman, Umm al-Quwain, Ras al-Khaima, and Fujairah.

Abu Dhabi
In 2006, the government of Abu Dhabi introduced mandatory private health insurance for all expatriate residents. Law No. (20) of 2005 (Health Authority Abu Dhabi, http://www.haad.ae), required a Basic Health Insurance Policy to be provided to limited income employees, those earning a monthly salary of AED 4,000 (USD 1,096) or less. The limit was later changed to AED 5,000 (USD 1,365). The benefits covered under this basic policy are shown in Table 3 and the exceptions are shown in Table 4.

Employees earning more than the minimum limit, may be provided with an Enhanced Health Insurance Policy which covers all the services in the basic policy plus additional benefits and higher limits over an expanded geographical area. Law No. (23) went into effect on 1 July 2006 for “Federal and local government authorities and establishments and government and quasi-government companies, and private companies with more than 1,000 employees”. The law was effective for all other types of employers from 1 January 2007.

The price or premium for the basic policy was set by the Health Authority Abu Dhabi, (http://www.haad.ae), and will consider provider payment and will examine health care financing in the UAE from a provider payment perspective.

### Table 1: Health and health service indicators, UAE and selected countries

<table>
<thead>
<tr>
<th>Indicator</th>
<th>UAE (per 10,000 population)</th>
<th>Saudi Arabia</th>
<th>Kuwait</th>
<th>Oman</th>
<th>Australia</th>
<th>Japan</th>
<th>Germany</th>
<th>UK</th>
<th>France</th>
<th>Netherlands</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total expenditure on health (%) of GDP</td>
<td>4.4</td>
<td>4.4</td>
<td>3.8</td>
<td>3</td>
<td>8.7</td>
<td>9.5</td>
<td>11.7</td>
<td>9.8</td>
<td>11.9</td>
<td>12</td>
<td>17.8</td>
</tr>
<tr>
<td>Out of pocket expenditure as % of private expenditure</td>
<td>34.9</td>
<td>37.6</td>
<td>21.2</td>
<td>21.2</td>
<td>32</td>
<td>17.7</td>
<td>23.1</td>
<td>15.9</td>
<td>22</td>
<td>14.3</td>
<td>52.3</td>
</tr>
<tr>
<td>Hospital beds (per 10,000 population)</td>
<td>19.3</td>
<td>9.4</td>
<td>17.9</td>
<td>19</td>
<td>29.9</td>
<td>21.4</td>
<td>36</td>
<td>27.4</td>
<td>34.5</td>
<td>28.6</td>
<td>24.2</td>
</tr>
<tr>
<td>Cell phones per 100 population</td>
<td>144</td>
<td>188</td>
<td>181</td>
<td>186</td>
<td>101</td>
<td>95</td>
<td>127</td>
<td>131</td>
<td>101</td>
<td>115</td>
<td>90</td>
</tr>
</tbody>
</table>


The remainder of this paper will consider provider payment and will examine health care financing in the UAE from a provider payment perspective.

### Provider payment
Provider payment systems vary widely between countries and this is surprising since the system that is chosen has a direct effect on use of services, total cost, productivity, innovation, quality and outcomes. Each system has advantages and disadvantages but a well designed scheme with regulatory controls can be a powerful tool for cost containment and quality improvement. The main types of provider payment systems are summarized in Table 2.

### Health care financing in the United Arab Emirates
The United Arab Emirates is a federation of seven independent Emirates that vary in size, population and financial strength. The seven Emirates are: Abu Dhabi (which is also the capital of the country), Dubai, Sharjah, Ajman, Umm al-Quwain, Ras al-Khaima, and Fujairah.

Employee earnings more than the minimum limit, may be provided with an Enhanced Health Insurance Policy which covers all the services in the basic policy plus additional benefits and higher limits over an expanded geographical area. Law No. (23) went into effect on 1 July 2006 for “Federal and local government authorities and establishments and government and quasi-government companies, and private companies with more than 1,000 employees”. The law was effective for all other types of employers from 1 January 2007.

The price or premium for the basic policy was set by the Health Authority Abu Dhabi, (http://www.haad.ae), and will consider provider payment and will examine health care financing in the UAE from a provider payment perspective.
Authority of Abu Dhabi (HAAD). HAAD is the government body charged with implementing the law (Health Authority Abu Dhabi, http://www.haad.ae/haad/Portals). The government of Abu Dhabi established the National Health Insurance Company, Damman, to be the sole underwriter and seller of the basic policy for a period of five years from the effective date of the law. The initial premium for the basic policy was set at AED 600 (USD 160) annually and was believed to be heavily subsidized by the government. However, no data has been published on the actual cost, or the loss or gain achieved by Damman in the first years after the introduction of the scheme. The responsibility for procuring and paying for health insurance for each employee and their spouse and up to three children rests with the employer.

In the past UAE nationals were always covered at public hospitals and clinics free of charge. Starting in May 2008, UAE Nationals working or living in the Emirate of Abu Dhabi, were given access to private hospitals and clinics also free of charge, through a very rich package of benefits. This package is referred to as Thiqa (meaning “trust” in Arabic). The Thiqa Health Insurance Program is also administered by Damman and is 80% underwritten by the Government of Abu Dhabi (Table 5) with the remaining 20% underwritten by the German re-insurance company Munich Re. HAAD sets the reimbursement prices for providers who are accepting basic product members. However providers can negotiate prices with payers for enhanced plans as a multiple of basic product rates up to a maximum of three times the basic rate. Thiqa reimbursement rates are set according to Damman’s most generous enhanced plan. So far reimbursement is on a fee for basis. However DRGs were introduced for the basic product in 2010 and for will apply for enhanced and Thiqa from 2011. Claims increased from 13 million in 2008 to 15 million in 2011 with on average 4–5 claims per insured member per year. The proportion of these claims that were for inpatient services decreased from 1.8% in 2008 to 1.3% in 2011 (Newhouse 1993).

The relationship between health insurance and utilization of health care is complex but it would appear that the introduction of mandatory health insurance in Abu Dhabi has increased health care service use. In addition even though prices are controlled by HAAD, providers can increase their activity levels to meet their income requirements. This means that the costs of the system could run out of control in a few years if payment continues to be on a fee for service basis. HAAD is planning to introduce capitation as a way to reimburse providers but the time scale for this is not known. Unless a risk adjusted capitation system is introduced the Abu Dhabi health financing system will be under threat. However, capitation should be linked to “rewards for outcomes” to prevent any potential decline in quality. Introducing both at the same time would be a wise regulatory move.

Dubai

Dubai has no compulsory health insurance requirement. However there are a significant number of people who already have private health insurance. It is reported that Dubai Health Authority (DHA), which regulates health providers in Dubai, conducted a survey in 2009 which estimated that over 400,000 people are insured. The population of Dubai in 2010 was about 1.9 million (Government of Dubai, 2010). Dubai government itself has about 150,000 members insured through several different schemes.

<table>
<thead>
<tr>
<th>Table 2: Provider Payment Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Salary</strong></td>
</tr>
<tr>
<td><strong>Capitation</strong></td>
</tr>
<tr>
<td><strong>Fee for service</strong></td>
</tr>
<tr>
<td><strong>Diagnosis-Related Groups</strong></td>
</tr>
</tbody>
</table>

Private health insurance plans give their members access to networks of private providers that vary in cost and comprehensiveness. The Dubai Government scheme, Enaya, grants its members access to private providers as well as all DHA facilities and clinics. The DHA has three major hospitals and many PHCs under its control. Some of those hospitals (such as Latifa Hospital formerly Al Wasl Hospital) provide the best quality care and are often the preferred provider for complex cases. For example the Rashid Hospital is the only hospital that accepts trauma cases.

Emirati citizens of Dubai have access free of charge to DHA services but they only account for about 9% of the population (170,000). To encourage members to seek access to DHA facilities, private insurance companies usually reimburse members a fixed amount for each night of admission. The Dubai Government Enaya programme has negligible cost sharing at DHA facilities but requires members to share in 20% coinsurance for private sector
medical services and prescription drugs. Private providers are all paid on a fee for service basis, even when the physician himself is a salaried employee. As a result, abuse of the benefits by both the providers and the members can occur. Since private providers can charge any amount that the market will bear for their services, the market has seen some exuberant price increases recently. For example in 2010, several big hospitals notified the insurance companies that they were increasing their prices by 30%, 40% or even in some cases 45%. This brought the insurance companies and Third Party Administrators (TPAs) together to try to organize a rejection of those demands.

Some high end private providers and hospitals claim that their high tariffs are justified since they offer American Board certified physicians, state of the art equipment and facilities and luxurious accommodation. This combination attracts a significant number of patients from neighbouring countries who come to Dubai for medical tourism. A comparison of prices and quality between Dubai and Abu Dhabi would be informative but no such comparison has been carried out. In Dubai, prices of a private insurance package vary widely based on the benefits offered and the network of providers included. Usually the wider the network, the richer the benefit and the higher the price. A limited benefit package, can be bought for

### Table 3: Abu Dhabi schedule of basic health care benefits

<table>
<thead>
<tr>
<th>1. Geographic coverage</th>
<th>The annual upper limit for the Basic Healthcare Services is AED 350,000 (USD 96,000) for each person.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Geographic coverage</td>
<td>1. Basic Health Insurance Services are offered inside the Emirate of Abu Dhabi through a network of health care service providers who are licensed by the Authority.</td>
</tr>
<tr>
<td>3. Inpatient basic health care services at authorized hospitals</td>
<td>2. The cover in other Emirates includes medical emergencies only.</td>
</tr>
<tr>
<td>4. Outpatient basic health care services in authorized hospitals and health centres</td>
<td>3. Health care services for emergency cases; transportation services for medical emergencies inside the Emirate of Abu Dhabi by an authorized party.</td>
</tr>
<tr>
<td>5. Deferred basic health care services</td>
<td>4. The upper limit for the cost of accommodating a person accompanying an insured child up to 10 years of age is AED 100 a day.</td>
</tr>
<tr>
<td>6. Decision period</td>
<td>5. The upper limit for the cost of accommodation of an accompanying person in the same room in cases of medical emergencies and at the recommendations of a doctor is AED 100 a day. The prior approval of the insurance company is required.</td>
</tr>
<tr>
<td></td>
<td>6. Inpatient maternity services of whatever nature provided that a prior approval is obtained from the insurance company and the patient pays a sum of AED 990 for each delivery.</td>
</tr>
</tbody>
</table>

1. Inpatient Basic Healthcare Services will be received in rooms of two or more beds provided that the authorized insurance company granted its previous approval.

2. The prior approval of the insurance company is required for tests, diagnosis, treatments and surgeries in hospitals for non-urgent medical cases.

3. Health care services for emergency cases; transportation services for medical emergencies inside the Emirate of Abu Dhabi by an authorized party.

4. The upper limit for the cost of accommodating a person accompanying an insured child up to 10 years of age is AED 100 a day.

5. The upper limit for the cost of accommodation of an accompanying person in the same room in cases of medical emergencies and at the recommendations of a doctor is AED 100 a day. The prior approval of the insurance company is required.

6. Inpatient maternity services of whatever nature provided that a prior approval is obtained from the insurance company and the patient pays a sum of AED 990 for each delivery.
have their own health financing models and projects. Residents of
The remaining Emirates

Table 4: Schedule of non basic (excluded) health care services (may be offered under the Enhanced Health Insurance Policy)

| 1. | Health care services, which are not medically necessary |
| 2. | All expenses relating to dental treatment, dental prostheses, and orthodontic treatments. |
| 3. | Domiciliary care; private nursing care; care for the sake of travelling. |
| 4. | Custodial care (includes non-medical treatment services or health-related services which are not seek to improve or which do not result in a change in the medical condition of the patient). |
| 5. | Services which do not require continuous administration by specialized medical personnel. |
| 6. | Personal comfort and convenience items (television, barber or beauty service, guest service and similar incidental services and supplies). |
| 7. | Health care services and associated expenses for replacement of an existing breast implant. Cosmetic operations which improve physical appearance and which are related to an injury, sickness or congenital anomaly when the primary purpose is to improve physiological functioning of the involved part of the body. Breast reconstruction following a mastectomy for cancer is covered. |
| 8. | Surgical and non-surgical treatment for obesity (including morbid obesity), and any other weight control programmes, services, or supplies. |
| 9. | Medically non-approved experimental, research, investigational health care services, treatments, devices and pharmacological regimens. |
| 10. | Health care services that are not performed by authorized health care service providers, apart from health care services rendered in a medical emergency. |
| 11. | Healthcare services, treatments and associated expenses for alopecia, baldness, hair falling out, dandruff or wigs. |
| 12. | Supplies, treatment and services for smoking cessation programmes and the treatment of nicotine addiction. |
| 14. | Treatment, services and surgeries for sex transformation, sterility and sterilization. |
| 15. | Treatment and services for contraception. |
| 16. | Treatment and services related to fertility / sterility (treatment including varicocelectomy / polyectomy ovary / ovarian cyst / hormonal disturbances / sexual dysfunction). |
| 17. | Prosthetic devices and consumed medical equipment, unless approved by the insurance company. |
| 18. | Treatments and services arising as a result of hazardous activities, including but not limited to, any form of aerial flight, any kind of power-vehicle race, water sports, horse riding activities, mountaineering activities, violent sports activities such as auto, boxing, and wrestling, burgers jumping and any professional sports activities. |
| 19. | Growth hormone therapy. |
| 20. | Costs associated with hearing tests, vision corrections, prosthetic devices or hearing and vision aids. |
| 21. | Mental health diseases, in patient and out patient treatments, unless the condition is a transient mental disorder or an acute reaction to stress. |
| 22. | Patient treatment supplies (including elastic stockings, ace bandages, gauze, syringes, diabetic test strips, and like products; non-prescription drugs and treatments, excluding such supplies required as a result of health care services rendered during a medical emergency). |
| 23. | Preventive services, including vaccinations, immunizations, allergy testing and desensitization; any physical, psychiatric or psychological examinations or testing during these examinations. |
| 24. | Services rendered by any medical provider relevant to a patient for example the insured person and the insured member’s family, including spouse, brother, sister, parent or child. |
| 25. | Enteral feedings (via a tube) and other nutritional and electrolyte supplements, unless medically necessary during treatment. |
| 26. | Health care services for adjustment of spinal subluxation, diagnosis and treatment by manipulation of the skeletal structure, by any means, except treatment of fractures and dislocations of the extremities. |
| 27. | Health care services and treatments by acupuncture; acupressure, hypnosis, massage therapy, aromatherapy, homeopathic treatments, and all forms of treatment by alternative medicine. |
| 28. | All Health care services and treatments for in-vitro fertilization (IVF), embryo transport; ovum and male sperms transport. |
| 29. | Elective diagnostic services and medical treatment for correction of vision. |
| 30. | Nason sepsis deviation and nasal resection. |
| 31. | All chronic conditions requiring hemodialysis or peritoneal dialysis, and related tests/treatment or procedure. |
| 32. | Treatments and services related to viral hepatitis and associated complications, except for treatment and services related to Hepatitis A. |
| 33. | Birth defects, congenital diseases for newborns and/or Deformities unless life threatening. |
| 34. | Health care services for senile dementia and Alzheimer’s disease. |
| 35. | Air or terrestrial medical evacuation except for emergency cases or unauthorized transportation services. |
| 36. | Circumcision health care services. |
| 37. | Inpatient treatment received without prior approval from the insurance company including cases of medical emergency which were not notified within 24 hours from the date of admission. |
| 38. | Any inpatient treatment, tests and other procedures, which can be carried out on outpatient basis without jeopardizing the insured person’s health. |
| 39. | Any test or treatment, for purpose other than medical such as tests related for employment, travel, licensing or insurance purposes. |
| 40. | All supplies which are not considered as medical treatments including but not limited to: mouthwash, toothpaste, sponges, antiseptics, milk formulas, food supplements, skin care products, shampoos and multivitamins (unless prescribed as replacement therapy for known vitamin deficiency conditions) and all equipment not primarily intended to improve a medical condition or injury, including but not limited to air conditioners or air purifying systems, arch supports, convenience items / options, exercise equipment and sanitary supplies. |
| 41. | More than one consultation or follow up with a medical specialist in a one-year time period. |
| 42. | Health services and associated expenses for organ and tissue transplants, embryo transport; ovum and male sperms transport. |
| 43. | Services and educational programme for handicaps. |
| 44. | Unauthorised transportation services. |

AED 700 (less than USD 200) for a full year coverage. While a high end package that provides cover in the US, Canada and Europe in addition to the UAE would be AED 15,000 (USD 4,064) yearly. This is slightly lower than similar coverage in the USA which is the most expensive country for private health insurance. The DHA has discussed mandating private health insurance coverage for all residents of Dubai. However it is not clear when this will be implemented.

The remaining Emirates

AED 25 (USD 7) for children to AED 100 (USD 28) for adults. Expatrates on the other hand are required to buy the card, which
is a requirement for their residency visa every year and it provides them with access to services at a 50% discount. However, the requirement for a card is not enforced. Additionally, most services at MOH hospitals and clinics have no official price and thus are given for free with a valid card, or are inexpensive.

The Ministry of Finance has been working on a compulsory health insurance law that would cover all residents of the UAE. However, it is assumed that any law passed at the Federal level would not conflict with the health care financing already in Abu Dhabi and possibly with Dubai’s future plans.

The draft law stipulates mandatory private health insurance for all residents of the UAE including Emiratis. It also stipulates a mandatory basic benefits list that would be covered at all private and public providers. The list of benefits has changed over time and is currently not available in its final form. A list of exclusions has also been included in the draft law.

It is anticipated that the employer would be responsible for purchasing the basic benefits package for his employees and their dependents. The government would be responsible for paying to cover basic benefits at both private and public providers for Emiratis. However, any benefits in excess of these would only be fully covered at public providers, unless no public provider offers the service, in which case the government would pay for it at a private provider. The draft law proposes a Health Insurance Authority whose role is to enforce the law, resolve any disputes and issue regulations. The Health Insurance Authority would also regulate prices for services offered as basic benefits and providers would be obligated to accept those tariffs as payment in full. The draft law allows for employers and individuals to purchase extra insurance coverage to increase the benefits, the limits, the geographical area or any other enhancements. It appears that providers would be paid on a fee for service basis although the draft law does not give details of this.

Conclusion
Private mandatory health insurance is still in its infancy in the UAE. It is very important for policy-makers in the country and in each Emirate to continue to compile and publish data on health service financing and health service utilization. This will allow them to judge whether the current funding model is the most appropriate one to meet the health needs of the UAE now and in the future.

Nabila Fahed Taha is the Managing Director & Chief Actuary at Dubai Health Authority. Prior to that, Ms Taha was the Director of Actuarial Analysis at the Dubai Health Authority where she led Enaya, the Dubai government employee health insurance programme with approximately 90,000 members. In that role, she successfully coordinated the enrolment of 38 Government agencies with a TPA, in addition to negotiating for better provider discounts, review of the benefits, performing actuarial analysis and financial projections as well as review of large claims. Previously, Ms Taha was a Managing Director in a consulting firm in Lebanon and has had a long successful career as an actuary in the United States of more than 17 years, first in property and casualty insurance including all major lines of insurance such as automobile, homeowners, general liability, inland marine, and workers’ compensation. She also has extensive work experience of more than nine years in the health insurance industry. Ms Taha has a Bachelors degree in Mathematics/Actuarial Science from Pennsylvania State University. She is also an Associate of the Society of Actuaries (ASA) and is a Member of the American Academy of Actuaries (MAA).

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Résumés en Français

Reconfiguration des processus de vérification, marquage du site et temps mort préopératoires pour la sécurité des patients

Dans cet article, nous décrivons notre périple hospitalier autour de la mise en application du protocole OMS standardisé des High 5s pour la prévention des erreurs de procédure et de site en chirurgie. Nous expliquons comment nous avons incorporé ce protocole dans notre système en révisant la liste aide mémoire préexistante, en reconfigurant les processus existants concernant la vérification préopératoire, le marquage du site et le temps mort (time-out) au Major Operating Theatre (MOT), et en prévoyant des vérifications et retours d’information pour garantir une conformité effective. Nous réfléchissons aussi à l’importance du leadership et du soutien ministériel, l’évaluation des progrès et le peaufinage de la pratique dans chaque discipline dans le but d’améliorer la sécurité du patient au sein de l’hôpital.

Programme d’entendance des antimicrobiens: quel passé, quel avenir ?

Le mésusage et l’abus d’antibiotiques sont largement documentés parmi les principales causes d’émergence et de transmission d’organismes poly-pharmaco-résistants (multi-drug resistant organism, MDRO). La résistance aux antimicrobiens a des conséquences graves sur l’augmentation de la morbidité, de la mortalité et du coût des soins médicaux. Pour faire face à la menace de résistance aux antibiotiques qui s’est considérablement aggravée depuis une dizaine d’années et le très faible nombre de nouveaux antibiotiques arrivant sur le marché, l’Hôpital Princess Margaret a créé un comité de pilotage constitué de représentants de haut niveau du service de pathologie, de microbiologie et de pharmacie pour élaborer un programme d’intervention intitulé Programme d’utilisation intelligente des antibiotiques (Smart Use of Antibiotics Program, SMAP) qui offre des conseils pour un usage judicieux des antimicrobiens. Grâce à des efforts concertés et le soutien des gestionnaires hospitaliers et des cliniciens de première ligne, SMAP a réussi d’importantes économies financières et une forte baisse de l’usage intempestif des antibiotiques. Il n’y a eu aucun effet adverse sur les patients du point de vue morbidité et mortalité.

Les consommateurs s’expriment pour l’amélioration des services hospitaliers

Les sondages de satisfaction des patients contribuent fortement à l’identification de moyens d’améliorer les services d’un hôpital. En définitive, cela se traduit par une amélioration des soins et des patients plus heureux. Qui plus est, cela montre au personnel et à la collectivité que l’hôpital prend la qualité au sérieux et recherche les moyens d’améliorer ses services. L’article explique comment le sondage « La voix des consommateurs » (VOC) peut être utilisé comme moyen d’améliorer les services. Le suivi régulier des cotes
VOC est indispensable pour combler le fossé entre les services prodigués et les attentes des patients. Le présent sondage présente les diverses initiatives menées pour amener les cotes VOC de 4,40 à 4,77 (sur échelle de 5) dans l’hôpital objet de l’étude.

Une étude sur la satisfaction des patients dans un hôpital de soins tertiaire de Hyderabad (Inde)

Le secteur de la santé est en pleine mutation. La transformation rapide doit répondre aux besoins croissants et aux exigences de leurs patients. Les hôpitaux et les fournisseurs de soins de santé sont en train de modifier leur vision des patients : ils incitent avec peu d’options en santé les patients à considérer les consommateurs instruits qui ont beaucoup de demandes de service et d’options d’assistance. Les organismes de santé modernes ont identifié le patient comme un consommateur final de services hospitaliers et comprennent l’importance des études sur la satisfaction des patients, ceux-ci devient même un point de référence. Cette étude est de nature exploratoire. C’est une étude transversale conçue pour recueillir des données concernant l’attitude des patients, pour évaluer leur niveau de satisfaction face à la facilité des soins, les services offerts par l’hôpital, l’attitude du personnel et l’état général de l’hôpital. L’étude a révélé un grand nombre d’informations sur l’importance des attributs pour les médecins, les infirmiers et les hôpitaux et qui répondent aux attentes du patient et conduisent à la satisfaction.

Journal Médical : la télé-interprétation

La Thaïlande est devenue l’une des principales plaques tournantes du tourisme médical, comme en témoigne le nombre croissant de patients internationaux se rendant au centre hospitalier de Bangkok (Bangkok Hospital Medical Centre, BMC). En conséquence, le BMC a créé un service d’interprètes pour assurer la traduction pour les patients non anglophones. Avec le temps, le service d’interprètes fonctionne bien souvent à sa capacité maximum pour assurer un service rapide à la demande, ce qui aboutit à de longs temps d’attente et à des retards de l’accès aux traitements. Le BMC a anticipé la nécessité de mettre en place un système de télé-interprétation en faisant appel à la technologie de la vidéoconférence pour assurer une traduction efficace dans l’environnement médical lorsque le retard d’accès au traitement n’est pas généralement acceptable. La télé-interprétation permet aux médecins de choisir simplement une icône « langue » sur leur téléphone Wi-Fi IP pour se connecter immédiatement à un interprète. Après sa mise en place en 2009, l’indice de satisfaction général des consommateurs pour le service d’interprétées est passé de 64,5% au premier trimestre à 85,5% au troisième trimestre 2011. Le système de télé-interprétation est actuellement le qui s’approche le plus du service d’interprétation face à face.

Policy section

Le financement de la santé aux Emirats Arabes Unis

Les nouveaux arrivés dans le système de santé des Émirats Arabes Unis (EAU) demandent souvent sur la façon dont les services de santé sont financés, surtout lorsque les questions financières affectent l’admissibilité aux traitements. Les Émirats Arabes Unis se classent au même niveau de beaucoup de pays occidentaux en ce qui concerne l’espérance de vie et la mortalité infantile, mais en raison de la structure particulière de sa population ils dépensent moins de leur revenu national en la santé. Étant un pays riche, par le passé les Émirats n’avaient aucune difficulté à assurer un accès universel à un large éventail de services, mais les besoins de santé de la population des EAU est de plus en plus complexe et comme beaucoup d’autres pays, le système de santé dans les Émirats Arabes Unis est confrontée au double défi de la qualité et du coût. Des nouveaux modèles de financement de la santé ont été introduits afin de relever ces défis. Dans ce court essai, nous allons décrire l’évolution du financement de la santé des Emirats Arabes Unis, son état actuel et les probables développements futurs.
Reingeniería de procesos de verificación preoperatorios, marcado del lugar y tiempo de espera para la Seguridad del Paciente (Singapur)

En este artículo se describe el periplo de nuestro hospital en la implementación del protocolo de la OMS High 5s la cirugía correcta en el lugar del cuerpo correcto. Se discute cómo incorporamos el protocolo en nuestro sistema mediante la revisión de la lista de verificación pre-existente, la reingeniería de los procesos existentes en materia de verificación pre-operatoria, el marcado del lugar y tiempo de espera en el Teatro Principal de funcionamiento (PPF), y la realización de la auditoria y la retroalimentación de para asegurar el cumplimiento efectivo. También reflexionamos sobre la importancia del liderazgo y el apoyo del ministerio, la evaluación comparativa y la adaptación de la práctica de cada disciplina en la búsqueda de mejorar la seguridad del paciente dentro del hospital

Un estudio de censo que explora la necesidad de la formación de enfermeras que trabajan en el Hospital de Kwong Wah y en el Hospital TWGH Wong Tai Sin. (Hong Kong)

Como parte del plan de desarrollo profesional estratégico para las enfermeras, se realizó un análisis sobre las necesidades de capacitación en el periodo de agosto de 2011 a febrero de 2012, bajo la forma de investigación descriptiva con diseño de encuesta. El objetivo era apoyar al personal de enfermería en su necesidad de perfeccionamiento bajo una perspectiva profesional y promover el compromiso del personal. Se empleó el muestreo consecutivo; todas las enfermeras de tiempo completo trabajando en WTSH & KWH fueron reclutadas y se les invitó a completar un cuestionario auto administrado. Se propusieron conclusiones y seguimiento de estrategias basándose en los resultados. La administración había construido un ambiente de aprendizaje sostenible para las enfermeras de KWH y WTSH en el plan de desarrollo profesional 2012-2015.

El aumento de la productividad mediante la reducción de la duración promedio de la hospitalización (ALOS) en los Hospitales Apollo Gleneagles , Calcuta (India)

La duración de la hospitalización después de una intervención quirúrgica o de un procedimiento determina la eficacia de la atención y la rehabilitación post-operatoria. El aumento de la estadía está asociado con comorbididades, complicaciones y errores en la prestación de la atención. El Apollo Hospitals Group diseñó el sistema Excelencia Clínica Apollo - 25 parámetros en el año 2009, incluido el seguimiento de la duración de la hospitalización para cirugías mayores y procedimientos. Los Hospitales Apollo Gleneagles Hospitales es un hospital polivalente con 510 camas, con más de 2.500 hospitalizaciones y cerca de 1.200 cirugías al mes. La duración promedio de la estancia en el Hospital Apollo Gleneagles era mayor (5,4 días) que la estadía de referencia de 4,8 días del Apollo Hospital Group cuando comenzó el proyecto. Este proyecto se llevó a cabo en el año 2011 de enero a septiembre.

Programa de Administración de antimicrobianos: ¿de dónde venimos ... ¡a dónde vamos? (Hong Kong)

El mal uso o el uso excesivo de antibióticos ha sido ampliamente documentado como una de las principales causas de la aparición y transmisión de organismos resistentes a múltiples drogas (MDRO). La resistencia a los antimicrobianos plantea un impacto significativo en el aumento de la morbilidad, la mortalidad y el costo de la atención sanitaria. En respuesta a la amenaza de la resistencia a los antibióticos que se ha incrementado dramaticamente en los últimos diez años y a los escasos nuevos antibióticos en proyecto, el Hospital Princess Margaret estableció un Comité Directivo con representantes de alto nivel de los departamentos de Enfermedades Infecciosas, Microbiología y Farmacia para elaborar un programa de intervención llamado Uso Inteligente del Programa de Antibióticos (SMAP) para ofrecer orientación sobre el uso prudente de los antimicrobianos. Con gran esfuerzo y el apoyo de la dirección del hospital y del cuerpo médico de primera línea, el SMAP ha conseguido ahorrar monedarios y la reducción del uso innecesario de antibióticos. No hubo resultados adversos de pacientes en términos de mortalidad y morbidad.

La voz del cliente-Un guía para mejorar el servicio (India)

Las encuestas de satisfacción de los pacientes son de gran ayuda para identificar la forma de mejorar los servicios de un hospital. En última instancia, eso se traduce en una mejor atención y en pacientes más felices. Por otra parte, muestra al personal y a la comunidad que el hospital toma en serio la calidad y que está buscando otras maneras de mejorar sus servicios. El artículo
describe cómo la encuesta “la Voz de la Encuesta del Cliente (VOC) se puede utilizar como una herramienta para mejorar los servicios. El control regular de las puntuaciones de la VOC es esencial para minimizar las brechas entre la prestación de servicios y las expectativas del paciente. El presente estudio muestra las diferentes iniciativas en el marco adoptado para mejorar las puntuaciones en el hospital de VOC de los previos 4,40 puntos a 4,77 (en una escala de 5 puntos) durante el estudio.

Un estudio sobre la satisfacción de los pacientes en un Hospital de cuidado terciario de Hyderabad (India)
La industria de la salud está cambiando rápidamente. La rápida transformación debe satisfacer las crecientes necesidades y demandas de sus pacientes. Los hospitales y los proveedores de salud están pasando de ver los pacientes como inútiles con pocas opciones de salud a consumidores educados que tienen muchas demandas de servicio y opciones de asistencia disponibles. Las organizaciones de salud modernas han identificado al paciente como un consumidor final de los servicios de hospital y entienden la importancia de la satisfacción del paciente, estableciendo la satisfacción del paciente como un punto de referencia. El presente estudio es de naturaleza exploratoria. Un estudio transversal destinado a recoger datos con respecto a la actitud de los pacientes, a evaluar sus niveles de satisfacción hacia los servicios que se ofrecen en el hospital, la actitud del personal y el estado general del hospital. El estudio reveló muchas informaciones con respecto a los atributos que son importantes para los médicos, las enfermeras y el hospital que coincidan con la expectativa del paciente y conduzcan a la satisfacción.

Medical Journal: Servicio de Tele-intérprete (Tailandia)
Tailandia se ha convertido en una de las principales plataformas giratorias del turismo médico, como se ha reñefijo en el creciente número de pacientes internacionales visitando el Bangkok Hospital Medical Center (BMC). En respuesta, se ha establecido un departamento de interpretaciones en el BMC para proporcionar traducción para los pacientes que no hablan inglés. Conforme avanza el tiempo el Departamento de intérpretes con frecuencia alcanza su máxima capacidad para suministrar un servicio rápido a la demanda, dando por resultado largos tiempos de espera y retrasos en el tratamiento médico. El BMC ha previsto la necesidad de implementar un sistema de Tele-interprete mediante la tecnología de videoconferencia para proporcionar una traducción eficaz en el ámbito médico donde generalmente no se toleran las demoras. La Tele-interpretación permite que los médicos sólo tienen que seleccionar un ícono “Idioma” en su teléfono IP Wi-Fi para conectarse al instante con un intérprete. Después de la implementación en 2009, el índice general de satisfacción del cliente para el Departamento de intérpretes aumentó de 64,5% en el primer trimestre a 85,5% en el tercer trimestre de 2011. El sistema de Tele interpretación es actualmente la aproximación más cercana a una interpretación frente a frente.

El financiamiento de la salud en los Emiratos Árabes Unidos
Los recién llegados al sistema de salud de Emiratos Árabes Unidos (EAU) a menudo preguntan sobre la forma en que los servicios de salud de los EAU se financian sobre todo cuando las cuestiones de financiación afectan la elegibilidad para recibir el tratamiento. Los Emiratos Árabes Unidos se alinean al lado de muchos países occidentales sobre las medidas de esperanza de vida y mortalidad infantil, pero debido a la estructura de población única gasta menos de su ingreso nacional en salud. Siendo un país rico, en el pasado los Emiratos Árabes Unidos no tuvieron ninguna dificultad para garantizar el acceso universal a una amplia gama de servicios, pero las necesidades de salud de la población de los EAU es cada vez más compleja y como muchos otros países el sistema de salud de los Emiratos Árabes Unidos se enfrenta al doble reto de la calidad y el costo. Para enfrentar estos desafíos se están introduciendo nuevos modelos de financiación de la salud. En este breve ensayo describiremos la evolución del financiamiento de la salud de los Emiratos Árabes Unidos, su estado actual y la probable evolución futura.
Who We Are
Founded in 1929, the International Hospital Federation (IHF) is the leading global body representing public and private national hospital and healthcare associations, departments of health and major healthcare authorities, with members from some 100 countries.

Our vision and objectives
The founding philosophy of the IHF is that it is the right of every human being, regardless of geographic, economic, ethnic or social condition, to enjoy the best quality of health care, including access to hospital and health care services. By promoting this value, the IHF supports the improvement of the health of society.

The objective of the IHF is to help international hospitals and healthcare facilities work towards improving the quality of the services they deliver to the population regardless of the ability of the population to pay. The IHF recognizes the essential role of hospitals and health care organisations in providing health care, supporting health services and offering education.

The IHF is a unique arena in which all major hospital and health care associations are able to address and act upon issues that are of common and key concern.

What IHF Accomplishes
Projects aimed at supporting and improving delivery of hospital and healthcare services.
Regular and extensive collaboration with governmental and non-governmental organisations in developing health systems.
Creation of “knowledge hubs” through its international conferences, education programmes, information services, publications and consultations.
In official relations with the World Health Organization (WHO) and the Economic and Social Council of the United Nations (ECOSOC), it is strategically positioned as a bridge between IHF members, the United Nations and the global health sector.

2013-2014 Corporate Partnership Programme
Supporting collaboration, ideas and innovation in global healthcare

What Is the Corporate Partnership Programme?
The IHF Corporate Partnership Programme, launched in 2009, is an opportunity presented to major corporations seeking to join IHF members in working to improve hospital and healthcare performance around the world.

Partnership is open to a limited number of companies who are fully engaged in the global health sector and have a good reputation as providers. Affiliation with this Partnership Programme gives a strong signal to the global community that the Corporate Partner is a major world player in the hospital and healthcare sector.

The Partnership package provides access to hospital and healthcare decision makers from around the world. The Programme provides an exclusive opportunity for relationship building and sharing of ideas and experiences between corporate leaders and executives in the hospital and healthcare sector. Dialogue through this platform will ultimately introduce new ideas and expand knowledge in the healthcare market.

The benefits of the Programme are designed to maximise interaction between actual and potential clients through a “one-stop shop” approach.

Opportunity to ultimately create a corporate leadership body, to act as a neutral platform for wide-ranging intra-industry discussions on issues of mutual concern beyond and outside of traditional parameters of marketing in order to foster collaboration and enhance confidence in commercial relations in the health sector as well as performance and quality of services and life to the community at large.

Becoming a Corporate Partner

Contract Terms
Payment covers a calendar year period of: 1 January – 31 December (For the 2-year option, payment can be made on annual basis)
Letter of Agreement
The Corporate Partnership is established upon signature of a letter of agreement by representatives of both the International Hospital Federation and an authorised signatory of the Corporate Partner organisation.
Application
For additional information, please contact:
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2013 Corporate Partners
Meet IHF corporate partners

**Bionexo**
Bionexo is the center of a community comprised of over 15,000 players of the hospital business. Through our web platform, we integrate hospitals throughout the supply chain sector, focusing on business development and relationships. Established in 2000, in just 10 years, Bionexo was structured in Brazil, becoming the largest marketplace reference in the hospital industry and contributing significantly to the professionalization of the purchasing sector and growth of the healthcare market. The success of this innovative business model has led to Bionexo for Latin America and Europe, where also attained leadership in addition to export technology and implement a new concept in commercial transactions of organizations. Everything happened in a short time, just like businesses are made between the companies that integrate our platforms. This makes Bionexo the largest core of the hospital sector in Brazil. Pioneering and innovation, helping thousands of companies and hospitals. [www.bionexo.com.br](http://www.bionexo.com.br)

**DNV Business Assurance**
DNV Business Assurance, a world leading certification body, is part of the DNV Group; an independent foundation whose purpose is to safeguard life, property and the environment. With over 140 years’ experience in developing safety standards in high risk industries, we work with hospitals, healthcare organizations and other businesses to assure the performance and safety of their organisations, products, processes and facilities through accreditation, certification, verification, assessment and training. Within healthcare we are recognised as a leader in identifying, assessing and managing risk to mitigate harm to patients. Our 1,800 employees worldwide help customers build sustainable business performance and create stakeholder trust.

**Esri**
Esri is the world leader in GIS technology. Esri software promotes exploring, analyzing and visualizing massive amounts of information according to spatial relationships. Health surveillance systems are used to gather, integrate and analyze health data; interpret disease transmission and spread; and monitor the capabilities of health systems. GIS is a powerful tool for identifying health service needs. Esri software is extensively used by health organizations throughout the world, including the US Centers for Disease Control and Prevention (CDC), the World Health Organization (WHO), 127 national health ministries, and over 400 hospitals.

For more information, contact Christina Bivona-Tellez, CBivona-Tellez@esri.com. [www.esri.com/health](http://www.esri.com/health)
Ingersoll Rand, the world leader in creating and sustaining safe, comfortable and efficient environments, offers products, services and solutions that allow our customers to create healthcare environments that are an asset to life. We help establish the physical environment as the foundation of all that is done to take better care of patients and staff – optimizing patient outcomes and safety, operational efficiency and patient, physician and staff satisfaction. As a part of Ingersoll Rand, Trane and Ingersoll Rand Security Technologies provide a broad portfolio of energy efficient heating, ventilating and air conditioning systems, mechanical and electronic access control, time and attendance and personnel scheduling systems, architectural hardware, building and contracting services, parts support and advanced controls for health care buildings.

For more information, visit ingersollrand.com/healthcare.
IHF events calendar

2014

IHF

4th IHF Hospital and Healthcare Association Leadership Summit (By invitation only)
5–7 November 2014, Seoul Korea For more information, contact sheila.anazonwu@ihf-fih.org

2015

IHF 39th World Hospital Congress*
6–8 October 2015, Chicago, USA
For more information, contact sheila.anazonwu@ihf-fih.org

2016

IHF 40th World Hospital Congress*
Durban, South Africa For more information, contact sheila.anazonwu@ihf-fih.org

2017

IHF 41st World Hospital Congress*
November, Kaohsiung City, Taiwan
For more information, contact sheila.anazonwu@ihf-fih.org

*The IHF Governing Council adopted a decision for the World Hospital Congress to become an annual event as of 2015.

2013

MEMBERS

USA

American Hospital Association’s Leadership Summit
27–29 July 2013, San Diego Hyatt, CA
For more information http://www.healthforum.com/healthforum/html/conferences/13Summit/Summit_home.html

American Nurses Credentialing Center (ANCC) – National Magnet Conference
2–4 October 2013, Orlando, FL
For more information: http://www.anccmagnetconference.org/

University HealthSystem Consortium (UHC) – Annual Conference 2013
17–18 October 2013, Hyatt Regency Atlanta
Atlanta, Georgia
LUXEMBOURG

24th EAHM Congress
28 –30 November 2013, Kirchberg
For more information www.eahm-luxembourg2013.lu

SWITZERLAND

Congress 2013 H+
7 November 2013, Bern
For more information http://www.hplus-kongress.ch/index_fr.php

KOREA

Healthcare Congress
13 –15 November 2013
Grand Hilton Hotel Convention Center, Seoul

GERMANY

German Hospital Day (Deutscher Krankenhaustag)
20 –23 November 2013
Düsseldorf (on the occasion of the fair MEDICA)

COLLABORATIVE

Hospital Management Asia 2013
12 –13 September 2013, Bangkok, Thailand
For more information: http://hospitalmanagementasia.com

ISQua’s 30th International Conference
13 –16 October 2013
Edinburgh, Scotland
For more information: http://www.isqua.org/conference/edinburgh-2013

For further details contact: IHF Partnerships and Projects Manager
E-mail: sheila.amazonwui@ihf-fihi.org
Visit: http://www.ihf-fihi.org/Events
TRANSPARENCY IS OUR GREATEST TECHNOLOGY

For over one decade Bionexo has been offering the market the best solutions in electronic hospital purchases.

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**Mark Your Calendar**

**International Hospital Federation**  
**39th World Hospital Congress**

**ADVANCING GLOBAL HEALTH & HEALTH CARE**

October 6–8, 2015  
Chicago, USA

Exchange ideas and best practices with visionary healthcare leaders from around the world.

**Come to Chicago—A World-Class City**

Home to a vibrant healthcare market with 115 hospitals in the greater metropolitan area, including 15 teaching hospitals, Congress attendees will get a behind-the-scenes look at several leading health care organizations.

Enjoy top-rated restaurants, museums, entertainment and a shopping district known as “The Magnificent Mile.”

The **Hyatt Regency Chicago**—the program site—is a prime location with breathtaking skyline and Lake Michigan views.

More information will be forthcoming at [www.ihf-fih.org](http://www.ihf-fih.org) but for now, save the date!