

## Bangkok's Bumrungrad Hospital: Expanding the Footprint of Offshore Health Care

*It's been called the Mecca of medical tourism. For the past 10 years, Thailand's Bumrungrad International Hospital has been wooing patients from Boston to Bahrain with a combination of lower-cost, state-of-the-art medical care along with service worthy of a five-star hotel. In what seems far from the hustle and bustle of the streets of Bangkok, more than one million patients, including some 40% from over 190 countries, visit every year for treatment at Bumrungrad's high-tech, upscale facilities.*

*Patients certainly seem sold on the idea. Having become Southeast Asia's largest private hospital since opening its doors in 1980, the Thai stock exchange-listed company (with annual revenue of around US\$260 million) can't keep up with demand. Indeed, one of Bumrungrad's biggest challenges today is increasing capacity without decreasing quality. Plans are now under way to ramp up inpatient admission rates by as much as 30% over the next few years and double capacity for outpatients, while also expanding partnerships elsewhere in Asia.*

*But is this what will help offshore medical care go mainstream and gain the acceptance of national policy makers, major insurers and employers? As the U.S. and other wealthy countries grapple with escalating health care costs, it's a question that needs an answer sooner rather than later, says Mack Banner, CEO of Bumrungrad.*

*He believes the long-term signs are "positive" that this will happen, as long as hospitals like Bumrungrad keep the bar high with the same, if not better, standards of care and service found at U.S. and European hospitals. Joined by Kenneth Mays, the hospital's director of marketing, Banner recently met with Ravi Aron, a senior fellow with the William and Phyllis Mack Center for Technological Innovation at Wharton, to discuss what this and other recent trends mean for the future of global health care.*

*Below is an edited version of the interview.*

**Ravi Aron:** Can you trace the origins of Bumrungrad Hospital? Why was it set up? What was the impact of the Asian financial crisis, how has the business model changed and where are you now?

**Mack Banner:** Our hospital is a private hospital. We're 29 years old this year. Our hospital is known for the current building that we're in, which was opened on January 1, 1997. It cost us \$110 million to build and we borrowed \$65 million of that in U.S. dollar-denominated debt. Unfortunately, in July of that year, the Asian financial crisis began in Bangkok and ... the private sector demand for health care in Bangkok, in Thailand and pretty much around the region dried up. When we were dealing with a hospital facing almost insolvency at that time, the silver lining was that with the baht depreciating from 25 to \$1 to 50 to \$1, we became half price almost overnight for those paying for their care in U.S. dollars.

That prompted us to start marketing to patients in the surrounding area. That really began our foray into caring for international patients. Over about 10 years, we became

increasingly known for what's now called medical tourism. It was helped in a weird sort of way by the 9/11 crisis in 2001 after ... the United States put visa restrictions on a lot of people from the Middle East, as did Europe. It was just harder to get into the U.S. for a while and that prompted a lot of Middle Eastern patients who had been going to the U.S. ... to seek alternatives. They came to Bangkok and to our hospital. We saw about 12,000 Middle Eastern patients in 2001 and last year we saw over 100,000. So several events over the last 10 years have elevated our hospital's profile in the international medical community to where we now see -- out of [a total of] about 3,000 outpatients a day -- about 1,200 who are non-Thai. If you come into our lobby, it's sort of like going to Terminal 3 at Heathrow airport [in London].

International patients make up about 42% of our patient volume, but about 55% of our revenue because the patients who come to us from international settings ... come for a mix of procedures [though] a fair number of those are higher end procedures. They make up an important part of our overall patient base and we have developed services over the years to respond to their special requirements.

**Aron:** The fact that about 1,200 of your 3,000 patients are international means that your base of skilled clinicians -- doctors, lab technicians, ward nurses, etc. -- has to be of very high quality. I suspect many of your doctors are U.S. educated. Can you talk about the qualifications of your physicians? How do you recruit them? How do you keep them?

**Banner:** We are fortunate in Thailand generally in that there is a fairly good supply of well-trained medical personnel across the board -- medical staff, doctors, nurses and technicians. There is a very vibrant medical education system here in Thailand. For doctors, we had a real advantage when we opened this hospital in that there were a lot of Thai doctors who had gone to the U.S. in the 1990s to further their education. Some of them set up practices in the U.S., and when we opened our hospital, we offered an [opportunity] to come back and have a meaningful practice in the private sector in Bangkok....

We have about 1,100-plus doctors affiliated with our hospital. About 225 of those have obtained their U.S. board certification before they came back. We've got a rich diversity of specialties and of those 1,100 doctors, about 200-plus are full time and the remainder are mostly university professors practicing in one of the three leading medical universities in Bangkok. They practice here in our hospital in the evenings and on the weekends. We enjoy a fairly good pool of top specialists in Thailand and many of those specialists have both advanced U.S. training and experience, [while] others have European and Australian training and experience.

**Aron:** That would explain some of the reasons for your high quality. We will return to that in a moment. Let's talk about your global footprint. You mentioned a substantial number of patients who you're treating are from outside of Thailand. What are the major regions from which you attract patients and what are their reasons for coming to Bumrungrad?

**Kenneth Mays:** The top region is Southeast Asia, given that about 600,000 patients are Thai, which is still the majority of our patient volume. Then we have a large number of patients who are either expats in Thailand or the region or come from surrounding countries like Vietnam, Cambodia, Burma and Bangladesh, who are using us as a

regional center of excellence and for advanced treatment. They come to Bumrungrad maybe much in the same way as someone in the U.S. might fly to the Mayo Clinic or Johns Hopkins. Farther away from Bangkok, we get about 30,000 patients a year from North America, a little less than 30,000 patients from Europe and a little less than 30,000 from East Asia -- Japan, China and so forth. As Banner mentioned, we get over 100,000 patients a year from the Middle East and those are mainly the Gulf countries -- principally the United Arab Emirates, Qatar and Oman -- and growing numbers from Africa and some from Australia. Through June this year, we had patients from 191 countries and that's typical. We'll top out a little over 200, which [means that] at some point in the year we'll see a patient from about every country in the world.... They come to us for quality, for value and for access. There's a difference by region in terms of which of those reasons is important.

**Aron:** Please tell us about the reasons and the regions.

**Mays:** In Southeast Asia, as I said, they tend to come to us for quality reasons. [It's also the case for] the Middle East, Africa and emerging markets like Mongolia. Patients come to us who [can] afford advanced care [but] cannot find it at the hospitals in their country. If they need advanced treatment, they see us as a good option for that and ... we are maybe anywhere from two to six hours away ....

From the U.S., it's principally cost. We're anywhere from 50% to 80% less expensive for comparable procedures than the U.S. We will see people from the U.S. who are uninsured or underinsured and coming here for a heart or hip operation, making the difference between being able to afford that operation and still having some money left in their savings versus draining their life savings or just not being able to have an operation.

From Europe and other parts of the world where there are social medicine programs, we'll see some patients for access reasons. In other words, they may be on a waiting list for eight months to get a knee replacement. They're in pain in the meantime. So they can get [the operation] here right away.

I should add that I say quality and I mainly mean quality of the medical expertise. But to many people, quality of service is also very important. For example, from the Gulf countries, they come both because we have a perceived higher quality of medical expertise than their home hospitals and much better service.

**Aron:** One of the issues for somebody from North America, the European Union or the Middle East is going to a strange, faraway country. Most of them don't speak the local language. What do you do to help them overcome the fear of the unknown?

**Mays:** First, we have representative offices in about 22 countries. In many countries, they can talk to somebody in their country who speaks their language and who would be able to help coordinate their trip. Second, we have a website that helps people to not only get information and answer questions about coming to a hospital that's so far away that they've never seen, but also experience the hospital visually so they can get a feel for what it's like to be here and meet the doctors in terms of seeing their photos and [reading about] their backgrounds. Third, once they get here, we have 109 interpreters.

So there's going to be an interpreter who can help them in their language. Virtually all of our doctors speak English, but if they don't, we'll be able to help them with translation.

Very importantly, we have a group of about 25 doctors and nurses in something called IMCO, which stands for International Medical Coordination Office. They serve the needs of international patients and do case management. If you're coming here for a check-up, you probably don't need them. But if you're coming here for spine or heart surgery, of course there's a lot of coordination that needs to happen with your home doctor. Arrangements need to be made for after-care when you go back home and so forth.

**Aron:** In terms of reaching patients considering a bunch of alternatives when they're thinking of going abroad, what are the factors that drive the decision? Is it word-of-mouth from people who have been to Bumrungrad and have had a happy experience, or reports in the popular and trade press?

**Mays:** Word-of-mouth is really important. About 40% of our international patients are repeat patients ... or have heard about us from friends.

In 2002, we were the first hospital in Asia to get accredited by the Joint Commission. We saw that as a way to not only measure ourselves and make sure we were up to top quality standards, but also reassure international patients who are traveling thousands of miles to come here sight unseen. We were looking for the most powerful third-party endorsement of quality that we could get and the Joint Commission is of course the gold standard that accredits hospitals in the U.S. It reaccredits every three years ... [sending a] team of medical professionals [to look] under the cushions and around the backs of walls to make sure everything works the way it's supposed to.

**Aron:** Is there any informal or formal contact with physicians in some of the countries in which the patients originate from?

**Mays:** Mostly informal. Where we have representative offices -- Vietnam is a good example of this -- [they] will do a lot of outreach to local physicians and make sure they understand what we're capable of doing. For example, we have level-three neonatal [intensive care units] that can take care of infants who have serious problems after birth -- maybe a heart defect, maybe they need surgery. That's a very advanced thing that many countries just aren't capable of handling. We'll tell doctors that we have pediatric cardiologists who could do that surgery and we have this special intensive care unit for infants, so if they see that type of case, they know they have an option, which is to evacuate a patient to Bangkok.

**Aron:** You mentioned your website. Once patients have been authenticated and given deeper access to the site, there are a variety of things they can learn about the hospital, physicians, their afflictions, etc. Tell us about the information capabilities of your site.

**Mays:** We seem to do about four different things on the website. We want to give people factual information like doctor biographies, lists of specializations, descriptions of procedures, our accreditations, treatment costs and so on....

The second thing is we give them a lot of testimonials -- from journalists, patients, bloggers. There's a wealth of material. They can probably find somebody from their own

country who has made some comment about us. They can find links to YouTube, where patients have even made their own videos about their visits to Bumrungrad. So this is a way of getting them to hear from other people who have experiences of what they thought of us.

Third is what I said earlier about a visual experience. We have a lot of photo galleries and 360-degree panoramas of our rooms so patients can see what their rooms will look like.

The fourth thing is that they can make an inquiry or request an outpatient appointment using the website. The website is in Thai, English and Japanese and some short information pages are in other languages. It does serve our local market ... but the primary reason for the site is to help international patients who are trying to decide whether to invest in a trip, get on an airplane and come thousands of miles to Bumrungrad

**Aron:** On one of my visits there, I noticed that there was a whole floor of multilingual experts on the phone talking to individuals. So what goes on through the typical cycle of events, from when a patient calls Bumrungrad and is beginning to explore coming for a procedure to when he chooses a physician, is admitted, completes the procedure and leaves?

**Banner:** Depending on how they make their initial contact, they probably end up at our referral center. That's a team of about 16 to 20 who handle anywhere from 300 to 500 email inquiries everyday. They do that in conjunction with our International Medical Coordination Office, [which is] a group of about 20 to 25 doctors and nurses. When we feel [callers] aren't suitable candidates for travel, we try to advise against coming [but] for those who do come, we give a preliminary plan of how they would be diagnosed and what the treatment plan might be. Of course, we're very careful about emphasizing that the care for patients doesn't begin until they come here to Bumrungrad and are examined by a doctor.

Once they come here, their appointments have been prescheduled and any special needs in the way of interpreters, assistants, wheelchairs or whatever will have been identified. We have an airport meet and greet. We have an office at the airport that if we know their flight, we can meet them at the plane and escort them through customs and through passport control and put them on transportation to their hotel here either on our campus or surrounding our campus. Once they come for their doctor visit they are under the care of their attending doctor, but they have a supplemental coordinator [who is] a case manager from our International Medical Coordination Office.

In addition to the interpreters that Ken mentioned, we have a travel and visa office service so that in some countries, they get a 14-day visit visa, and if that ends up needing to be extended our folks will arrange for that with the Thai authorities. Then if they or their family members want to take a side trip while they are here, there's a complete travel office.

We have two hotels on our campus, which are fairly low priced. One of them is -- I guess you'd rate it about a three-star hotel -- very clean, basic. The other is maybe a four-star. Then surrounding the hospital, we have any number and all levels of accommodations to fit anybody's budget. So we've developed these services over the last 10 years and we're

not unique in having these services. Many hospitals that treat international patients have comparable services. I do think that we have the benefit of having treated so many international patients and [are dedicated] to constant improvement of these services and listening to feedback to develop what we hope are world-class levels of service across the board for our international patients.

**Aron:** At the heart of this phenomenon for a person who is interested in putting herself in the care of experts in a faraway country that she probably has never visited in her life is the issue of quality. There are a number of aspects of quality that I was given access to when I visited you folks. One of them is your Joint Commission International (JCI) certification. Were you the first hospital in Thailand to be JCI certified?

**Banner:** We were the first hospital in Asia to be JCI accredited in 2002 and we've been reaccredited three times. The JCI is the international arm of the Joint Commission on Accreditation of Health care Organizations (JCAHO), sort of the gold standard for accrediting hospitals and other health care institutions in the States. About 10 years ago, they launched an international division and began an international accreditation program. I think they have now accredited about 240-plus hospitals outside of the U.S. The standards they use are comparable to the standards for the U.S. but they are a little less U.S.-centric.

I've been through accreditations by the Joint Commission in the U.S. and overseas and they are comparable as to the dedication of the staff and the level of documentation regarding clinical care, the policies, procedures, processes, the quality of monitoring.

**Aron:** You have a suite of metrics that goes beyond what JCI specifies in its accreditation standards. Tell us about things like medical error and recovery rates. What do you measure and how do you compare with, say, the average American hospital?

**Banner:** We try to measure just about everything. We probably have 300 to 500 measurements. We have a TQM [Total Quality Management] office that works with our quality management committee on clinical measures -- very similar to what you have in the U.S. -- and they measure everything just like you said. Most of the quality measures [involve] the absence of things going bad. In other words, a medication error, infection rate, fall rate, unplanned readmission to the emergency room, unplanned return to the operating theatre, all those things. We measure them [much the way] you would in the U.S.

An underdeveloped feature of international medicine is the global comparability of outcome and quality measures, which would allow hospitals to benchmark themselves against leading hospitals in the world. The issue [has to do with] the definitions of how data are collected. It is absolutely key that you collect quality data using exactly the same definitions because if you're looking at [for example]... medication error rates, any number can occur. You need to be able to define the different types of medication errors and measure those so that you can compare them like apples and apples. We searched around for about two years for an international benchmarking standard that we felt was independent of any hospital, professionally run and included a cross-section of the world's best hospitals. We settled on the Maryland project.

It was a project started in the 1980s by the Maryland Hospital Association. It has since progressed into what is called the IQIP -- International Quality Indicator Project. We signed up for that this year. As far as we know, we were the first hospital in Thailand and one of the first hospitals in Asia to sign up for that. They sent their representatives in March this year to teach our team about how they define the quality parameters that they measure. It's another example of our quest to benchmark [ourselves with]... quality as well as outcomes indicators against the best hospitals in the world.

In addition, we constantly get inquiries from insurance companies exploring what we call the Global Care option, which means we're providing patients with the option of obtaining care in a foreign or international hospital as opposed to their local hospitals. Of course, [the insurers] need to do due diligence to see what the quality and outcomes indicators are for the hospitals that they might put on their provider list. So we're participating as much as we can with the various insurance inquiries as well as the IQIP program.

**Aron:** When I visited you for the first time a couple of years ago, you were exceeding the mean of numbers for North American hospitals of patient satisfaction survey scores, correct?

**Banner:** Last year, we subscribed to the Gallup opinion survey group, which has a database of over 100 hospitals worldwide [for which] they do three types of surveys -- patient, staff and doctor engagement. So, again, we wanted to benchmark ourselves and how we're doing at all of those against the world's best. We break down our patient groups into international, Thai and what we call local expats, [that is] non-Thais residing in Thailand, and that represents about 120,000 patients out of 1.1 million. For the international patients index, we're in the 94<sup>th</sup> percentile. We want to be above 90% for all three groups.

In another benchmarking exercise, our marketing group compared us with a benchmark that we had before and showed us at an 89<sup>th</sup> percentile versus about 67<sup>th</sup> percentile with the other metrics database.

**Mays:** That was what we did about a year ago before we went to Gallup. We asked a question in the same way that the question is asked in U.S. hospitals. It's a measure of whether you would recommend this hospital to a family member or friend; 89% of our international patients said that they would and the standard in the U.S. was 67%. So we were significantly higher.

People might have the perception that the local patients are less demanding than Americans. The opposite is actually the case. The Gallup survey [showed that] our Thai patients are more demanding and satisfaction surveys showed that they have higher expectations than international customers.

**Aron:** One of the challenges that large multispecialty hospitals face is the idea of subjecting medical and clinical experts to a regime of metrics and TQM discipline. It's something that hospitals, as you well know, wrestle with all the time. You have put in a very high-level regime both in terms of qualitative and quantitative metrics. What did it take to inculcate a culture of going by metrics, of constantly looking for business-processes improvements?

**Banner:** In comparing us with U.S. hospitals and hospitals around the world, we probably had the same experience that all hospitals go through in getting their medical staff to buy into these things. One way to look at it is that the metrics used in TQM and all of those are very similar to scientific methods and diagnostic processes doctors are familiar with. Doctors use their judgment when doing an assessment because they rely on the clinical data they get from a laboratory, the reports from their imaging. At the end of the day they're scientists. So we present our data [and say], 'Let's look at the conclusions we would reach from those data, the findings from those conclusions, and then [decide] what actions we take. Our quality management committee meets monthly and they have their metrics just like they do in the U.S. They have very active discussions about what does that data mean and what do we do about it.

And just like in the States, you get doctors at the meetings who talk about how that data relates to a patient they have seen and the complications of the real issues associated with that data. In that respect, it's pretty much like hospitals around the world. Some medical staff members get enthusiastic about the data, others less so. But we are fortunate in that a lot of our doctors have practiced in the U.S. so they can relate to the Joint Commission and the U.S. style of medical staff committee structure and peer reviews.

**Mays:** In terms of aligning the culture -- at least as long as I've been here -- the top three goals of the company are to satisfy patients, to satisfy doctors and staff, and [to pursue] continuous quality improvement. When we start our annual planning or when we evaluate ourselves, we always go back to those three things.

**Aron:** Do staff have any incentives [to strive] toward higher quality, especially in terms of continuous quality improvement?

**Banner:** This is a great question. We started an innovations program [and] we have town hall meetings that we initiated about two years ago at which we have open questions from staff. In the first town hall meeting, we had 500 questions. About 80% of them weren't real questions. They were, 'Why can't we do this? Why can't we do that? What about doing this?' So we developed an innovations program intended to solicit ideas from staff, evaluate them and then reward staff when they come up with innovations, both large and small. It's been in existence now for about a year and a half and had a slow kick-off, but over the last six months we had a ramp up and there are some quite innovative suggestions. We give them cash awards and we have a points program, sort of like a frequent flier thing where you collect points that are redeemed for gifts.

We also have a conference [showcasing quality improvement projects] every November. For this year's conference, we already have over 100 projects submitted, which will be whittled to about 20 finalists. We celebrate quality-improvement initiatives and projects that are taken on by either one department or cross-discipline teams. We also teach them about the research methodology in conjunction with the local university, so that they're not just improvement projects. Hopefully, they bring in world-class comparative data on whatever problem they're looking at. And then these folks are judged as to the quality of their [initiative], the outcomes they've been able to receive and the way they have methodically gone through the process.



These are two programs we have developed to reinforce the quest for what Ken was just talking about -- our second guiding principle to care for staff's welfare and development and our third guiding principle to constantly improve the quality of everything we do.

**Aron:** That sounds very interesting. One of the issues that often goes in lockstep with quality and processes is technical automation. You are a very data driven organization, as you pointed out, so the quality of data is all-important. Bumrungrad has often been referred to as the all-digital hospital, from the comprehensive databases containing information about patients -- everything from billing and medical history -- to digital images, X-rays of film, patient recommendations, pharmacological data, all of those things. Tell us about your information systems and your IT capabilities.

**Banner:** Our information system innovation began just before we opened the hospital. We spent a couple of years developing a one-source IT solution, or an enterprise solution. That's probably a different approach than what's been adopted by 98% of the hospitals around the world. We have one database, one system and one vendor to care for all of our IT needs. That system has turned out to be one of the key factors allowing us to see the number of patients that we do -- over 3,000 outpatients every day.

The system was originally a combination of digital data and a very sophisticated scan and sort [system for handwritten documents]. We had had analog data plus digital data -- what we used to call the H2000. In 2007, Microsoft was looking to enter the health care arena ... and it purchased the H2000 software from a company called Global Care Solutions. They renamed it Amalga HIS. As part of that transaction, we became a partner with Microsoft to develop some of the next generation of the software, which will be a totally digital version. And we are working in conjunction with them now on the features that make up the next generation of their program. We've identified 37 modules that are the core of the offering. We've got various teams working on all of those and some of them have already migrated [to the new modules]. We have different releases coming out, about two a year, [so that] over the next two years we will truly be a totally digital hospital.

**Aron:** How do you train your clinical and non-clinical folks to get the best out of the platforms?

**Banner:** I wish we had a magic formula. It's a work in progress, both in the system and feature designs. Once we have developed ... the structure of a particular feature and Microsoft has developed the programming and features, we've got 3,500 staff to train. We have a full education center and we bring in 25 to 30 people at a time over a period of two to three weeks ... just like you would have in any hospital. You set up 25 to 30 computers and you train them on the features during the test portion before you go live. In one sense, it's not different than what any hospital would go through in a new IT implementation. It's just that ours is an enterprise solution so it is run off one database as opposed to multiple programs that have to be consolidated by some sort of amalgamation program.

**Mays:** We talk to our colleagues in the U.S. and they're all facing the same challenge of getting doctors to enter things into computers. It's wonderful in theory. It makes your system more efficient. It makes it faster. It takes out a big source of errors. But it requires doctors to type in these things and it's not easy to get doctors to do that. It

could also take something away from the doctor-patient interaction if the doctor has his head buried in a computer rather than looking at the patient and having a dialogue with the patient.... You don't want that to happen either. Hospitals, not just our hospital but I think hospitals everywhere, are facing this challenge.

**Aron:** When I visited your hospital, I noticed that to assemble the unit medicine dosages, [you were using] a Swisslog robotic system and nicely calibrated business processes ... so that the platform and the process deliver the right kind of result. Tell us about the use of robotics in your pharmacological processes.

**Banner:** This is just one feature that has benefitted from the programming put in place with Microsoft in that we are able to go from CPOE -- computerized physician order entry -- for medication directly to Swisslog robot dispensing, which dispenses in unit doses. The robots also put the unit doses in the sequence in which the nurse should administer the medication.

We also put in ... bedside computer monitors and medication-administration stations [because] we're in the process of reinventing our campus and expanding our outpatient capabilities by almost 100% and inpatient capabilities by around 30%. By digitizing our hospital, our goal is to care for a substantially higher number of patients with increased personalization and patient safety because one of the main sources of medication errors are simple transcription errors by the pharmacist or nurse not being sure what the doctor wrote or said. These systems have been proven to help eliminate errors because they are either typed in or [identified by] a drop-down menu by a doctor before he selects the medication, dosage and route ... [This allows] us to deliver more medication to a higher number of patients and increase patients' comfort level that they're getting the right medication at the right time, the right dose and so on.

**Aron:** Let's discuss the sequence of events after a patient has had a procedural intervention, spent some time [recuperating] and is ready to go back home, whether it's the United Kingdom, Saudi Arabia or North America. Are there ways you help transfer medical information to the patient's physician so that the care continues?

**Banner:** The short answer is yes. That's what our International Medical Coordination Office [IMCO] does. [The 25 doctors and nurses in that office] prepare reports about the care that's been received here and will transmit the reports with the patients or electronically to the caregiver if authorized by the patient. In some cases, particularly for Middle Eastern patients, we have arrangements with government groups and they have their own medical panels that will have reviewed the patient and authorized the care. Our doctors coordinate with that medical panel and work with them [to show] what the patient received [and] what we recommend they need as follow-up, and then it's up to them to arrange that in their home country.

For patients coming here independently through our referral offices, it's best if a direct doctor-to-doctor relationship can be established with the referring doctor. Sometimes that's possible. Sometimes you just give the information to the patient and he or she passes it on to the primary doctor at home. But that primary doctor always has the option to call our hospital and work with our IMCO doctors if there's anything that is unclear, needs follow-up or needs more explanation.

**Aron:** You mentioned that you are trying to expand your capacity for outpatients and increase your admission rates by 25% to 30%. I looked at some of your facilities and hospitality, and they easily rival five-star hotels, with additional automation thrown in for doctors to have bedside information retrieval. What capacity constraints do you face and where do you see yourself going in the next 36 months or so?

**Banner:** We have select clinics that we haven't moved to our new building yet and we are suffering from overcrowding in those clinics. We have a master plan over the next two to four years to expand all our outpatient services. So we are making do in the short term with some temporary solutions, expanding into temporary areas and so on.

We've got five more floors in our new building and each of the floors has the capacity to take up an additional 30 examination rooms. Once we fill those floors, we feel that from a physical facility standpoint, we will have just about the right equilibrium of outpatient clinical examination rooms and inpatient beds to support our outpatient clinic and the specialties that make up the bulk of our inpatient load. We do have some physical restraints now, but it's a process of how soon we can outfit the rest of our outpatient center and expand some of our clinics. Now they are a little bit crowded due to the normal growth in patient volumes.

**Aron:** You mentioned that one of the reasons why medical errors increase is an increase in scale and scope of operations. You mentioned the programs that you have put in place for quality, soliciting ideas and innovations, as well as your heavy emphasis on accurate automation and information management capability. Can you give us an example of innovation and best practices that you have pioneered, which would give us insight into the kind of hospital you are?

**Banner:** I gave that some thought. Using an American analogy of let's say a football team, a lot of our focus is on basic blocking and tackling of how to actually deliver our services, finding out what the customer wants, and giving it to them as rapidly and effectively as we can. Every hospital in the world tries to do all those things [but] we exist in a far simpler environment than what our U.S. colleagues have to deal with.

[When] we sought out and got JCI accreditation in 2002, in one sense that was an innovation [just from the fact that] we sought it out and got it before any other hospital [did]. We couldn't have done that if we had not been doing the basic blocking and tackling of developing the systems in the first place. Our medical record system was innovative. Again, in 1997, when we opened this hospital, we chose a path that we thought was in our best long-term interest although it was unlike what other hospitals -- [particularly in terms of] the IT path -- were choosing. Again, that has turned out to be a beneficial innovation [aiding] our ability to see the number of patients that we do.

The IQIP sign-up for international benchmarking that we talked about is not revolutionary in and of itself, but it's consistent with our quest to constantly measure ourselves to see that we are, in fact, world class. So we are always looking at programs [such as IQIP]. And it's not just to get recognition. It's to put us through the rigors of an independent international professional organization, [which] will have [its] own standards.

In the case of the Joint Commission International, it has 1,200 measurable elements in its 13 chapters of standards. That provides us both the opportunity and challenge to

meet all the standards that any other hospital [has to meet]. The fact that we're meeting those is not revolutionary, but the fact is that we seek it out and we have a history of being one of the first hospitals outside the U.S. to look at it and constantly test ourselves [in] satisfying our patients and improving our doctors and staff and so on.

I'll give you a good example of how we are approaching the next generation of medical innovation and that's stem cell technology.... Stem cell technology and applications are widely perceived to be the next generation of medical advances. There are fundamental ways of approaching it. You can do it in the scientific method that [involves] clinical trials, institutional review boards and ethics testing by independent parties.... We set up a steering council to ensure that our doctors follow [this] method ... so that when [innovations] are broadly moved from research labs to clinical applications, we will be positioned at the forefront of when they have passed through the peer review process and are accepted treatments.

There are other hospitals, primarily outside of the U.S., that are not taking that path. They are [pursuing] more experimental uses of stem cell technology. We are not. Everything we do with any advanced technology is run through our institutional review board and only incorporated into our practice after it has gone through scientific peer review.

**Aron:** Let's move on to the business environment of offshore health care. Bumrungrad was one of the first hospitals in Asia -- perhaps the first in Thailand -- to set up a partner program with a large insurance firm in the United States -- Blue Cross Blue Shield of South Carolina. Can you tell me more about this?

**Banner:** We think we were the first hospital. The gentleman who was the driver behind that -- a fellow named David Boucher -- was on a private vacation in Thailand, visited our hospital and ended up staying about two or three days. He did his own Joint Commission type of survey.... He told us what he was exploring and who he was and everything, and we said fine. We put him in scrubs and he went into the operating theatre. We showed him our systems and what we had. It took him about a year from his initial visit to convince Blue Cross of South Carolina to develop a product that would provide what we call the Global Care Option, which other insurance companies are exploring. While we have not seen a large number of patients out of this -- we think the reasons why are mostly U.S-centric -- the global option may gain some traction and become a product offering that many U.S. and European insurance companies incorporate into their policy offerings.

**Aron:** For offshore health to enter the mainstream ... it is important to structure payment options, as you pointed out, as part of the many offerings that insurance companies put on the table before consumers. What are the barriers? Why are insurance companies in the United States and the European Union slow to embrace the global health care financing option?

**Banner:** You probably need to speak with the insurance companies to get their view. Our perception is that the main barriers are regulatory and legal [as well as] the perception that if individuals go to a foreign country to get a procedure, they accept that they are putting themselves in the hands of a foreign hospital and jurisdiction if there is some sort of dispute or allegation of medical misadventure, malpractice, negligence, whatever.... I

think an individual will know that. If an individual is sent somewhere by an insurance company and something goes wrong, their recourse becomes to sue that insurance company. Generally, the judicial relief and awards that would be afforded in a U.S. court for medical malpractice are astronomically higher than the relief available in most foreign jurisdictions, and it's basically proportional to the cost savings of when you go overseas.

I don't think insurance companies would be culpable ... in a U.S. jurisdiction [but] they aren't comfortable with that yet. Our view is that for a select group of procedures, and that's probably 10 to 20 of the higher cost procedures, the savings are so great and the quality of offerings by hospitals like ours are at a standard that they can figure out a way to insure themselves if they are faced with a legal dispute in their own jurisdiction in the U.S. That has [largely not] happened yet.

Some products have been introduced that we think show promise, but it's the insurance companies and large employers that need to get comfortable with them. Then it becomes a matter of how many patients do they think would go overseas and how comfortable would they be with provisions to address what could be a fairly significant financial exposure.

The other thing is that it is not suitable for all patients to go overseas [for] physical- and health-related reasons [and some] people just don't want to travel to a country they've never been to... They don't want to travel over X number of time zones or whatever. But out of all that there is probably a fairly significant group of patients who can benefit from it at some point in the future, but there's still work to be done.

**Mays:** Another issue is the complexity of the American health care system and the fact that this has to go through several steps before it ends up with patients coming to international hospitals. It starts with an international insurance executive like David Boucher deciding that this is a powerful concept, selling it to his management and designing a plan. Then they have to put together a network of international providers that can service this plan, and they have to take the plan to U.S. employers and sell it to them. The U.S. employers have to add it to their benefits booklet [saying], "...We'll waive your deductible and [the amount you would have to pay under the policy] and we'll pay your travel if you want to get a hip replaced in Thailand." A number of employees have to get sick or need treatment and they have to decide to take this option. There are about five levels before a meaningful number of patients start going overseas for treatment.

We're hearing a lot of noise in the first [levels] and animated discussion among the big names in insurance -- Blue Cross, Aetna, Cigna and so forth -- and international hospitals about this. But in June, at SHRM -- which is the big HR convention that happens every year in the U.S. -- somebody conducted a survey of the HR managers at employers that ultimately [will need] to accept this idea [and say] I'm going to offer this to my employees [for it to work].... The survey showed that very few of them were even aware of the concept or interested in it yet. It's gone two steps into a five-step process and it takes a few years for big ideas to get traction in the complex American medical system.

**Aron:** You mentioned the regulatory environment, which brings us naturally to the health care reform under way in the United States. How do you think it will impact your volume of patients? Will it increase it, decrease it, not change it or are these early days yet?

**Banner:** The bottom line is we don't know. We follow the evolution of how health care reform is being discussed in both the Senate and Congress. Until we get a bill and evaluate what the implications are, we just don't know. I will say that I've been in this business for 35 years and I saw the first health care reform bill -- Public Health 9260, which was passed in 1972 -- and there has been a 35-year track record of the government, after it passed Medicare and Medicaid in 1965 and 1968, of trying to regulate cost, utilization, abuses and so on. It's at a point now where the U.S. is spending about \$2 trillion in health care. According to one estimate, about 30% -- or \$600 billion -- is spent on ... reviews [of doctors' decisions by] nurse types and administrators.

The question is, "Is this yet another health care reform attempt that at the end of the day is only going to add another layer of bureaucracy, or are they going to achieve some fundamental reforms?" We don't know yet.

**Aron:** Let's talk about the Bumrungrad group. What does it do beyond the hospital? Are you planning to open up other multispecialty units or take your success to other ventures?

**Banner:** In 2005, we established Bumrungrad International Limited (BIL), which has since been spun off into an associated company so that we own 31.5%. Some of our key investors include Istithmar in Dubai and Temasek in Singapore -- the private investment arms of both those governments -- and other private investors here in Bangkok. The company is our investment and operational arm outside Thailand. It has three major businesses and is looking for others.

One is a hospital that we purchased outside of Manila -- Asia Hospital International. We own 53% of that. Two years ago, we bought Asia Renal Care, which is now a group of 96 dialysis clinics in eight countries, and we have a [five-year] management contract with the government of the U.A.E. -- United Arab Emirates -- to manage the Al Mafrag Hospital, which is on the outskirts of Abu Dhabi.... That's a five-year management agreement and we're in the second year of that agreement. As part of it, we are helping them plan a 600-bed hospital to replace the existing hospital. The idea is that we would take the Bumrungrad name, history and systems we've developed over our 29-year track record and look for opportunities to expand that brand in Asia. The target market for BIL is Asia, which extends from the Mediterranean to the Pacific Ocean.

**Aron:** Speaking of geography, Bumrungrad Hospital in Thailand is sometimes mentioned as the gold standard for health care. But what other [hospitals and] regions do you see emerging? I know there is Parkway in Singapore, and Wokhardt in India is trying to offer these services. Can you tell us some hospitals and regions that you think are emerging as destinations for offshore health care?

**Banner:** You have named two. Singapore has a group called Singapore Medicine, which is a government-sponsored initiative to promote Singapore as a medical hub. It has definitely emerged as a competitor, as has India. It has several groups doing high-volume surgeries. And Malaysia has a government effort to promote private hospitals there that are focusing on international health care. Interestingly, over the last year or two, Korea and Japan are pursuing international health care. They are coming from a very small base but they have had stunning growth.... Closer to the U.S. market, there

are quite a few competitor organizations throughout the Caribbean and in Central and South America. A lot of organizations have been caught up with the [prospect] of a large number of patients going overseas so we have a lot of competition now.

**Aron:** Given your expertise and the obvious volume constraints, are you considering strategic partnerships or alliances with hospitals in places like India, Malaysia and even Vietnam that could offer comparable quality of care?

**Banner:** We wouldn't rule that out. We haven't found a model yet that works to a mutual benefit .... There are various models that we have considered. It just hasn't happened yet.... Our international division has local business partners as well as medical partners, like in Asian Hospital International, where we own 53% and the rest is held by local investors, including key medical staff.

**Aron:** Given that several regions are emerging and many players are entering this space, let's return to the question of marketing. Tell us about some marketing initiatives that you have undertaken to keep your significant lead from diminishing in terms of reaching out to entities such as employers and so on, but also to retail patients in various countries.

**Mays:** One of the things that we have done in the last year or two is put more emphasis on our local Thai patients. That's kind of like balancing the stock portfolio. We want to be diversified. We want to have a healthy international portfolio. We want to have a healthy portfolio of Thai patients. And we've been focused on international growth for a while and we've been getting very heady growth. We also have a lot of competition in Bangkok. So in the last couple years, we've undertaken some important initiatives for our Thai patients. We have a very successful member program for our Thai patients.

[In terms of] other marketing initiatives, we continue to expand our representative office networks. When a country develops easy flight connections to Thailand -- like Ethiopia or Mongolia -- it often becomes an ideal market for us and we start to see explosive growth. So we open an office and find a representative in one of those markets and we use that to help develop those markets [and] become kind of a natural regional referral center.

We've introduced innovations on our website. One of [those] is something called RealCost, [which provides] the actual costs that patients have paid for their procedures. We make the data about that available online for an international patient who wants to know what it would cost to get an appendectomy, heart bypass or knee replacement. It's kind of hard to answer that question because [it's not like] filling in an order for a digital camera. It's not one size fits all. The answer really depends on an examination and evaluation of a patient. But understandably, international patients want some guidelines before coming over and being examined as to what the cost might be. We put online the actual amount that our patients who have had those procedures have paid, so a [potential] patient can see the median, low-end and high-end range of what people have paid for the procedure they're interested in.

**Aron:** I would like you to share your vision on a few things with us. Gaze into your crystal ball and tell us what you think about this. In most industries, as it matures -- and scale and scope jointly increase -- you will see specialization. Do you expect the future of the offshore global health care model to be driven by large multispecialty health care

service providers, such as yourself? Or do you expect a lot of patients to be going to single specialty providers, such as ophthalmic clinics?

**Banner:** You're going to see a combination of both. You've got a lot of niche providers for ... the lighter specialties in medicine. Plastic surgery, some eye care, dentistry, those things can be effectively packaged in single unit institutions -- either small hospitals or large clinics -- and you can process patients quite effectively through those subspecialty hospitals.

For many heavy-duty subspecialties -- like neurosurgery, cardiology, oncology and so on -- patients have "co-morbidities", so you really benefit from a larger multispecialty tertiary hospital center with a critical mass of patients coming to actively engage your top subspecialists. The idea of a totally independent subspecialty neurosurgery hospital might work in some circumstances, but broadly speaking, patients are going to need the support of any number of surgeons and internal medicine specialists and you can't get the top subspecialists to come for just one specialty support because they just don't have the critical mass of patients. So there are opportunities, particularly in the lighter subspecialties, to have independent hospital provisions. But in your larger, high tertiary subspecialties, you benefit from the critical mass in multispecialty hospitals and clinics.

**Aron:** Pretty much every commercially available report from research and consulting firms on the future of global health care seems to suggest that we are set for a period of exceptionally high growth. The numbers range from 10% to 60% a year. Other than the numbers, are there interesting ideas or trends to share with our readers?

**Banner:** We read those reports by Deloitte and others. We actually participate in their compilation and writing. We think they have basically generated a lot of our competition because other hospitals are reading the reports and saying, "We better get in this business as well." There will be multiple influences on international health care, and here are some of the main drivers.

The positive drivers are: The world is aging. The cost of care, particularly in North America and Europe, seems to continue to go up and the ability of traditional payors, including the government, is getting more limited in terms of how much they can they spend for health care [compared with in the past]. International travel is getting less expensive and more readily available and acceptable to many people. You have more people who don't think anything of traveling two, six, 10 hours internationally. So the long-term trends to facilitate patients feeling more and more comfortable with going overseas are positive.

There are going to be more providers developing services similar to the ones that we've developed over the last 10 years. There will be more services available at a higher standard of higher quality. There will be more standardization as more hospitals become Joint Commission accredited and subscribe to international quality benchmarking services. The information about the available services, the quality and so on in different countries will be increasingly available. International health care will cease to be a new phenomenon. It will settle into one alternative provider source available to people around the world. [But] at what level that ends up is anybody's guess.





Because we are still writing this chapter on the evolution from very little international travel to it becoming more mainstream, we still don't know how it's going to settle in. At our hospital, we are expanding our campus and are always focused on the services we feel international patients want. We're getting ourselves ready for not only international patients, but also increasingly insurers and third-party payors as to how they want to be paid for patients and the reports they want for follow-up care once patients return to their home countries. It is a multidimensional future and our crystal ball is probably no better than anybody else's.