

A Gulf Intelligence Special Report

Healthcare Outlook

2014

**Patient Empowerment...
No Longer Optional!**



Publishing

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Foreword



Healthcare Empowerment

GLOBAL HEALTHCARE systems, including those in the Middle East, are being transformed by a technological revolution that's enabling a new generation of patients to leverage mobile apps and devices, patient portals and social media to take greater responsibility in managing their health and engaging with the wider health community. New 'smart' solutions integrating the latest information technologies into hospitals and clinics provide patients with unprecedented levels of access to medical records and health information, support illness management through remote and mobile healthcare, and minimize risk through real-time data sharing. Gulf Cooperation Council (GCC) states are among those that have begun placing a greater focus on patient engagement and empowerment amid a region-wide ramp up of spending on healthcare to enhance existing infrastructure and cater for a growing population confronted with near epidemic levels of cancer, diabetes and cardiovascular diseases. According to consultancy firm Strategy&, formerly known as Booz & Company, at current prevalence rates, the total direct and indirect cost of the most common chronic diseases in the GCC nearly reached \$36 billion in 2013, or one-and-a-half times official healthcare spending. If governments do not enact measures to curb the rising prevalence of these diseases, the total economic burden is expected to nearly double to \$68 billion by 2022, Strategy& estimates. In the UAE, government spending on healthcare is set to reach \$11 billion by 2015, up from \$9.8 billion in 2011, as the sector continues to expand in line with the country's National Vision 2021, which aims to provide a world-class national healthcare system and establish Abu Dhabi and Dubai as health centers of excellence and medical tourist hubs.

Sean Evers

Managing Partner, Gulf Intelligence



The Evolution of the Healthcare CIO

Michael Reagin, Chief Information Officer, Cleveland Clinic Abu Dhabi

ABU DHABI, the capital of the UAE, is a city that uniquely combines many international influences with a strong commitment to local heritage. And whose transformation in the recent decades has given way to an interesting mix of new and old.

Al Maryah, the capital's new central business district, is home to Cleveland Clinic Abu Dhabi – the first Cleveland Clinic campus outside North America. Like Abu Dhabi, Cleveland Clinic values its long heritage. The clinic was founded in 1921, and at the same time continues to retain its pioneering spirit, which has been a driving force behind many medical breakthroughs, including coronary artery bypass surgery and the first face transplant in the US.

Abu Dhabi's remarkable healthcare transformation is a reflection of unprecedented change in our healthcare industry. Rapid advances in information and communication technology that is being adopted by patients and providers are fundamentally changing the way that we operate. Increased access to information and knowledge, social media, self management programs, new regulatory requirements for patient involvement, reorganization of healthcare systems and new technologies are all contributing to the new dynamic that resonates throughout healthcare systems across the globe. Indeed, we have witnessed a paradigm shift in the healthcare sector triggered by these technological advancements that put data and information at the core of healthcare today. Never before has so much knowledge and information been available and accessible to practitioners and patients.

One of the key trends that has emerged as a result of these changes is the focus on patients' empowerment and engagement, which today sits at the heart of the fundamental changes taking place in our healthcare society, and the focus on technology. During the transformational time, organizations adapted a focus on value not volume. Healthcare organizations moving towards this value-driven model are being lead by the chief information officer, who is becoming more strategic than ever in aligning the needs of patients and clinicians, and then finding new opportunities for organizations to offer value in this changing healthcare landscape.

Cleveland Clinic Abu Dhabi is a 360-bed tertiary/quaternary care facility and it represents more than just a 360-bed hospital.



It's a little over 4.5 million square feet in design, or about 420,000 square meters. And it is a full medical campus. So we have more than a million square feet or about a 100,000 square meters of outpatient clinic space. We have an events and conference center, located here, that will seat approximately 200 individuals. This hopefully will allow us to drive continuing medical education and learning in the region.

Today, patient empowerment is a necessity and there are a lot of drivers in healthcare that are impacting all of us: cost and sustainability; reimbursement dollars for providers; and the ability to deliver high-quality healthcare is always being refined and we're asked to do more with less. Access to healthcare services in our facilities are being taxed and we have to figure out new ways to be innovative to allow online and other alternative forms of communication with our patients. And finally, the penetration of social media and Internet

technologies is allowing people to have access to opinions and to information that before were not available to patients.

At Cleveland Clinic, probably about a decade ago, we redesigned the way we think about delivering healthcare. We have this philosophy called 'patients first'. This is fundamentally changing the way we do business at Cleveland Clinic. Every time we implement a new technology, a new workforce, a new optimal measure, whether it's a clinical process, whether it's an administrative process, the question that we have to ask ourselves is: how are we doing this in the best interest of the patient? This has changed the way we look at things and how we design things. When we design committees that are governance, we include patients in those opportunities to actually have a voice at the table. We're increasingly doing more and more surveys to try figuring out what are we doing well and what we can change. This whole concept of patient experience is really permeating the way we think about the delivery of healthcare.

From an IT perspective, I think there are a couple of key technologies that are really driving and leading the way in our patient-first transformation here. The first is mobility. The permeation of smart phones and devices for every patient and every person pretty much on the planet has enabled us to have a revolution in health and allowed people to really think about different ways to deliver care. Today, at Cleveland Clinic Abu Dhabi we even have patient bedside tablets that enable patients to have complete control of their room, whether that's the lights, the temperature controls, entertainment, or access to their medical record. More and more people want the ability to have personal media integrated with the professional media, and have applications and mobility to do these things.

The second area, there really is a fundamental shift today happening in healthcare around biomedical and clinical engineering. In the old days, you just had a CT scanner or an MRI, which was really disconnected from everything. All those medical devices are slowly moving their way into the network.

And this is a fundamental shift in how we think about healthcare. The biomed department of the future is going to be worried about home monitoring; it's going to be worried getting data from patients wherever they are to the provider at the right time at the right place.



“Cloud computing is offering us unprecedented ways to share information between organizations and to drive costs and efficiency by changing the technology footprint required to provide healthcare services.”

The connectivity of these devices is exploding. When we open Cleveland Clinic Abu Dhabi, we'll have more than 1,200 clinical biomedical devices connected to our network. And that number will continue to grow every single day.

Finally, there is the fundamental technology shift in cloud computing. Cloud computing is offering us unprecedented ways to share information between organizations and to drive costs and efficiency by changing the technology footprint required to provide healthcare services. As more and more of the infrastructure moves offsite and moves to the cloud, or is in some kind of way managed through the cloud, healthcare IT organizations are able to focus a bit more on frontline solutions for providing better access to information, assisting patients and empowering providers. ■



Michael Reagin,
Chief Information
Officer, Cleveland
Clinic Abu Dhabi



Patient Empowerment and Engagement Revolution – The US Perspective

Dr. Seth Bokser, Medical Director for IT at UCSF Benioff Children’s Hospital, Associate Professor of Pediatrics at UCSF

THERE ARE three drivers for patient engagement in the US: one is people, the next is policy, and another is performance.

So first ‘people’: In the US, according to 2012 Pew data, we know that two thirds of Americans went online in the previous year to look for health information about themselves or a family member. The question is: where are they going? They’re not going to UCSF; they’re not going to Mayo clinic; they’re not going to Cleveland Clinic; they’re not going to Harvard—they’re going to doctor Google. So 77% of Americans start their search for online health information at a search engine, and Google is the most common search engine that we have in the US.

So when you ask why are providers like UCSF jumping into the patient engagement revolution with two feet, it’s because that’s where our patients are. That’s where the people are. And the good news for us as healthcare providers, and I’m not sure if this translates internationally, but I have a feeling it does, is that in the US, Americans trust us; they trust providers. So 85 to 95% of Americans, according to Harris Poll data, trust their doctor, their nurse, their clinical pharmacist. So more than any other industry, more than search, more than social, we in healthcare have this fantastic opportunity to engage patients where they live, which is online. And we have this great opportunity to provide them with accurate information, personalized information—which Google could never do—and information that is based on this trusted relationship, based on a foundation of trust.

What are we doing at UCSF? To take advantage of this opportunity, we have deployed our own social media site at UCSF. We have a secure social media platform; so far we are inviting our obstetrical patients – women who are expecting a baby are the most common searchers of online information. In fact, if you want to experiment, at least in the US, if you type the number between 25 and 40 and Google, the smart search will fill in “weeks pregnant”. So we have a social media site for pregnant women at UCSF that’s secure; the women interact with each other; they support each other; we hold their data at UCSF—Facebook or any of the other social media sites, they’re not using those data. And we, me, as a clinician, we have the opportunity to participate in the conversation and correct any misinformation, direct the patients to sites that are more reliable, more data driven, so



“ The key for this conversation is that meaningful use today and into the future means you need to engage patients; you need to incorporate patients into the health IT experience.”

that misinformation and fearful information doesn’t permeate the group as so often happens. So that’s one thing we’re doing.

We also have a very active patient portal at UCSF. We have over 90,000 of our patients and families engaged in our patient portal. They’re online, everyday viewing their electronic health record, downloading bits of their electronic health record, making appointments online with their doctor, and having the ability to email securely, privately, with their doctor and their doctor’s representatives.

At our newest campus at UCSF, UCSF Mission Bay, we are deploying a comprehensive patient engagement software platform. Because we believe to be a truly state-of-the-art hospital, patient engagement needs to be a big part of what we do. And so, using this software platform, our patients are going to have a bedside experience with tablet as well as large-format display in the room. Patients are going to be empowered with information about who is on their care team.

There was a great study at the University of Pennsylvania, which showed that US patients upon discharge from University of Pennsylvania Hospital, only 20% of them

“What I mean by performance is the need to increase quality and to lower cost. Of course, in many ways that’s the mission of any business, but in healthcare, especially US healthcare, it’s a mandate, because our costs both to our citizens and also to the government are becoming unsustainable.”

knew who their attending physician was. So we want to empower them with information about who is on their care team in a visual way. We want to empower them with the ability to participate in their daily schedules, so they know when they’re going to X-ray; they know when the physical therapist is coming. We want to empower them with the ability to order meals online that are in accord with their health plan, so they can choose what they want to eat but they also have information on what they can eat given their health condition.

We’re going to entertain them, of course; patients still require a lot of entertainment in the rooms. But we’re going to entertain them with their own



music, their own movies, their own online books as well as all of their favorite Internet apps and Internet sites, and we’re going to save that information from admission to admission, so when they come back they feel like they’re at home. And we’re going to educate these patients using this platform as well, not only with education that’s specific to their disease, but also very specific to the time in which they’re in their disease process.

That’s a little bit of what we’re doing at UCSF. And we’re doing that, primarily because in our market, in the middle of Silicon Valley, our people are demanding it. I’m going to discuss the two other drivers.

One is ‘policy’. If you don’t know what meaningful use is, or the HITECH Act, and you want to understand the healthcare IT industry in the US, it’s essentially that the US government—probably around four years ago—decided that in order to spur the advent of health information technology, they were going to subsidize, they were going to pay providers, physicians, and hospitals, to deploy and meaningfully use healthcare information technology. The key for this conversation is that meaningful use today and into the future means you need to engage patients; you need to incorporate patients into the health IT experience. So specifically starting this year, in order to get the incentive payment and not

get penalized, providers have to allow patients to view, download and transmit parts of their electronic health record; and they have to provide patients with a customized patient education, not generic, but they have to use the information in the electronic health record to provide them with online education that’s customized to their specific needs. This is starting this year and will advance in terms of the priority of patient engagement in the coming years.

The next policy piece is the Affordable Care Act, called Obamacare. What I’ll say about it is the US healthcare system is still a very fee-for-service based system. So I as a provider continue to get paid more every time I consult with a patient, every time I order a test, every time I order a medication. It’s a quantity issue. What Obamacare and much of the legislation coming out of DC over the last decade move us to is more of a value-based care model so that I as a provider am now incentivized financially to form longer-term relationships with patients and keep them healthy rather than treating them when they get sick. When they do get sick and they’re in the hospital, I’m going to get paid more if I provide better outcomes, and I’m going to get paid less if I provide outcomes that are not quite as good or if the patient is less satisfied. So to the extent that these reimbursement models start to permeate the US market, you’re going to see an encouragement of patient engagement tools, you’re going to see an encouragement of tele-health and you’re going to see an encouragement of home monitoring tools.

The last driver I’m going to discuss is ‘performance’. What I mean by performance is the need to increase quality and to lower cost. Of course, in many ways that’s the mission of any business, but in healthcare, especially US healthcare, it’s a mandate, because our costs both to our citizens and also to the government are becoming unsustainable. We don’t have enough data about patient engagement tools, and my colleagues and I at UCSF are trying to remedy that fact by studying our patient engagement tools. But based on the data we do have, it’s very compelling, it’s very exciting, and we believe that patient engagement is one of those tools that will enable us to increase quality and lower costs.

For example, Kaiser, which is a large health plan in the US, publishes data out of their Colorado health plan that showed that if they enrolled heart attack patients within 90 days of their first myocardial infarction, their first heart attack, they could reduce cardiovascular

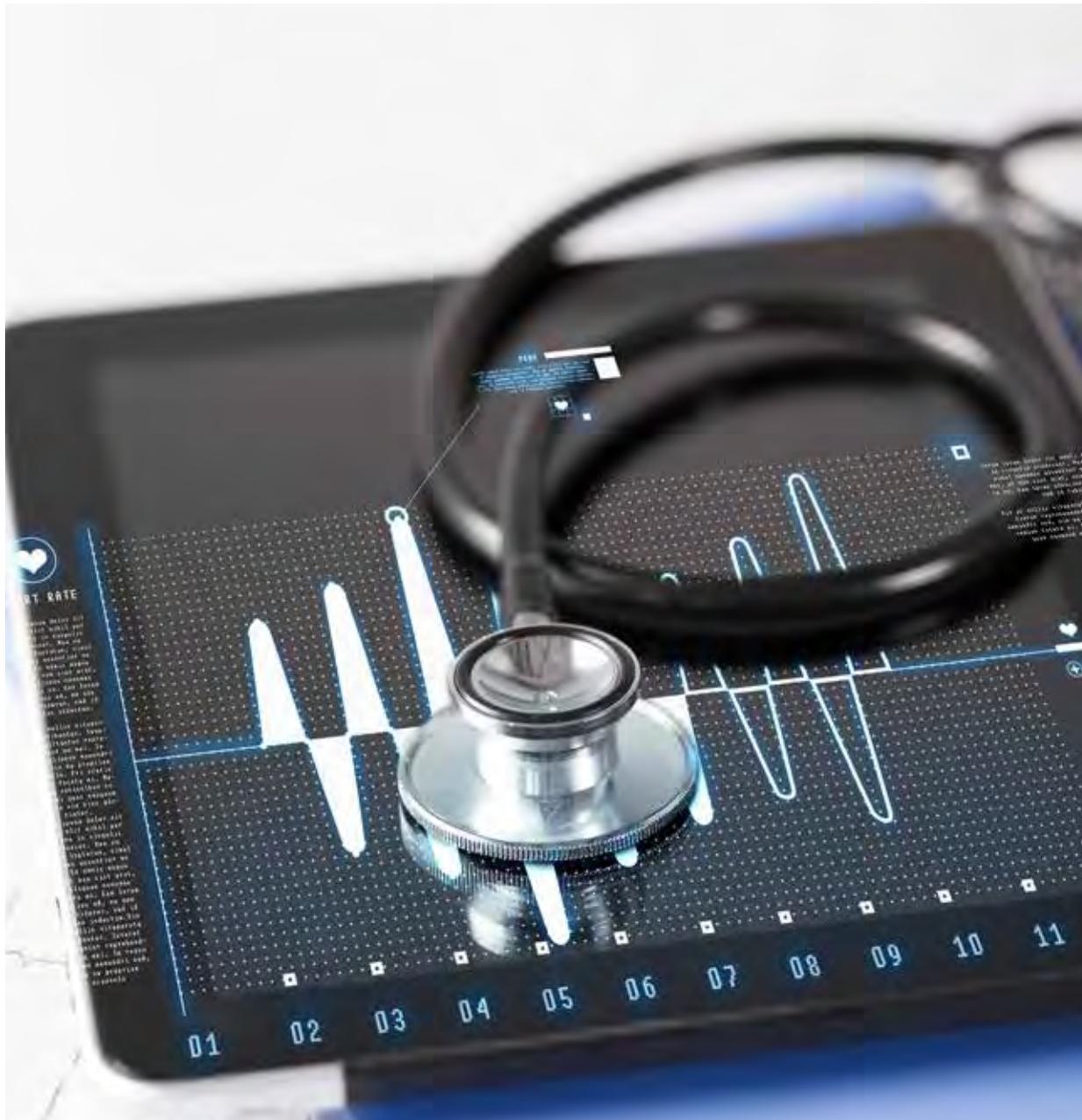


mortality by 87%. If these patients were given patient engagement, home monitoring, patient education, being able to reduce mortality by 87%, those kinds of results have lead Leonard Kish, who is a famous health researcher in the US, and others to entitle articles “patient engagement, the blockbuster drug of this century.” That’s really how people are starting to think about it. Furthermore, Dr. Judy Hibbard, who’s at the university of Oregon, and colleagues have published data showing an activated patient, one who questions the physician, one who understands their disease, understands their medication, costs the system 30% less than a patient who is the most passive – so increased quality, lower costs. That’s what our opportunity is in the US, that’s what our opportunity is in this room, in environments where in the US we one out of every two citizens and one out of every 15 children have a chronic disease. We’re not talking so much about cure anymore; we’re talking about treatment, we’re talking about living with disease. And we believe that patient engagement can be the blockbuster drug of this century.

I think it’s up to us to think about how do we use healthcare information technology? How do we leverage our shared humanity and cultural understanding to increase patient activation to new heights? Because when we do, we’re going to increase quality, we’re going to lower costs and we’re going to provide meaningful therapy in the form of connection. ■



Dr. Seth Bokser,
Medical Director for IT
at UCSF Benioff
Children’s Hospital,
Associate Professor of
Pediatrics at UCSF



Patient Empowerment and Engagement Revolution - MENA Perspective

Dr. Ibtesam Al Bastaki, Director of Health Operations, Dubai Health Authority

HAVING BEEN enrolled in different positions over many years, from the prime minister's office to the Dubai Health Authority to business development and projects, has given me a lot of information and knowledge of what's happening in this part of the world.

First, I would like to highlight the general aspects of healthcare in the UAE and to focus on patient empowerment. I like to use the word 'customer' more than 'patient', because the customer sometimes isn't sick; he comes only for his screening program or to seek some knowledge or information.

The UAE's demographics are very different so copy/paste models really failed in this part of the world. And while it is good to learn and share from others, we implemented an innovative way that would be suitable for best practice in Dubai and the UAE. Since we know that health is a very challenging topic worldwide, and particularly in this part of the world due to its fast growth and the fact that the UAE is a very young country, delivering the service is challenging. And we as a health provider are struggling to maintain it. However, as we know, health is essential and it's considered to be one of the major assets within each country, one may say 'health is really wealth'.

We can overcome the challenges that our health system is facing by collaborating with the non-health sector; by talking and communicating with each other through the

mandate of making the health system more feasible and therefore to fulfill the need of our patients, or customers. In other words: health is a package that ties different entities together such as trade, economy, commerce and foreign affairs.

In our past history, our concern mainly was education, sanitation, housing, water issues and so on. We never thought of communicable or non-communicable diseases, but nowadays things have changed because of the prevalence of disease in this country: number one is cardiovascular; number two is road traffic accidents; and number three is cancer. The government is investing heavily to cater for these services and to meet the need of the population, especially the nationals.

We can improve the health status generally in terms of fighting against communicable and non-communicable disease by promoting screening and using health prevention methods. Therefore, we emphasize human security via proper public health welfare and primary healthcare approaches, which is really essential in this part of the world.

In our role as a leader to promote health for a Third World system, it is essential to focus on decreasing non-communicable diseases. When I was at the prime minister's office, I got a mandate from His Highness that we need to have the tools to decrease or to screen our population to decrease the mortality among the national population, especially with regard to



“ We can overcome the challenges that our health system is facing by collaborating with the non-health sector; by talking and communicating with each other through the mandate of making the health system more feasible and therefore to fulfill the need of our patients, or customers.”

cardiovascular diseases and whatever is related to it, such as diabetes mellitus, hypertension, hyperlipidemia. With our government leadership, health strategy and policy, we are also working hard, and have started, to focus on other aspects, one of which is the aging of the population. As mentioned, we have a very young country but the people who are in their 30s and 40s now will, in 20 years, be senior citizens. We need these people to walk around, to stay healthy at home without any disabilities.

Innovation, new financing schemes, better medications and technology have a lot of positive impact on our health system. By using innovation, we can improve the government's internal inefficiencies, health budgeting and procurements.

In addition, we would like to see innovation in different areas of healthcare, focusing on patient centre, organizing the integrated practice unit. This is the way the world is moving. During my last visit as a member of the Governing Council for the International Hospital Federation, this was actually a hot topic: how can we establish an integrated practice unit that is measuring and improving the outcome and the cost for every patient, integrated service for practices and for facilities that lead to excellent and multi-disciplinary services? All these components are added and measured by value-enhancing information technology platforms.

AT DHA, we have excellent centers such as the Trauma Center, Dubai Diabetes Center, Dubai Gynecology and Fertility Center, as well as community care for the elderly. Now DHA is working hard on the Jalila Hospital, which hopefully will be launched by the end of the year. There are other projects in the pipeline that we are looking at, one of which is in oncology.

The private sector is very well established in Dubai and therefore is complementing

the government health system by providing different services and various specialties.

It's a win-win situation. In 2005, outpatient service was shared between the government and the private sector, with the government accounting for about 36% of the outpatient base versus 64% for the private sector. However, in 2013 the government's share was 23% versus 77% for the private sector. Promoting private investment in healthcare facilities in Dubai is the strategy that the government is looking for. This is supported by the DHA's Health Regulation Department since 2009.

The Clinical Governance Office within the Health Regulation Department empowers the patient's right in terms of complaints, which are communicated in line with a transparent policy and system. In addition, the office has established a mandate for patient's right and responsibility, and communication within the public and private healthcare sectors. Therefore, nowadays we can see more patient education happening in the form of taking decisions about their healthcare plans. And the licensing department follows international benchmark standards for best practice. An electronic system for licensing has been built in-house by DHA's IT team, where credentialing and examination is standardized.

Last but not least, I would like to focus on the quality of health service and address health standards and accreditation. In Dubai, there are 2,600 state-of-art healthcare facilities, 70% of which are private hospitals and clinical labs that are internationally accredited and out of which three are accredited DHA public health agencies. Having values, ethics and medical careers of various health professionals is the core concern to deliver the best services among the community. Through quality of care and ethical professionals, we will ensure that we provide best practices to our patients. ■



Dr. Ibtesam Al Bastaki,
Director of Health
Operations, Dubai
Health Authority



PANEL DISCUSSION: Patient Empowerment – Key to a Better Healthcare System?

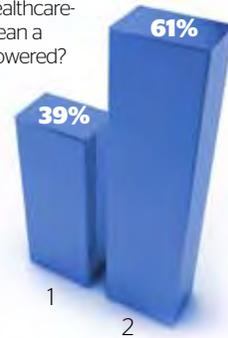
Dr. Ibtesam Al Bastaki, Director of Health Operations, Dubai Health Authority
Dr. Seth Bokser UCSF, Medical Director IT, UCSF Benioff Children's Hospital
Dr. Anne Marie Hadley, Chief Information Officer, Chris O'Brien Lifehouse
Moderator: Sean Evers, Managing Partner, Gulf Intelligence

SEAN EVERS (SE) Does healthcare information seeking mean a patient is de facto empowered? Anne Marie, is there anything about that result that strikes you in any way?

DR. ANNE MARIE HADLEY Our experience at Lifehouse is that we've actually allowed the patients to own their records. Traditionally, it has been that the medical record is earned by the clinician or by the organization. So I think

QUESTION 1 Does healthcare information seeking mean a patient is defacto empowered?

- 1) Yes
- 2) No



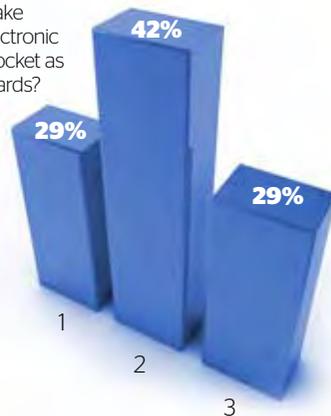
there's a bit of a shift in paradigm around the information actually belonging to the patient. People are actually quite surprised that we don't charge them to get access to their information. So I think there's bit of a shift going on, and I think people are just a little bit unsure at the moment where that's still up to.

SE The next question is interesting and it seems quite a vast range of response.

DR. IBTESAM AL BASTAKI His Highness has spoken about the 'smart city' recently, so I think the whole industry should be shifted

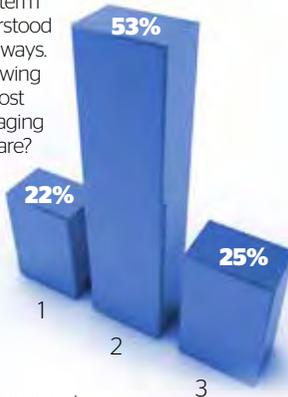
QUESTION 2 How long will it take before everyone carries their electronic health records around in their pocket as common as we now do credit cards?

- 1) Up to 5 years
- 2) From 5 to 10 years
- 3) More than 10 years



QUESTION 3 Patient engagement is a term that can be understood in many different ways. Which of the following do you think is most important to engaging patients in their care?

- 1) Giving patients access to educational content so they understand their condition and their treatment.
- 2) Involving patients in decision making about their care plan
- 3) Providing patients with the ability to view their personal health record and exchange electronic messages with their clinicians.



into an online process. But in healthcare, especially in the government sector, it's challenging. The cultural change within the professional community is really a challenging topic, especially if they come from different backgrounds and cultures.

SE Let's bring up the next question please, about involving patients in decision making about their care plan. Do you think that is the right answer?

DR. SETH BOKSER I think number two invokes the idea that, as healthcare providers, we're meeting patients where they are, we're not just providing them health education or number three, the ability to view, but we're actually engaging with the patients. Every patient is not the same obviously, in terms of health literacy, in terms of cultural understanding etc. So I think maybe a lot of people chose number two because that engenders true engagement where we have some understanding of where a patient is and we're able to tailor our communication and our electronic engagement tools to that patient.

DR. ANNE MARIE HADLEY I agree with Seth, it's actually about personal choice, about preferences. It's about trying to get to the bottom of what's important to an individual patient. In cancer and oncology, which Lifehouse is all about, it's about trying

“ I think more and more, especially with the training of physicians that I see, they're challenged by that aspect of medical care and they view it as an opportunity to gain skills in another area, in the area of closing the health literacy gap with their patients.” **Dr. Seth Bokser**

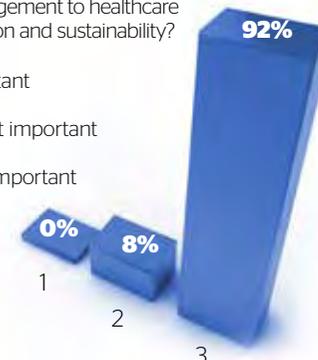
to reduce the stress levels. We've already potentially got a life threatening illness, what are the things that actually will make that a little bit easier. So, being able to find a car space, reduce the time you have to wait—cancer is about waiting, so trying to arrange a schedule around if you're well enough to go to work after you've had your chemo or your radiation, etc. It doesn't have to be big things; it's just about asking a question and finding out what your personal preference is.

SE Let's go to the next question: how important is patient engagement to healthcare transformation and sustainability? Seth, in the context of opening this conversation up a bit in terms of patient engagement and empowerment, are those two words interchangeable?

DR. SETH BOKSER Well, I don't think there are formal definitions of either those words. The way I think of it and I think a lot of people think of it in the US, is engagement is the act of partnering; and empowerment is when you have a partnership between a provider and a patient, and a patient is able to participate in that shared decision-making.

QUESTION 4 How important is patient engagement to healthcare transformation and sustainability?

- 1) Not important
- 2) Somewhat important
- 3) Critically important



SE I'll tell you the reason I ask about this: I do think there's a big difference in the words, because power is a big word and I'm wondering if somebody is empowered in the context of this transformational journey of the healthcare industry; this disruption, does that mean somebody has to lose power in order for somebody to be empowered, or is there an endless supply of power that everybody can keep tapping into?

DR. SETH BOKSER It depends on how you look at it. When I train my residents, I tell them that medicine is now a partnership and many times as a physician you're the senior partner, but you have a partner in how you're going to approach a specific disease and treatment decision. Now, I suppose there are some physicians that would view that as losing the autonomy of decision-making and view that as disempowering, but I think that's less and less common. I think more and more, especially with the training of physicians that I see, they're challenged by that aspect of medical care and they view it as an opportunity to gain skills in another area, in the area of closing the health literacy gap with their patients.

DR. IBTESAM AL BASTAKI Once you engage your patient you're empowering them, so you're giving them all the rights. This used to not be here in this part of the world, but we started to see it, especially in Dubai, because of the demographics and the private sector's involvement as well. So engagement of the patient is very crucial, and therefore empowering them is critical now.

DR. ANNE MARIE HADLEY We're a Greenfield site, so not only do we have no legacy IT systems, we really had no legacy staff either. When it comes to patient empowerment the pyramid in Australia is the doctors on the top and the patients down



at the bottom. And so to sort of turn that around, one of the things that we spend a lot of time on was actually growing our cultural framework together and what were the values of other people we wanted to come and work at Lifehouse. There have actually been a number of interviews where patients or patient advocates are sitting on the interview panel for the appointment of medical staff and a couple of pretty preeminent doctors have been turned away because the patients felt that they did not have the same cultural values.

SE And they did the right judgment on that sort of thing?

DR. ANNET MARIE HADLEY Well, at the end of the day, I think that it went well.

SE Something that seems to come up a lot, and it was mentioned here a bit earlier, is who owns the patient, and then of course all of the data?

DR. SETH BOKSER I don't think that's a question of ownership. I think you connect everyday with patients. What we used to see in the patients, what we used to see in the US and I think worldwide, were healthcare providers using patient data as proprietary asset with which they can hold patients to their institutions. So if I held your electronic health record, I had you for life, engendered loyalty just because I owned your data. What we've seen in the US is both consumers and policy have changed that paradigm. I, as a

provider, am required to allow my patients to download and transmit their health data to any other provider that they see fit. So that barrier to market mobility has been lifted.

SE So in a legal sense, the owner of the data is the person? They own their own medical data?

DR. SETH BOKSER Patients own their own medical data, correct.

SE Which is not necessarily the case everywhere, is it?

DR. SETH BOKSER You get into some pretty specific legal definitions. UCSF is still accountable for that data as well; so I suppose there's some shared ownership. But the idea that the patient can take their data wherever they would like is the new reality.

DR. IBTESAM AL BASTAKI Same here, the patient owns it and the government as well owns it. But it's the patient's right whether they want to share it with other entities.

SE In Ireland it's a little bit different and in other places similarly in terms of who perceives that ownership to be. I suppose these legal cases will emerge now as data becomes possibly more valuable. In the context of Australia and the idea of who owns the patients, is that in anyway a conflicted debate? Is it an obstacle to this transformation happening?

DR. ANNET MARIE HADLEY I don't think it's an obstacle, I think it's challenging for certain sectors of the professional community. I think policy not keeping up with technology is probably one of the hurdles; patients having a voice and demanding it. I mean, when we had paper medical records the problem was you couldn't read what was actually written! The fact that they're typing them up now, the fact that you can actually read them, it's improving the quality of documentation because a clinician understanding that the patient has access to their record and is empowered to read it and take it away, has actually done a lot to improve the quality of the medical record.

DR. IBTESAM AL BASTAKI It depends also on how your system is being created – if it is a GP gatekeeper or you have access through any facilities. Like in Dubai, and I guess in the whole UAE, the GP gatekeeper doesn't exist, so people have access. Therefore they own their information and they can share it with any entity. It all depends on the system, and where you are and how your system is working. In Ireland and the UK, I believe it is completely a GP gatekeeper system. And in fact the NHS wants to change it because it's not going to work in the future because people are getting educated through the internet and websites.

SE Can we bring up the next questions please – what is the greatest challenge to realizing the potential of patient engagement and empowerment?

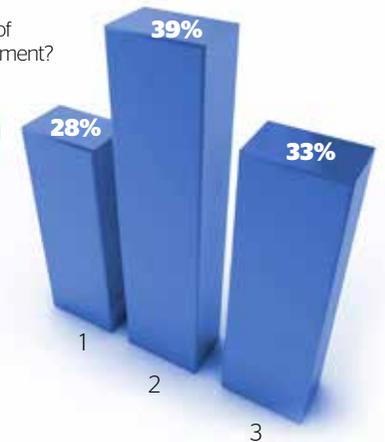
DR. SETH BOKSER I put down number three. I mentioned the transition and reimbursement incentives in the US. We're not there yet. We still have fee-for-service based systems, so that when we have 90,000 of our patients at UCSF using our patient portal, my colleagues, who all know my email address, contact me and they say, 'this patient engagement is great, but I don't have time; I need to make a living seeing patients; I need to make a living touching patients and doing lab tests and medication. That's how I get paid. I don't have time to be educating'.

SEAN EVERS And time is critical, isn't it?

DR. SETH BOKSER Time is absolutely critical. So we're dealing with that, with physician extenders and providing interaction with our patients with nurse practitioners and so forth. But I think to the extent that

QUESTION 5 What is the greatest challenge to realizing the potential of patient engagement and empowerment?

- 1) Patient's capability to use and understand the information and tools which are made available to them
- 2) Lack of health data sharing (providers' sharing of data with the patient, patient's ability to share data with providers)
- 3) Reimbursement systems not rewarding healthcare providers for engaging patients



reimbursement structures migrate to support these long-term relationships with patients, pay my colleagues and I to keep patients healthy, rather than pay us when they get sick. That will really enhance patient engagement, the potential of patient engagement and empowerment.

SE In terms of number one, where do those two things meet in the sense of self educating, self-diagnosis, and where does it stop and patient engagement begin. Is there a line?

DR. SETH BOKSER Well, I think that's why it's so critical for us providers in the room to be front and center in the conversation, because the information that patients are finding online, it's not always accurate and in some cases it's frankly sensational and dangerous and can lead them to make the wrong decision and even dangerous decisions. So that's why doctor Google has its limits and why it's so critical for us as healthcare providers to engage our patients online and provide them with an accurate, personalized, sometimes empathic, if we need to be empathic, information.

SE I'm wondering is there a risk that access and overwhelming confidential data doesn't deliver wisdom?

DR. SETH BOKSER I think it certainly is a challenge. As a physician I'm acutely aware of what a personal relationship means and I think, different from other industries, a personal relationship, the ability to know your patient, the ability to know at what time you can provide them with information in which they're ready to receive it. I think that's a skill and an insight that still requires a human touch



that doctor Google isn't going to replace. I think that's where the core competence or the uniqueness of providers' capabilities still lies.

DR. ANNE MARIE HADLEY We've spent a lot of time in the lead up to opening Lifehouse five months ago to try and address each of those. We designed new roles in the organization. We designed one role, a clinical technology navigator and a patient navigator, and actually building time into people's schedules to actually spend time with them to take them through the information. We know from our patients that particularly getting a cancer diagnosis they are very scared, we provided them with lots and lots of information, but really they were not listening. It was all going over their heads so being able to build some more time back into their next appointments, etc. and having people who actually have been trained in patient-clinician communication and take them through the information and ensure that they feel comfortable with that, and having a hotline available for them to call them, and having that personal assist, having that personal interaction. We've also designed and built an area in the hospital where people can come along and learn how to use a computer. Lifehouse has got at the center of it lots of technology, but the people component is still really the most important part.

AUDIENCE MEMBER—MAJID

ALTUWAIJRI Majid Altuwaijri from Accenture. It's not a question; it's really an experience that I would like to share with everyone. Five years ago a very close relative of mine was diagnosed with a disease and we were looking online for some information about that disease and it was really mainly copy and paste type of information that you can see in forum after forum or in portals, but not really very credible. At that time I was the CIO of the national broadband, I was the Dean of College of Public Health, so I thought it could be really worth to study the credibility and the worthiness of Arabic health information online. And we did a study with WHO, with an organization called Health on the Net Foundation, which is an accreditation body for health portals. And the results of the study—we really studied all health, health related portals and ministry of health across the Arab world—96 percent of all the portals and the sites we visited failed to meet the standards. Only 4 percent were about the right standards. So we felt that there has to be something done about it. We cannot say people should be empowered and look for health information online when the risk there is 96 percent. So we have to do something about it, and we recommended an establishment of an Arabic health encyclopedia online.

SE Is that particularly acute in the Arabic language?

AUDIENCE MEMBER—MAJID

ALTUWAIJRI It is actually. It is now online. It's under the name of King Abdullah, Arabic Health Encyclopedia: www.kaahe.org. It's the only encyclopedia that is bilingual, knowing that in this part of the world most of the healthcare givers speak English, so we wanted that the healthcare giver can find information in English, but then by just pressing the "A" letter, the Arabic letter, then he can review to his or her patient. Today we have more than 2 million visitors for this encyclopedia per month. We have about half a million downloads on Android. And it's really been interesting to see how the patients are interacting. We don't just use it really to show information for the patients, but we can also use it to see what patients are looking for, and women's health has been number one and diabetes has been number two. So when we looked at women's health, we said, okay, we are attracting women, so we add healthy recipes, for example, as a way to attract more and more women. I think this part of the journey is very interesting. We have published this report in an article called "Empowering Patients in the Arab World," it was published in the IMIA yearbook 2011, and I'm happy to share this study with anyone who's interested.

AUDIENCE MEMBER—GEORGE YACOUB

George Yacoub, I'm with SEHA. We need to differentiate between patient engagement by the provider, or by the healthcare giver, versus what information is available online. That's the question I'm talking about here. If you take all the text out and just answer the question, I think you probably reverse the answer. The problem is, and as Seth earlier explained, you cannot replace the physicians' role in patient engagement. Making information available online on any topic could be dangerous for the person, but that's the way things are now. And it's good to have information. What you need to do is use the clinician, whether it's a physician or a nurse or whoever the care provider is, to moderate and explain and articulate the topic to properly educate the patient. That's patient engagement. So when some provider or some source of data or information makes it available online, we, as healthcare workers, cannot take credit for that. That's information someone is putting out there for the patient to read at their own risk, that's not patient engagement. Patient engagement actually

“It's a joint effort and relationship between IT and the care provider, the clinicians, to really make sure that we provide the best information for the patient based on their particular case, not just general information.”

George Yacoub

becomes more critical in this age where all this information is available, to make sure that we don't take the bad things of it, or overreact or misunderstand it.

SE Does the patient have an obligation to be engaged?

AUDIENCE MEMBER—GEORGE YACOUB

No, the patient doesn't have an obligation other than the obligation to him or herself. I mean, if I'm a smart person I would try to get as much information about whatever it is I'm dealing with. I don't have to have someone pointing a gun to myself or saying that you signed a disclaimer or signed a form, it's in my best interest.

SE But a lot of statistics show that even with all of this information and change, that hasn't moved the bar on those who want to be engaged.

AUDIENCE MEMBER—GEORGE YACOUB

Well, that could be true but I don't have any supporting statistics. I think that with the age of having everyone walking around with multiple tablets and mobile devices and having information directly available to them and the younger generations that are coming up to the professional environment, I think people would be more engaged out of care for themselves. But what I'm trying to say is, it's really critical at this point that healthcare providers engage the patient to avoid all the side effects of having a lot of information available online. That's the point I'm trying to make. There are so many forms of that, and of course IT is not going to lead that but IT can be a facilitator. It's a joint effort and relationship between IT and the care

provider, the clinicians, to really make sure that we provide the best information for the patient based on their particular case, not just general information.

DR. SETH BOKSER I'd like to agree with my fellow exactly here in the audience, Dr. Majid and George and distinguished guests up here, I think we're talking about trusted sources. And though the key word here is "trust" and I think that that's the education that is going to come to our patients as they find trusted information from people that is either direct relationship with their providers or the healthcare organizations that they're with. That's going to assist them in gaining the right information online at the time they need it. So I think that's the revolution and we're going to see going through this: how do I establish trust and have accuracy and well positioned information so people can internalize that and can understand that?

DR. IBTESAM AL BASTAKI I fully agree. The matter is how much information the patients gain; but they should be guided at the end. And there should be a trustable website that they will go on to. For example, if I'm Dubai Health Authority, I want to put out lots of medical information, it should be standardized, it should be under the policies, it should be directed very well so that I direct my patients to the right track. Getting information from different websites is okay, but they should be guided at a certain stage.

SE Going forward, if I don't get engaged after my heart attack and then I have a second heart attack, will the insurance company cover me?

DR. SETH BOKSER I don't think we're at that point yet. You may start to see incentives from the insurance company to try to get you to enroll in this patient engagement-education-monitoring program, so they may lower your premiums, for example. I think culturally, at least in the US, that wouldn't be tolerable, to financially penalize patients who weren't able to engage or empower themselves with information for a variety of reasons, at least not at this point.

AUDIENCE MEMBER—DR. SAQIB CHAUDHRY, I'm with Cleveland Clinic. In my personal experience, I don't go to Google to do research on symptoms for the sake of eliminating physician altogether. I just go to Google to figure out what the symptoms are so

I can figure out which specialist I need to go to. And this is to avoid going to ER and waiting for 2-3 hours to see a GP and then figure out what the issue is and then making another appointment to see another specialist, or making an appointment with a GP, which will take a week or so just to get that appointment. So to me, Google or other knowledge websites help me figure out who to go to and talk to. I know there is a chance of me not 100 percent getting there, but with the amount of information available I think it makes my life easier.

DR. SETH BOKSER There's a site in the US, I'm not sure if it's worldwide, it's called Patients Like Me, and there are a couple of million patients who have collaborated along 100 different diseases, and they've gotten together and rated their experience with various treatments for those diseases in terms of how well they work, and what are their side effects. But if you look at those millions of patients, it's hard for you to know as a patient, what applies to me? So I think the conversation we want to have as providers is we want to see that information, we want you to come to us and say, this is what I found, I'm looking at this range of possibilities, let's determine together how this information applies to my particular case. I think that's sometimes where people get into trouble, making the wrong decisions, they don't personalize the information enough to their particular case.

AUDIENCE MEMBER—NIALL O'NEILL from Oneview Healthcare. I am interested in the panel's view on how technologies like IBM's Watson and the use of artificial intelligence will impact on this whole practice of information governance, bringing the ability to search huge body of evidence and surface personalized medical information to an individual either to themselves directly using that through some interface or via their clinician.

DR. ANNE MARIE HADLEY We're only at the start of a journey and we actually spoke to IBM around that because they're doing some work within the MD Anderson on the whole big data and data analytics, I think chiefly in the cancer space, the whole genetics personalized medicine, and they're very, very interested in it. For us, certainly in Australia, we are only just starting on that journey and we're just really trying to look at good quality data. I don't know whether we've got great confidence in our data as yet, in terms of the standings of the data, being able to compare



data across multiple organizations. We're one small cancer facility, an impressive one, but we've still got a little way to go. I definitely think down the track, we just want to put our emphasis in making sure that we've got this whole garbage in, garbage out, and we've just got really good quality information. But once again, our patients are expecting it. I've been working really hard on achieving that.

AUDIENCE MEMBER—NIALL O'NEILL

I think what is really interesting about something like Watson is that it takes the collective intelligence, the collective body of evidence, which means you're no longer dependent on one person or one institution and that institutional knowledge. You now have the power of global knowledge and that idea is really powerful. I think that it is interesting to think about how that will change a patient's view of the advice that they get from one clinician or one institution.

AUDIENCE MEMBER—OSAMA EL-HASSAN

from Dubai Health Authority. My question is, are there any successful models for regulating health data on the net around the world? And who would be more successful in performing such a task, government or NGOs or non-profit organizations?

DR. SETH BOKSER I have to say, I wouldn't say this about all areas, but I actually think this is one area where the US regulation has actually kept up fairly well. For example, in the US and especially in Silicon Valley, consumers are becoming acutely aware that their data can be used in all sorts of ways that they don't approve of, to sell them various advertisements

and so forth. So in terms of healthcare data, the US government has stepped in to prevent the secondary use of healthcare data for marketing purposes. The FDA has weighed in on mobile health devices, but they said that they're going to use discretion, meaning they're not going to regulate most mobile health devices, they're going to promote innovation unless that mobile health device results in direct treatment recommendation, diagnosis and treatment recommendation, or extends an existing regulated medical device like a biometric monitor. So they're trying to strike that balance, encouraging innovation but also protecting the fidelity of information.

When it comes to privacy regulation, we have the legislation that I discussed before where we're required as healthcare providers to be able to give patients their data so they could take it to another health organization, but we're required to do so in an encrypted way. So for the technologists in the room, you know, there was a question about when is the health record going to be in someone's back pocket, we'd like to think that's never, because we're going to keep it in an encrypted format. Our patients are going to be able to access it and transfer that data in a secure way. At the same time, the regulation stipulates that if a patient tells us, UCSF, this encryption stuff is great, but I'm real basic, I just want you to give me my healthcare data on a USB drive encrypted then we are obligated as healthcare provided to do that, to follow the patient's wishes. There's no doubt that regulation frustrates all of us in our day-to-day jobs and trying to strike that balance between access and policy, but I have to say there's a lot of good sense regulation that's come forth out of the US in the last couple of years. ■



Putting the Patient First: the SEHA Story

George Yacoub, Acting Chief Information Officer, SEHA

THE STORY of SEHA is a very proud story for the Emirate of Abu Dhabi and for all of us who work with SEHA, thinking about how SEHA started in 2007 to manage individual hospitals that have independent operation models and different systems and so on. Getting all of them together in one organization is coordinated work in an orchestrated way to serve maybe 3 million, 4 million patients that would probably have about 3 million-4 million medical records now; and to become an integrated delivery network of around 17,000 employees to serve the population in the UAE.

Talking about the inception and the idea, the success story has always been an interesting topic. The focus on patients, who everybody in healthcare is now focusing on and in putting patient's interest as the

top priority, we like to think about ways to enhance the patient experience. Enhancing the patient experience in a way that we make access available; we expand access to patients; to healthcare services; we make it convenient; we use innovative ways to achieve that. And also behind the scenes, all the people that were to support the clinicians, the doctors and the nurses and the pharmacist and so on, to make their experience a positive one so that can reflect on the patient and allow the patient to get the best experience at any of our facilities.

We are very proud to say that we have been able to implement an electronic medical record that allows any patient to go through any facility that is run by SEHA to allow the caregiver to get the feedback to the medical history and therefore be able to

provide the right care at the right time for them, regardless of where you go and where you first initially started to visit SEHA, and regardless of the physician and location.

This is a significant improvement. It's actually evidence that when we develop and implement systems, we always focus on patient experience. There is no one single best EMR system in the world. There are pros and cons; there are better systems, bad systems and good systems; and systems that could be improved and so on. So looking at what SEHA has been able to do over the past six or seven years, not just from an EMR point of view, but also from all the other ancillary and supporting systems and activities behind the scene that allow the clinician or the care provider to provide best service for the patient is a significant effort.

Making all these functionalities available from one single provider or vendor naturally makes integration a non issue. So instead of spending your time getting best of breed, which is a different theory, and try to get all these systems to work together, you spend your time on functional enhancements and optimization and training of the staff, or the administrative staff, or the clinical staff, to make the best out of the system you have and to give the best service possible to the patient.

And being an IT person, I do understand that it's not just about the electronic medical system application that they're using, and it's not about only training the physician – it's about everything else that nobody sees. Most patients don't know about them, most patients don't see them, but you walk into the hospital and you have people who have been working on making sure that you, for instance, have a stable network that doesn't go down, so you can still provide the right service. Making wireless networks available so clinicians could move around with their tablets and laptops and be able to walk from patient room to another patient room. Mobile devices that we use for medication administration or for radiology services, or for whatever it is. All these behind-the-scene activities add up to delivering the best experience for the clinician and therefore for the patient.

The challenge that we all face now, we talk about mobility, we talk about Internet, we talk about patient engagement and so on, so all that I talked about earlier is given, it's granted, it's like picking up the handset on the phone and getting dial tone – it has to be there. The challenge is to come up with innovative ideas to

“The challenge is to come up with innovative ideas to actively, and actually in most cases proactively, engage the patient and the caregiver.”

actively, and actually in most cases proactively, engage the patient and the caregiver. Help them get access, schedule appointments, find locations, and learn more about the physicians that they are dealing with: what is their background, where are the best specialty clinic hours and so on. All these things add to access and add to convenience and also ultimately add to a better outcome and add to patient loyalty. Yes, we are big in this market, there are a few private providers, but you still have to worry about patient satisfaction and patient loyalty and the quality of the outcome they are providing to the patient.

We talked about challenging ourselves and challenging our strategic partners, the people that we work with, who can help us and be committed to work with us on the journey to ultimately enhance what we deliver to the patient and find out what is the most convenient way to deliver that service and what is the most effective way to deliver the service. So, talk about patient engagement, do we give the patient a tablet when they come up to the hospital to track their activities and track the wait time and track the satisfaction with how they have been greeted; how they have been talked to by the nurse or by the treatment physician; and how they convey the overall satisfaction? Well maybe that's an idea. So we hear from Oneview that they have solutions that would help the patient manage their entertainment system in the patient room and also take a look at their medical record and treatment plan, maybe lab work, and maybe before the patient is admitted. And also focus on outpatients, when the patient comes for a regular visit: how do we capture their experience? That's patient engagement. How do we follow up with the patient before they leave to make sure that they have the next appointment scheduled? How do we follow up with the patient to make sure that when the doctor orders an x-ray or they need to go to a lab



or they need to go a pharmacy, how do we facilitate and track all these activities and make sure that the patient is not wasting time, they are not getting lost, they understand why these orders have been ordered – that’s patient engagement. Yes, there is information available online and I can go to doctor Google on the sources and find out I’m going to a hospital today, I’m going to an outpatient clinic to get this appointment, and I expect that the physician would be asking or giving me some information. That’s generically available, but how does that tie into my specific case? These are the kind of things that we need to focus on with patient management. It is part of what we do as we plan for system enhancements and for new advancements that we’re looking for. And it is ultimately related to putting the patient first.

But I also want to go back to the caregiver, because the caregiver is our front in dealing with the patient. So I want to make sure that the caregiver is really aware of the most recent functionality that we put in the system, make it available to them; they’re properly trained, they know how to navigate through

the system to get whatever information or historical data on that particular patient; as well as being familiar and comfortable with the technology that we are making for them.

I’ve had some cases where we had clinical staff who were not comfortable using a mouse; so we had training session that started by playing solitaire on the computer, just to make them familiar. As technology advances and as we have a younger generation of physicians coming in, that actually makes this part easier. But at the same time it also represents a challenge for some of the IT folks around here because this younger generation is very used to technology and you are probably coming with more challenging ideas and challenging requirements for us to satisfy how they would like to practice medicine; which is also a good thing. So I always focus on really trying to make sure that our clinicians are comfortable, are knowledgeable and have a good experience, so that can reflect on the service that we are giving to the patient as a customer.

SEHA now has about 11 hospitals and about 62 or 64 outpatient clinics. All of us

“ Being a large organization and serving millions of patients, we by default develop our own health information exchange, within all of our facilities, and that’s evident by the fact that any clinician can treat any patient at any of our facilities and get the entire medical record. ”

are on one single network; all the systems are being posted in a central location; all the services are offered from that central location through our—what I would like to call—private cloud. So whether you are in location A or B or C, you can always get to the information. The challenge is for us to try opening that up and allow patients to have secure access to some of that information. There are different theories of who owns the patient record. I think the patient has the right, and should have the ability, to access at least all the basic information in the medical record other than coming to the hospital and asking for a print out or a copy on a CD or a memory stick of their entire history. And that helps. So think of a time where I’m sitting at a coffee shop with a friend, I get a call from my wife saying my daughter is not feeling well. So I say, “No problem.” I’ll look up my location, the closest SEHA facility, my physician, look up appointments to set up an appointment the next morning and everything is okay. So that’s a challenge. And that’s part of convenience, that’s part of access and it’s a part of patient satisfaction and patient loyalty. That’s what we need to be working on. Someone was talking earlier about stopping and going to the bank. Why would you go to the bank anymore? You have ATM; you can look at your account online; you can pay your bills online and so on. So I think as time goes by we should be challenging ourselves more about how to come up with innovative ideas to use reliable technology to make patient’s life easier and more convenient by expanding access – basic stuff. That’s what we are focusing on and that’s what we are trying to do at SEHA with our partners and vendors.

The next big thing, actually one that has been going on for a while, is that SEHA is also expanding its outreach to schools; there are nurses in every school. We have a program that is going on now to engage on a daily basis with students’ health and make sure that we have that

relationship. This also expands our customer base. It’s more of a proactive way to try to get access made available. And it’s somewhat an innovative idea to expand our outreach and make services available. We have active plans and we actually have active construction projects to build new hospitals. We have one going on at Mafraq and we have another one planned for Al Ain. We have probably some new construction projects coming up in Abu Dhabi as well. So there is access also from the physical construction point of view; we are trying to make sure that we have additional capacity made available to the population.

Being a large organization and serving millions of patients, we by default develop our own health information exchange, within all of our facilities, and that’s evident by the fact that any clinician can treat any patient at any of our facilities and get the entire medical record. The next step would be to expand that beyond SEHA. We are going to start to have some early discussions and actually some proof of concept implementations with Cleveland Clinic in Abu Dhabi, where we have some programs to exchange clinical services and now our physicians from both sides to get access to medical records on both sides, although we’re not using the same system. The next logical step would be to expand that for other customers, other users of the same electronic medical record that we use, whether it’s within the Emirate of Abu Dhabi or through the UAE, or we can ultimately expand the reach of being able to provide treatment to our patients, not only with Abu Dhabi Emirate, but anywhere else in the country and vice versa. So again, it’s access; it’s convenience; and it’s trying to use reliable, innovative technology.

We hope that we can continue to challenge ourselves and be challenged by our younger generations of providers, as well as younger generations of patients, to continue on the path of patient engagement and enhancing the way we deliver the service. ■



Mr. George Yacoub,
Acting Chief
Information Officer,
SEHA



PANEL DISCUSSION Evolving Technology Environment – Positioning the Patient at the Center of the Care Experience?

George Yacoub, Acting Chief Information Officer, SEHA

Dr. Amer Ahmad Sharif, Managing Director, Dubai Healthcare City - Education

Dr. Walid Tohme, Partner, Strategy& (Formerly Booz & Company)

Jared Walker, Chief Technologist, HP World Wide Digital Health

Moderator: Sean Evers, Managing Partner, Gulf Intelligence

SEAN EVERS (SE) We start with the first question on personal health records like Google Health and Microsoft Health, both of which have struggled to get track with consumers. Indeed, Google has ended the Google health service.

DR. AMER AHMAD SHARIF I'm not an IT expert, and as such, cannot comment on the technical aspects. However in my core capacity as a medical professional and my experience with health systems, historically patients place their trust in their physicians. Trust has been, and continues to be - to a large extent, the cornerstone of the doctor-patient relationship. The healthcare system in its entirety is represented by relationships with a doctor, or a hospital or a clinic,

QUESTION 1 Personal health records like Google Health and Microsoft Health Vault have struggled to get traction with consumers. Indeed Google had ended the Google Health Service. Why do you think this is?

- 1) Consumers do not want to engage with their health data. They want to place their trust in clinicians to interpret and share this data as appropriate
- 2) For personal health records to be a success, there needs to be greater sharing of healthcare information
- 3) Consumers are concerned about security and will never want to have personal health records stored in the cloud



necessitating the disclosure of medically-relevant information. Health records are sacred and a patient expects this clause to be honored.

While this has been the case traditionally, there are proponents of technology comfortable with electronic health record data capture and usage. We will witness a change as more and more people adopt and accept how technology interfaces in the healthcare environment.

SE I understand that in the UAE, there was a decision made that in order to store UAE health records in the cloud, i.e. the data center, had to be in the country. They had to build the data center before putting the health records in the cloud. Is that accurate?

GEORGE YACOUB To our knowledge there is no specific line in the law that says you cannot store the patient records outside of the country. But that has certainly been the practice and the unwritten law if you will. So we always try to make sure that whatever we do, with hosting facilities and services, that the record doesn't leave the country.

But going back to the original question, it's a matter of time before the younger generation starts to get older and we get more people who can trust the system and get used to having everything electronically available. It's also about the industry and the providers of the electronic medical records, whether it's because of regulation demands or because it's a business need that they need to collaborate and open up more to each other to make sure that if you go to get treatment from different sources, ultimately as a consumer or as a patient, you can have access to all the components of the medical record. It's a matter of time. I don't think it will happen in the next five years but it will happen in the five years after that.

DR. WALID TOHME I think for this to be successful, initially patients need to understand what to do with that. Maybe in the next 10 years, when people are more educated, they know what to do with the data. But right now, and initially when Google Health and Microsoft Health all came up, it was very hard for people to understand what to do with the data. Suddenly you're custodian of your own data where you thought the physician is going to be dealing with it. Now you are going to have to deal with it and you are not necessarily an expert. So the value proposition that you were giving to the patients was not clear. How much of it do I own?

“Trust has been, and continues to be - to a large extent, the cornerstone of the doctor-patient relationship.”

Dr. Amer Ahmad Sharif

JARED WALKER There are a couple of problems here. First, there is no sure data sovereignty where we will allow our health information to reside physically in the logical sense of value, control and ownership. As I have traveled around the world, even in between Canada and America, there is great concern that the data doesn't leave national boundaries. There will be economics of leveraging the infrastructure in the US to host information in Canada that would be very advantageous; there is a sense that that needs to be protected because the governance around what's done with that information, who possesses it, what value that may have, either economically or politically or socially, is still something that's evolving.

SE Is it a redundant question in a sense that insurance companies have all of your records when you call on them to pay your bills, and so they are the owner of that data in a way that a credit card company might be the owner of your spending habits that they liberally use to do all sorts of marketing exercises?

JARED WALKER It's a different view of the same information. Your actual detailed medical record will have lots of notes and other sorts of unstructured data. If I own a clinical setting, it gives a pretty clear and comprehensive picture of someone's current state of health based on that history. It's like you're the public data that exists without you. These are all data sets which in themselves are probably relatively innocuous; it's how they're employed. So the fact that this governance doesn't exist, that there is no clear societal consensus around who owns that information, how it can be used and who should be permitted to use that information to what end, I think is creating a lot of concern and a lot of limitations as to what we do with that information. And I find that this debate is not settled anywhere where I have been around the world; it is still very actively being considered.

AUDIENCE MEMBER—MOHAMMED SALEH from Microsoft; I'm leading the health practice, Middle East and Africa. I do agree with George that it is a transformation journey. I think it's the same now with the challenge of whether a person's health record is provided by the government. So if we need to have our own personal health record, you are looking for a trusted entity within your country or city, just to get the personal health records trusted website or apps. So I think in the coming five to ten years, when we have the young people using and growing up with the transformation reality, we can move easily to the personal health records. It's important because the personal health record is not a medical record, it's my own. If I ask you about your blood type, it's not a secret; it's health information. One comment was how we can classify the data itself. Maybe it's critical data, so it would be saved on a premise such as a government or ministry of health data center; or my personal health records would be in my own health wallet on my computer, like blood type, allergies and medications. Most of us here, in the room, are traveling from outside the UAE to a different country. So the challenge is, how can we personalize your health records? Which data would be with you and which data would be within the country? So the personal health record is a journey, a transformation that I think it will happen.

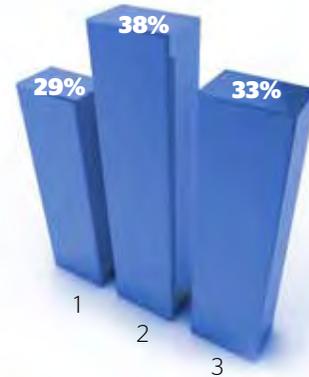
DR. AMER AHMAD SHARIF If consumer or patient behavior changes, it becomes essential that the change is addressed at an educational level. As healthcare professionals, we are bound by patient confidentiality. However, if at a policy level or as part of governance structuring, healthcare professionals are required to adopt data collection, storage and usage supported by technology, then the change has to be introduced at an educational level.

The education component should address the tools we use - iPads and other technologies, as well as policies on usage.

The patient too should be empowered in the process. A good example is sharing mandatory minimal data sets such as allergies, and blood type - information that is necessary in case of an emergency and should be carried on person all the time. The minimum data set should not be confined to national or geographical boundaries. What happens if I travel to the States tomorrow and I meet with an accident, get admitted to hospital, and the attending medical staff don't know my allergies? So some level of patient information should be accessible.

QUESTION 2 Patient empowerment is great - if patients are health literate. Whose responsibility is it to educate patients?

- 1) Governments
- 2) Health providers
- 3) Patients themselves



AUDIENCE MEMBER—UNKNOWN MALE

In the UAE, we have the Emirates ID card that has a chip for any data, just the patient's basic information, when the patient at the age of 20, when the patient is age 30. We have the means to have electronic medical records and basic information available on the Emirates ID chip, which is very secure.

SE So the architecture exists at the moment and the question is why is it not used?

GEORGE YACOB We have been trying to get the attention of the Emirates ID agency for quite some time and we are finally going to talk to them; we're starting our first discussion about how we use the national ID card to identify the patient - number one; and number one is to store some basic patient demographics and health information on the chip. So it goes along with identifying the patient providing the immediate care they need in case of accidents and so on. And then develop it further to add more information about drug to drug allergies in medications and so on. So, it is happening. The infrastructure is there in the country, almost everybody in the country has a card and we should be taking advantage of it. And that's what we are about to start.

SE Jared, is there anything comparable that you've come across in other countries like the national ID, on which you can have that level of content?

JARED WALKER Actually, that infrastructure varies quite a lot from place to place, and you would think that the more predominant economies in the world would have more robust infrastructure but it's actually quite the contrary. I have spent a lot of time in Canada over the last year and there is a huge discussion right now around how to reconcile the provincial level identification infrastructure with the health plan infrastructure. These are all government services - but they're two different parts. Part of that debate is, again, around governance and ownership: who owns that data? Who should be the system of record on who you are as an individual? Does the health authority really have the business of determining in some fashion or having ownership of your legal status? It turns out to be a lot easier in countries who are making those investments now because they can look at it and say, we really see a lot of value in eliminating the duplication, having one authoritative record and then managing that as part of your national or regional services. But even then, you get the philosophical underpinning of who should have custody of that information; who should be the authority to determine your status etc.

SE I suppose it's interesting to see what people perceive the priority responsibility to be, but 38 percent say healthcare providers have the responsibility to educate patients. That's a pretty big responsibility. Are they suitably placed to be educated?

DR. AMER AHMAD SHARIF It goes back to the need for training healthcare professionals so that adoption and usage of technology is filtered down from a training environment to an implementation phase. At an educational level, curricula on health systems teaches undergraduate medical students at medical colleges and universities on how the IT system works, how the government structure works in hospitals, how the financing systems works, how the e-claim system works, and so on.

Then once they begin interacting with patients, they are already equipped with the necessary knowledge of how various systems work. This emphasizes the need for training, starting with health professionals.

I would also like to touch upon the electronic readiness of the systems here - are these ready for the next level of empowering patients? Are we, as a community, ready? Looking at our population pyramid, we don't conform to a traditional model due to the high dependence on expatriates. Hence, if the UAE's population



“Healthcare ultimately becomes an individual act. So broad sweeping initiatives or something else are only useful if at the end of that effort there is an individual who accepts that and begins to change their behavior as a result.”

Jared Walker

pyramid shows majority healthy expatriates, should electronic records be available? The answer to this question has to be answered in part by healthcare providers, but largely governments, policy makers, educational authorities.

SE I wonder if the healthcare providers are suitably placed to be educators, to be teaching. Do you think SEHA is well placed to be a well-educated facility?

GEORGE YACOB I think this model of healthcare delivery that we live in now will eventually evolve into healthcare providers talking a greater leading role. And when I say healthcare providers, I don't specifically mean the physician or the nurse, I mean the authority. And that takes us back to our earlier discussion about patient engagement. I'm coming to see a doctor for a particular specialty. I'll be sitting in the waiting room. I'll see some medication material that is general and that makes the job of the physician easier and faster, so they can

specifically focus on my issue and give me the information that I need. The information is available online as we have a younger generation that's technologically savvy and comfortable. They will go back and do some more research and complete the picture.

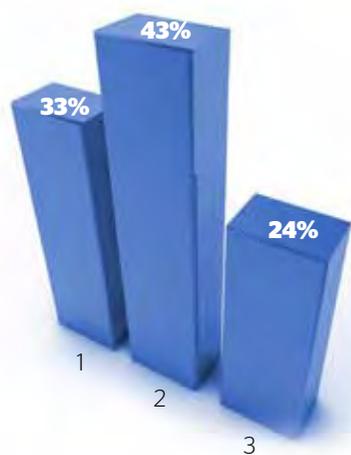
SE Seth, can I ask you to comment on that as to where that educating role responsibility begins and ends in terms of the institution of the hospital versus the practitioner? Where is it going in real-time in your experience?

DR. SETH BOKSER I would generally agree with the comments that were made already. Not all doctors are doing the same thing every day. We have those who have a job to do in the operating room or elsewhere, and then we have our medical consultants, who view a large part of their responsibility as enabling in-patients to collaborate with us and partner with us on their own care, because we are not ultimately going home with them. So, I think it's always been part of the medical school curriculum for physicians to meet patients where they are to understand their level of health literacy, understand their specific cultural needs. And I think these health information technology tools allow us to expand that empowerment of patients even further.

SE Let's go to the final question of the day. What do you feel is the biggest obstacle to greater patient engagement in MENA?

QUESTION 3 Patient engagement is widely recognized as being a positive force, yet there are still many challenges. What do you feel is the biggest obstacle to greater patient engagement in MENA?

- 1) The lack of a financial incentive program or reimbursement reform equivalent to Meaningful Use and Accountable Care in the United States
- 2) Patients are not equipped or willing to take a more active role in their own care
- 3) Disparate electronic medical records systems



GEORGE YACOUB I think the first two could be key factors in this. As I said, as younger generations start to experience the healthcare issues that we are experiencing with ourselves and with our children and with our parents, they will be taking a more active role. And I think they are more equipped and ready to be engaged. We cannot overlook the cost issue. I'm expecting a physician to see 'x' number of patients and if I'm expecting the physician to have the role of spending extra time educating the patient on what is their particular cases, then that particular physician is seeing less number of patients and therefore there is a financial impact. And that's a key for how to deliver the right optimized level of care in a personalized way. And this is where the government and insurance companies' roles and regulators get in to the picture.

DR. WALID TOHME I voted for two. On the first one, if you think what the Meaningful Use Act does in the U.S., it is really to provide an incentive to use the EHRs. And not just an incentive, but it has measures specific to what needs to be done by when, and percentage-wise. So, for example, you know if a patient asked for their electronic health record – or lab report – and that it is delivered to them in 'x' amount of time and there need to be, for example, 50% of patients receiving it within three days of asking for it. So there are specific measures that the governments put in place to encourage that. And that's important to have, but there are things that need to be put in place before. So I think number two is important before we get to number one.

DR. AMER AHMAD SHARIF I chose number two. The singular adoption of electronic medical records doesn't lead to patient engagement. Hence the distinction between the tools available and the intent to use them. We might be equipped, but are patients willing to take a more active role?

SE Which one do you think it is here in the context of the UAE?

DR. AMER AHMAD SHARIF In my personal view, I believe it is the lack of willingness. People are not accustomed to taking care of their health. The reality is we have obesity, cardiovascular diseases and diabetes. The prevalence levels have burdened healthcare professionals and the health system. We need to push people to take a more active – and proactive – role in health.

However with the new generation, there has been a change in lifestyle in the UAE, starting with our leadership. We see our leaders lead active, healthy lifestyles. The newer generation is changing, but seeing impact will take a little more time.

It would also be important to highlight the introduction of mandatory insurance, which will see the fee-for-service model change to pay-for-performance model.

JARED WALKER Again, the notion of equipped versus willing is a question. I think that where we have countries or systems that are working on driving more individual enablement, those tools become very useful. But they become useful to the segment of the population that is pre-exposed or incentivized to utilize them. For example, should the insurance company provide you with a sort of carrot and stick model and say, I want you to engage in this wellness campaign or some sort of behavioral modification because ultimately it's going to improve your health and save me a lot of money. Providing the tool is not going to create an outcome; it's finding a way to actually evoke the behavioral changes that resolve from those changes. So the obstacle for patient engagement really is largely a cultural one: it's cultural in terms of the business and economics of healthcare; in terms of our societal expectations; in terms of individual relationships and stigmas that are sort of associated with different illnesses or dependencies or frailties.

SE In the two examples that you just mentioned in Canada and the U.S., there are two very, very different models of healthcare and the availability of healthcare. Does that different model have a different engagement with the answers here? Like Canada being a bit like the UAE?

JARED WALKER What I found in Canada was that there is more of an institutional view of attempting to find ways to drive or create the enablement and willing behaviors. They want to establish the institutions, create campaigns, and raise awareness. They're not at the point necessarily of driving incentives, but to me, they sort of create a conversation around wellness and move those forward. And interestingly, not just in purely a healthcare context, but it starts with talking about food – what sort of food should be available to everybody in order for them to be healthy? It's not a matter of just availability; is the quality of food high? And what do we use to measure that and how do



we correlate that with the health and wellness of people in a given area? And they're doing some analysis at a provincial level and realizing that in areas that have certain illnesses, their food is not as good. Whether it's that they are eating foods of convenience or they have in some sense cultural predispositions towards certain diets that are just ultimately unhealthy, either physiologically or culturally. They are in the process of establishing the organizational underpinnings of a broader view of wellness and attempting to figure out how to engage the individual. Healthcare ultimately becomes an individual act. So broad sweeping initiatives or something else are only useful if at the end of that effort there is an individual who accepts that and begins to change their behavior as a result.

Where we see the difference in the U.S., is that all that conversation isn't happening at the macro level; it's happening between you and your individual physician or with your hospital system that's probably local or regional.

GEORGE YACOUB I want to comment on this, because what Jared is describing is you are taking wellness and preventive care to a different higher level by checking quality of food and it goes along with insurance companies paying for your gym membership and encouraging you to be healthy and go to the gym and so on. So if you think about the same philosophy, I would also go as far as freeing up more time on physicians part to educate the patient about their illness, and for us, in general, as healthcare organizations, to engage the patient in more effective education sessions or delivery methods, whether it's written material or online information, about their specific cases based on the medical record information that we have on them. ■

“As a patient I could see that technology had the potential to change my experience for the better and to enhance the wonderful care I received from the clinical team.”

clinical team. It was from this belief, that technology could help improve care and improve the experience for the patient, that I founded Oneview Healthcare. We now have international strength; we have a presence in the region; our partners include Microsoft, Hewlett Packard, Dell and Intel; we are now live on four continents; and we are delighted today to be the knowledge partner.

People understand the power of technology to enact change, the opportunities technology creates to become better engaged patients, the challenges which must be overcome to realize the potential of patient engagement. Patient engagement is one of those words and terms that prompts great debate. As we saw from the surveys, it means different things to different people. It is a term that some time may be at risk of becoming just another marketing buzzword. So I believe it is critical that we keep the patient perspective.

The Center for Advancing Health in the United States asked patients to define engagement. They defined it as “actions individuals must take to obtain the greatest benefit from the healthcare services available to them”. But I think there is a step before this, a responsibility of providers and the vendors who support providers. So I believe that providers and technology vendors must play their part by ensuring that individuals have the tools, the information and the understanding to be able to take these actions.

Technology is transforming the delivery of healthcare, not by replacing the human interactions that are so key to healthcare, but by enhancing and enabling these interactions beyond the hospital room. So for example, secure messaging and information sharing create a connection between patients and their care team that sustains when they leave the hospital. And for me this is the crux of how technology can support patients and support clinicians.

We need to keep a sight of what is at stake, this is not a marketing buzzword or the latest

fad – this is about helping people recover from illness, getting back to health and stay healthy. Helping the healthcare system provide the greatest and sustainable value, engaged patients are proven to have lower healthcare costs than patients who are less engaged. In fact, the least engaged patient had over 20% higher costs than the most engaged patient. As we head towards the fiscal cliff of healthcare costs created by older and increasingly chronically ill populations, we simply cannot afford to miss this opportunity.

When we think of cost saving, we tend to think of a worse service – think of the budget airline experience. But the opportunity poised by patient engagement is to realize cost saving without cutting back the service. Engaged patients are generally more satisfied patients. As Dr. Seth Bokser said, that is why patient engagement has been termed the blockbuster drug of the century.

One of the key challenges we face is our reimbursement systems, which have the ultimate power over how healthcare is delivered, must adapt to create the incentives for investment in the change to move, as Mike Reagin said, to a more patient-centric model, in which patients have the tools to enable them to be engaged.

We are seeing progressive policy in the United States through the Meaningful Use Regulation and Accountable Care Legislation. But more work is required to drive sustainable change, particularly outside of the United States.

So to conclude, if there is one thing I want you to take away from today’s discussions, it is this: what can I do in my organization to help patients become engaged? Whether you are a clinician, a hospital executive or a technology provider like Oneview Healthcare, we all have a part to play. Together we have the responsibility to patients to enable them to understand their conditions, the treatment options open to them, and the actions they need to take to aid their recovery. ■



Mark McCloskey,
Founder and President,
Oneview Healthcare

Final Thoughts

Mark McCloskey, Founder and President, Oneview Healthcare

I STARTED this journey that I’m on with Oneview Healthcare as a patient. I was in hospital a few years ago for an operation, and whilst my care was excellent, my experience as an engaged patient was one of isolation and boredom.

The communication between the clinical staff was limited and almost everything

was paper based. The entertainment and connectivity to the outside world was poor, to say the least. I wasn’t an expert in healthcare technology; I didn’t know the field except as a patient. But as a patient I could see that technology had the potential to change my experience for the better and to enhance the wonderful care I received from the



Roundtable Findings

Are digital patient engagement tools such as apps and portals helping or failing patients?

Presented by: Niall O'Neill, Solutions Architect, Oneview Healthcare

THIS TOPIC drove great debate at our roundtable, including whether hospitals could and should learn from other industries such as airlines who have successfully transformed customer experiences through the use of digital tools. We considered the ways in which digital patient engagement tools are helping patients:

- Enabling patients to track health and wellness data such as glucose levels beyond the hospital, and to bring this into consultations with physicians.
- Helping patients connect with other patients across the world who are going through a similar experience, for example “Patients Like Me”.

- Empowering patients to seek information beyond the knowledge of their physicians.
- We then looked at ways these tools are failing patients. In many cases, it is not the tools themselves but rather the system in which they operate.

Reasons included:

- While many doctors are patient advocates, there are many more who either don't have the training or the inclination to hear and respond to engaged patients who have questions about or preferences for their care.
- The lack of uniform information sharing means apps often can't access health records or share data with clinicians – this limits the value for patients.

- The internet is a vast resource of health information, but there is no regulation or quality assurance to help patients separate evidence-based information from quackery.
- A lack of maturity in patient experience design means tools are often point solutions, rather than designed in the context of a holistic, multi-channel journey.
- Health or technology non-literate patients being left behind.

Our conclusion was that these tools are undoubtedly helping patients, but are a long way from realizing the full potential of technology to support and enable engaged patients – not down to the tools themselves, but the need to address the types of issues highlighted.

Presented by: Douglas Collins, General Manager, MENA, Oneview Healthcare

THE CONCERN, which has been the voice of a number of people here, is the idea of trusting where the information is coming from, and when accessing that information, whether it could actually fail the patient and make them sicker, or lead to a particular incident that is unhelpful to their overall patient journey.

In an area where information in both apps and portals is unregulated, this is going to lead to particular issues that we don't see as helpful to the patient. If that particular source of information is guided through a collaboration of expertise or regulation that then makes that information very safe.

The other point that people made, which was quite strong, was that the human interaction as part of accessing this information is key to the overall regulation of that information. You may have access to information through a portal that has been approved by somebody, but you still need to take that information in. And as one of our guests at the table eloquently put it: that information needs to be translated into knowledge.

This journey from information into knowledge is also the journey into empowerment, which comes by a collaborative experience – the patient engaging in the information; turning that information into knowledge through guidance; and then both people together defining the particular patient journey in terms of getting better and helping them. So the consensus was that all of this information only becomes helpful when it's guided through correct expertise.

We have information all around us; but if it's not guided, it doesn't become knowledge and without knowledge you're not empowered.

Building healthcare hubs from scratch: You can buy the technology but can you buy the human capital?

Presented by: Nithia Nagan, General Manager, Axon Asia Pacific

WELOOKED at this discussion point and the answer is, “Yes: you can buy the technology and you can buy the human capital.” In terms of the discussion, we can buy possibly anything, but is it sustainable? And the answer that we’ve come up with is: “long-term, no.”

I believe that if you’re looking at whether it [the healthcare hub] is outcomes-based, then you have to look first at whether it is fit for purpose, fit for use, for that specific region within the UAE and then base that on what type of hub you want to build. Obviously, in this era, the best-of-breed technologies or branding, everybody wants to be associated with, either financially or for whatever other reason. But essentially, first we need to look at building fit-for-purpose, fit-for-use centers. Then you will attract the staff as well.

In terms of Australia, the land mass governs us. So in terms of the model of care, that’s also dependent in terms of the skill level associated. In the city areas: yes, you have a multitude of places to go to and, obviously, there’s leading-edge technology. In terms of regional, the model of care is slightly different. So in terms of what’s built there, it’s out of necessity rather than leading-edge.

In terms of this environment, the focus is on probably more on leading-edge first rather than what’s necessary now and building onto, developing it into, modern day.

Presented by: Dr. Walid Tohme, Partner, Strategy&

WELOOKED at it more broadly from a building an infrastructure or facility perspective. With all this infrastructure coming on board, not just in the UAE but in the region, how do we make sure that we have the expertise within the facility to be able to run those hospitals, etc.? We looked at it from the human capital that’s required to run a hospital: there are physicians, nurses, the biggest contingent; allied health professionals. And with that, we can include the health IT professionals. We looked at each category of those stakeholders and then looked at their needs and what we can do to attract them.

The key categories were around collaboration and by collaboration we mean we need to have programs to make sure that the staff that we’re attracting is well trained culturally; there is localization, in terms of teaching them the cultural aspect of the environment; education.

Knowledge transfer includes also public-private partnerships, making sure that we have this knowledge, this transfer, from outside; but also building capabilities locally whether it’s training centers or academic centers to bring up the expertise. So we’ve talked about collaboration, we’ve talked about training and academic centers. And with training, training centers, institutes, mentorships, sponsorship, etc. you create career advancement opportunities, because as you bring in folks from outside, you need to give them the incentive to not just bring them and attract them, but to retain them.

Finally, there are things that the government needs to do at the level of UAE government, but also at the level of the federal government. We talked about something at GCC level, because the problem that we’re facing today in terms of expertise is not just UAE-based. Saudi Arabia is building 120 hospitals in five years. Qatar’s doing a similar thing. We’re all vying for the same expertise.

So first, you have to look at it from your own requirements. But then, realistically, and this is a challenge to the owners, why don’t we think about it at the federal or GCC level? We have policies; we have things in place at GCC level. Why don’t we think about resource skill sets at that level as well?

I think this is something that we need to think about. Everybody is facing the resource constraint that we have in the region and everybody’s struggling with it. It’s not easy to build a new hospital and attract 1,600 nurses. It’s a challenge. It’s the same thing for physicians. We cannot look only at what we’re building but we have to look at the bigger picture. And maybe that’s something that the UAE government as a whole, not just Dubai or Abu Dhabi, needs to look at together from a workflow planning perspective. This was one of the suggestions at the table: to look at it more broadly and more holistically than just facility by facility.



Will personal health tracking really improve the overall health of patients?

Presented by: Phillip Urrea, Chief Technologist, Oneview Healthcare

THE CONVERSATION started with personal experiences with health trackers. One member of the table had diabetes and spoke about the value of using tracking to help manage that condition. The Dubai Health Authority has a scheme whereby diabetic patients are issued with automatic monitoring technology and everyone agreed this was very positive.

We spoke about personal activity trackers such as FitBit and how they help people keep a track of their activity. The surprise being that you are less active than you would have thought. Digital Health Tracking was felt by everyone to be extremely useful in helping to cope with chronic conditions. Keeping logs for readings and diet was seen as key to chronic conditions.

Being able to email results to a physician and have the dosage change based on the readings was one area where it was felt they add a huge amount of value. Engaging with doctors using tools like Twitter was very desirable. Being able to keep a personal health record that you own and that can travel with you is a big bonus of personal health trackers.

Educating yourself to make better health choices can help prevent illness in the future. Being based on personal health initiatives and activating patients to ensure better adherence to keeping fit and healthy was a likely outcome of using personal health trackers. It was felt that they would play on the mind and encourage more participation – at least until the novelty wore off and there was a concern that the adherence would wane here as well. Building awareness is extremely important and the use of tools such as pill boxes to try and remind people when to take medication and if they have already taken it.

The big positives centred around Awareness, Reminders, and Encouragement, in addition to trackers being able to follow up readings using Remote Communication tools and video conferencing. As much needs to be automated as possible to increase adherence; and providing access to more education to help engage the patient.

The negatives were the inability or unwillingness of the patient to learn; the risk of increasing concern by worrying the person about their readings; and also the person may self-medicate or make dangerous self-diagnosis based off the data.



Presented by: Jared Walker, Chief Technologist, HP WorldWide Digital Health

OUR GENERAL consensus was that “yes”, personal health tracking technologies overall will improve healthcare. They’re not a cure-all by any stretch; but it is as a capability to change your conversation.

We focused on the notion that the role of personal health tracking was in creating a body of information that was more objective; that the tracking technology provides some clarity and objectivity to your self-assessment; but also to create a means of engaging in a conversation with your peers or your clinician or other communities to share that information and become more aware of those things.

We also focused on the notion that there needs to be context for that data, for that information and the employment of this technology. It isn’t just that “I have a lot more information, but why do I care?” Knowing how many steps I walk is academic and sort of interesting but useful in that it helps me understand, comparatively speaking, how active am I? Am I moving around? Am I being more sedentary? And as I begin to correlate that with my other health observations that becomes knowledge. It’s a tool to advance understanding.

We think that this is a thing which runs down multiple paths. This is a very personal individual enablement technology that will, through application or through device or both, give me information, allow me to better assess and conduct myself through my day to the benefit of my own wellness. But it’s also used for my clinician to gather information very pointedly to be able to better advise me and to better characterize, from an expert perspective, what I’m doing, how I’m evolving through the state of my illness or the journey of my wellness, to help me to make better choices along the path.

It is important then also that we have persistence. We had a number of examples where people had incentive trackers and they were very interesting for a short while. But once the incentive program concluded, generally speaking, interest waned and they were sitting on a desk or up on a counter. Unless it becomes a persistent part of your behavior and a tool for ongoing awareness, the technology itself will not yield meaningful long-term results. They don’t change behavior. These technologies are not in and of themselves an answer or solution, they are a means of modifying their expectations, creating a new kind of conversation and then through that conversation, achieving the benefits we all seek.



Will consumer empowerment and patient engagement drastically change the current landscape of healthcare public policy and legislation?

Presented by: Jeff Fallon, President North America, Oneview Healthcare

WE HAD a really lively debate around the table about the various ways to answer this question. We did land soundly on the answer “Yes,” that patient engagement will drastically change the current landscape of healthcare public policy and legislation.

The way that it manifests itself around the world is represented in the discussion as we have people from North America, Ireland, the UAE, as well as Canada in the discussion. But we did land on three very clear topics, three very clear ways that patient engagement will either drive legislation change or legislation will drive new changes in the behavior of patients or physicians who care for them because of issues of engagement.

First is privacy. That is: how can patients share information with their provider? How can they share information or what are the implications of their sharing information

publicly? And what are the enabling technologies that make that happen or keep that from happening?

Second would be interoperability or access to the information. In the United States, we have developed health information exchanges. The concept is expressed differently across the globe, but the idea of a central repository for access to this information by all the different stakeholders in the care of patients is an important one.

Thirdly, the financial implications for the issues of patient engagement: how will providers be reimbursed or not reimbursed, incentivized or disincentivized for engaging patients? How will patients be incentivized or disincentivized through increased costs of premiums for their health insurance, for the reality of their engagement in their own care or the results of their own engagement in transforming their own care?

We felt we landed pretty solidly on these three very specific ways that legislation will be changed by the engagement of patients. ■



The Complete
Healthcare Technology
Workshop Forum Survey

The Complete Healthcare Technology Workshop Forum Survey

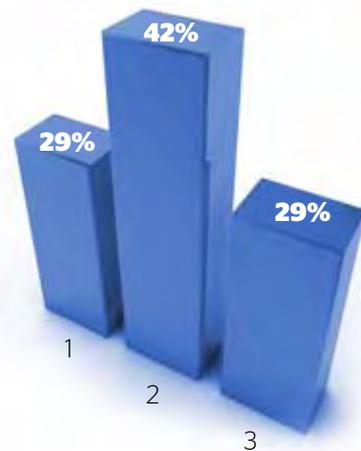
QUESTION 1 Does healthcare-information seeking mean a patient is defacto empowered?

- 1) Yes
- 2) No



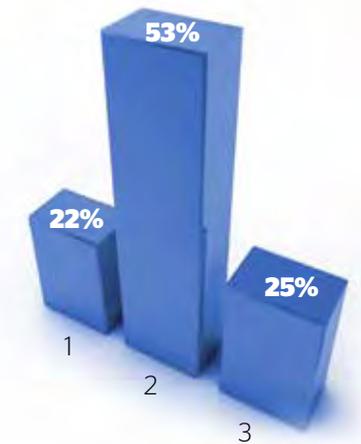
QUESTION 2 How long will it take before everyone carries their electronic health records around in their pocket as common as we now do credit cards?

- 1) Up to 5 years
- 2) From 5 to 10 years
- 3) More than 10 years



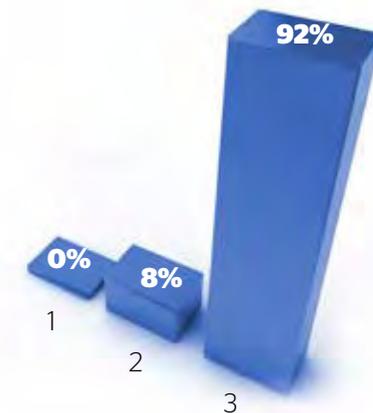
QUESTION 3 Patient engagement is a term that can be understood in many different ways. Which of the following do you think is most important to engaging patients in their care?

- 1) Giving patients access to educational content so they understand their condition and their treatment.
- 2) Involving patients in decision making about their care plan
- 3) Providing patients with the ability to view their personal health record and exchange electronic messages with their clinicians.



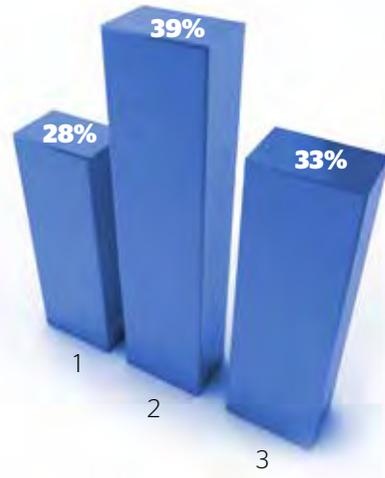
QUESTION 4 How important is patient engagement to healthcare transformation and sustainability?

- 1) Not important
- 2) Somewhat important
- 3) Critically important



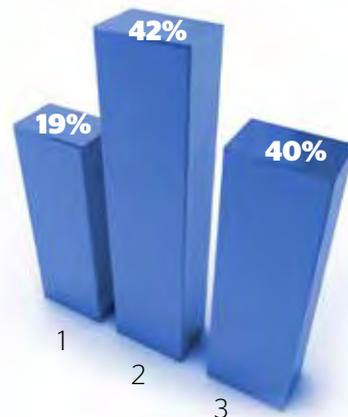
QUESTION 5 What is the greatest challenge to realizing the potential of patient engagement and empowerment?

- 1) Patient's capability to use and understand the information and tools which are made available to them
- 2) Lack of health data sharing (providers' sharing of data with the patient, patient's ability to share data with providers)
- 3) Reimbursement systems not rewarding healthcare providers for engaging patients



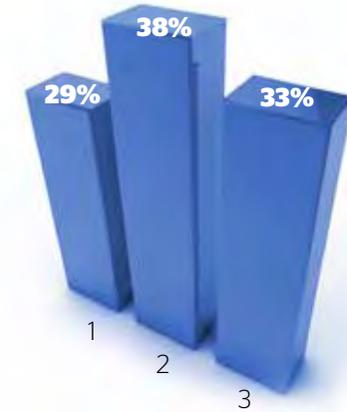
QUESTION 6 Personal health records like Google Health and Microsoft Health Vault have struggled to get traction with consumers. Indeed Google had ended the Google Health Service. Why do you think this is?

- 1) Consumers do not want to engage with their health data. They want to place their trust in clinicians to interpret and share this data as appropriate
- 2) For personal health records to be a success, there needs to be greater sharing of healthcare information
- 3) Consumers are concerned about security and will never want to have personal health records stored in the cloud



QUESTION 7 Patient empowerment is great - if patients are health literate. Whose responsibility is it to educate patients?

- 1) Governments
- 2) Health providers
- 3) Patients themselves



QUESTION 8 Patient engagement is widely recognized as being a positive force, yet there are still many challenges. What do you feel is the biggest obstacle to greater patient engagement in MENA?

- 1) The lack of a financial incentive program or reimbursement reform equivalent to Meaningful Use and Accountable Care in the United States
- 2) Patients are not equipped or willing to take a more active role in their own care
- 3) Disparate electronic medical records systems



