The practice of mobile health, or mHealth as it is now known, has been around for decades. The first initiatives were designed to provide greater healthcare access to remote populations, mostly in developing countries. This trend continues and grows daily, providing many patients with a higher quality of healthcare and health education than ever before. There are now multiple science and commercial applications to mHealth, including capturing data and tracking patients during clinical trials, collecting disease information, defining patterns, and sharing research for quicker and more effective collaboration on healthcare solutions. Other mHealth solutions include health literacy initiatives, anti-counterfeit tools, and professional education.

At a commercial level, the focus has moved to more consumer-centric compliance and adherence applications. Studies prove these technologies can benefit almost everyone.

According to a report by research2guidance, by 2015 one in five people around the world will have a smartphone, which will enable the industry to deliver health and wellness support via what some researchers call “mass personalization.” From cost savings to data collection to better health outcomes, mobile apps may be the industry’s answer to the next blockbuster. The experts participating in this forum are deeply immersed in mHealth at different points along the healthcare spectrum, and they are providing strategies, best practices, and a wealth of information pertaining specifically to the mobile application movement. With pharmaceutical company investment in mobile phone apps and educational websites up 78%, this seems the hot spot for discussion.

**Pharma Needs to Move Now to Mobile Apps**

1. 5 billion cellphone users worldwide
2. Increased use of smartphones for Web information
3. Create value beyond the pill

**DR. PAUL KECKLEY. DELOITTE.** mHealth is a catalyst to fundamentally change the way drugs are evaluated and delivered to patients. The landscape is dynamic, so staying abreast of emergent platforms, applications, and devices is essential. Cloud computing promises the ability to share larger amounts of clinical data, thus changing the way pharma might conceive its postmarket surveillance activities.

**CHRIS WASDEN.** PWC. Most of the incremental value companies can create is through information. mHealth will become one of the most effective tools the industry can use to share, gather, and monetize information to create value beyond the pill. There are apps that can increase patient compliance. There are apps that provide education for patients. There are apps that enable patients to engage with one another via social networks; patients who suffer from the same disease or conditions can learn from one another’s experience. Apps and devices that can integrate collected patient data around various medical situations with treatment information can become part of therapy and health management.

**XAVIER PETIT.** SHIRE. There are opportunities with mobile apps, coupons, and adherence programs in the consumer space. With HCPs, the basics are mobile site optimization to ensure an adequate user experience and the delivery of the right information at the right time on the right device. Additionally, with the significant adoption of smartphones and tablets...
by the healthcare community, in 2011 I expect a sharp increase in the adoption of e-prescribing, e-sampling, e-detailing, and EHR/EMR usage. Other ripe opportunities include partnering with third-party aggregators, such as WebMD and Epocrates, to leverage their platforms and build up ready access.

OLIVIER ZITOUN, EVEO. The time to go mobile is now. Brands need to use mobile technologies to reach healthcare providers, help patients, and to aid sales forces. With 5 billion mobile users in the world and only 6,000 medical apps in the store, the potential to reach targets with robust, relevant, interactive programs is tremendous.

But developing a regulated mobile device application for a pharmaceutical company is a big challenge. One of the most important steps is to diligently outline the process. Mobile projects are complex and come with numerous unknown variables. Developing a mobile application is actually developing software, most people don’t realize there is a lot of work to do after launch. Apps must be continually evaluated and refined. The launch is just the beginning. Managing privacy, compliance, and regulatory issues are also difficult. If the app program is international, it is important to understand the different laws and regulations in different countries.

DAVID TOLIVER, ANGEL. Consumers as well as healthcare providers have become more voracious in their desire to consume medical information, and they expect that information to be at their fingertips no matter where they are. We’ve reached a tipping point in the mobile world where smartphones are starting to outsell traditional cellphones across the board. This means more people will have the ability to consume mobile information. Additionally, the pharmaceutical industry, from a historical standpoint, is starting to adopt mobile technologies faster than other technology rollouts they’ve done in the past. If a pharmaceutical company isn’t thinking mobile right now, it needs to head in that direction very soon.

Challenges in the mHealth Environment
1. The mobile market moves at the speed of sound
2. There are more than 300,000 mobile apps to compete against
3. Users lose interest in apps fast

“Offering useful and functional information for the long term is key for mHealth solutions.”

DR. KELLY CHOI / QuantiaMD

“mHealth will be a huge part of the physician and patient education process and mobile tactics will need to integrate into the physician workflow or treatment process.”

DAVE DUPLAY / MedTera

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May 2011  o  PharmaVOICE

Mobile apps will help the industry create value beyond the pill.

CHRIS WASDEN
PwC

mHealth is the information highway for DTC.

DR. PAUL KECKLEY
Deloitte

Three Steps to That First Leap Into mHealth

mHealth is the future. The industry is at the beginning of everything that is possible. These first steps will help move a company beyond the start line.

1. Know the audience. Stay close to how patients and HCPs are using mHealth to determine how to best leverage mHealth for business in a compliant manner.

2. Start small and smart. Seek out credible partners in this space and do some pilot programs to learn and evolve. From a competitive standpoint, no one wants to be the last one to try a new technology. Marketers need to get smart on this space fairly quickly.

3. Catch up. Assess how internal resources and processes need to evolve to support mHealth.

Source: Kelly Choi, QuantiaMD.
For more information, visit quantiamed.com.

Software-based health data processing systems, there are issues such as understanding what defines a device and requirements for 501K clearance. Bradley Thompson wrote a good report on this in the 2010 MobileHealthNews “FDA Regulation of Mobile Health” report — which I strongly recommend everyone read.

CHRISTOPHER CULLMANN, OGLIVY COMMONHEALTH. The rapid growth of the mobile market and the speed at which it is changing is a challenge for the pharmaceutical industry. Pharma companies, slowed by regulatory and legal restrictions, must still find a way to participate in a market that is shared with smaller and faster competition. To successfully launch projects, pharmaceutical companies should leverage what they know best: their audience. Being able to address the needs of its consumers is how a company will win its market. Looking at the end user’s requirements and creating a model for usage are more important than ever. An mHealth solution for collecting emergency room data will have a completely different execution than a compliance application for a teen who has diabetes.

JAMIE PECK, ROSETTA. Any pharma marketer about to initiate an mHealth project needs to understand the sheer competitiveness of the landscape. There are currently almost 300,000 apps available for the iPhone, almost 50,000 apps for the Android, and several thousand apps for the Blackberry. Pharmaceutical marketers are competing against apps that count calories, that help with fitness, that provide recipes, etc. Understanding how to contribute something of value to the daily management of a patient’s health will be critical to success.

VINCENT SCHIAVONE, LISTENLOGIC. Broad health applications will continue to have a big impact on the industry. The Carrot app is a great example of this; it’s an all-in-one application to track all types of health and nutrition information. Compliance and adherence apps, being more narrowly focused, will have less impact in pharma. Only a small group of patients will download a single purpose app for compliance, for example; an even smaller subset will use it after 10 days. We’ll likely see pharmaceutical brands tie up sponsorship and educational sections of the apps that manage to gain audience critical mass.

XAVIER PETIT, SHIRE. Pharma companies should evaluate their role in this market and how the technology complements treatments. It is very likely that the pioneers in mHealth will not be pharma companies; they will either become partners, competition to pharma, or be absorbed by pharma companies.

Best Practices for Implementing Mobile Apps

1. Achieve a complete understanding of the mHealth ecosystem
2. Define objectives before beginning
3. Add value to the health experience
The first thing pharmaceutical companies need to understand is the difference between eHealth and mHealth — they are related, but are not the same. mHealth is not possible without eHealth. Companies need to familiarize themselves with both practices, as they are very complex. They need to know the differences between wireless health, telemedicine, connected health, eHealth, and participatory health. To understand these elements is to understand the future of communication-enhanced healthcare. I would not advise the industry to create an app without understanding the whole eHealth and mHealth ecosystem. The key for pharmaceutical companies is learning how to adjust to communication-enhanced healthcare.

JOHN MAILLARD, E-HEALTHCARE SOLUTIONS. Companies need to identify the program goal and determine if it is achievable through mHealth. They shouldn’t become enamored with new innovations and technology just for the sake of being in the game.

According to a recent report from Ernst & Young, pharmaceutical companies have increased their investments in mobile phone apps and educational websites by 78%. The apps and sites generally aim to encourage patients to take their medications, eat well, and exercise more often, according to the report. Merck and Novartis are the leaders in the mHealth drive. Pharmaceutical companies launched a total of 97 projects that made use of information technologies to improve patient health last year, compared with a total of 127 such projects during the previous four years combined.

The key is having all channels, including nondigital education, social media, and desktop applications, integrated into a lifelong learning platform.

Dr. Kelly Choi, Quantiamd. Mobile apps can be disposable, so understanding how a given solution will be used by a doctor or patient is key not only for adoption but for continued success. Offering information that is useful and functional for the long term is key for mHealth solutions. This understanding is obtained by monitoring the feedback of many physician users about their needs and what types of content work for them on the go. This will allow for rapid growth in the mobile space while continuing to actively retain and engage users.

Dave Duplay, Medtera. If the goal is to educate physicians and patients to drive better clinical outcomes and enhance patient adherence, mHealth should be considered one tactic in the overall treatment or education strategy. The key is having all channels, including nondigital education, social media, and desktop applications, integrated into a lifelong learning platform.

What the Future of mHealth Holds for Pharma
1. A more holistic approach to marketing
2. Technology is here to stay
3. Better informed patients, better outcomes

Jamie Peck, Rosetta. Since mHealth is about access, and not necessarily enablement, the

Pharma Spending on Mobile Apps and Websites
C. Peter Waegemann, MHealth Initiative. Technology isn’t a novel accessory, but should be thought of as an embedded part of the health management process.

Xavier Petit, Shire. The focus should be around adding value, improving processes, and addressing communication flow. It is key for pharmaceutical companies to listen to their patients and customers; to truly understand their needs, challenges, and expectations; and know where and how these needs can be met. It is equally important to understand that for any mHealth initiative to have long-term success it needs to be independent of any specific platform or technology. It is also important to identify the right challenges rather than implementing a technology that can solve a meaningless problem. Long term, it is likely that solutions will involve more than one platform or technology, they will need to integrate multiple factors or devices, they will need to accommodate multiple forms of interactions, and they will require the involvement of many stakeholders.

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The industry needs to focus first and foremost on outcomes and the reporting of outcomes. Mobile enablement should vastly improve outcomes. The industry needs to focus on how to analyze and optimize data and programs.

**DR. PAUL KECKLEY, DELLOITE.** The industry must embrace a new vision of direct-to-consumer advertising that acknowledges the critical role consumer-directed, technology-enabled care management will play. mHealth is the information highway for DTC; it facilitates customization of information and the correlation of diagnostics and therapeutics. mHealth will be the centerpiece for future DTC efforts and a rifle rather than shotgun approach to its use must be thoughtfully designed by each company, which must carefully optimize interactions between consumers, prescribers, and payers.

**C. PETER WAEGEMANN, MHEALTH INITIATIVE.** The pharmaceutical industry will eventually move to a more holistic approach to healthcare. The focus will move from only providing medications to providing applications, which have long-range implications. Instead of clinicians just prescribing pills, they will also prescribe mobile apps that provide guidance. It will be like using a GPS compared with paper maps — getting directions without knowing where you are. Pharma mobile apps will guide patients in the same way. It’s a whole different ball game.

**KURT MUELLER, ROSKA HEALTHCARE ADVERTISING.** When establishing long-range goals around mHealth the industry needs to accept and understand that the boundary between real life and mobile life is disappearing. Think about the way 20 year olds ‘watch’ television today. Thirteen minutes constitutes a complete show and they may just be watching on their iPhones. We are inextricably linked and dependent on technology. The pharmaceutical industry should establish its long-range goals with this understanding in mind and seek to integrate mHealth into the everyday fiber of patients’ lives so they once again are simply managing their health. Technology must not be treated like a novel accessory, but as an embedded part of the health management process, one that achieves the best possible outcomes.

**DAVE DUPLAY, MEDTERA.** An educated patient or caregiver is a healthier, more compliant patient, so the focus must be on education. We recently conducted a patient survey in partnership with Dr. Mark Vanelli of the Harvard Medical School, and found that up to 72% of patients in their first month of treatment stop taking their prescribed medications. Pharmaceutical manufacturers sacrifice between 40 cents and $2.34 of potential revenue for every dollar of current revenue because of the high rate of medication discontinuation. The patient education process needs to be engaging, fun, entertaining, and easy. mHealth has the potential to be a huge part of this educational process.

**DAVID TOLIVER, ANGEL.** Mobile devices will only expand throughout the market and within all demographics. Seniors are the demographic with the largest year-over-year growth in the mobile market. Creating a direct connection between company and customer, where that direct, always-on connection rests in the palm of the customer’s hand, is extremely important. There has never been a time when marketers had the opportunity to make their brand or company information ever-present in front of their customers. Not
“mHealth does create opportunities for pharma companies, but it comes with a fair share of challenges.”

XAVIER PETIT / Shire US

“Compliance and adherence mobile applications will have a limited impact on the industry.”

VINCENT SCHIAVONE / ListenLogic

only can mobile apps make a brand site the go-to source for the information consumers are hungry for, but mobility also affords a direct two-way connection. With smartphones, marketers have the ability to reach out to their customers via every mode of communication — phone call, SMS, e-mail, push notification, and more. And mHealth gives customers that same direct connection back to the brand. When establishing long-range goals, companies need to think about how to expand their customers’ communication world. They don’t have to do everything at once, of course, but they should get started.

CHRIS WASDEN. PwC. When developing a mobile app, a company can’t be self-serving to its own drug. Patients want apps that solve their problems. This is a difficult concept for drug companies to get their arms wrapped around because they have always focused on selling product. However, some of the more innovative companies are starting to think along the lines that their No. 1 priority is the patient’s overall health, and that the drug is just one of many parts of a holistic approach. The pharmaceutical industry needs to learn how to integrate a drug into a whole list of other requirements for a more holistic approach that drives value to the patient. Shire has a mobile app for patients with Gaucher’s disease that can be used even if they are not taking the company’s treatment. Another example is the first mobile app approved by the FDA called WellDoc. This app was developed to improve the management of diabetes and it is drug company agnostic.

JOHN MAILLARD. E-HEALTHCARE SOLUTIONS. The knowledge that there is someone else out there is a huge motivating factor for many people. The ability to share successes, challenges, and everything in between brings together health communities, which can be accessed regularly for more information and further support. This will guide the future direction of mHealth. Marketers will want people to remember that it was their company that gave them an application, which will increase brand loyalty while improving adherence.

OLIVIER ZITOUN. EVEO. The long-range goal should be centered around improving the patient-HCP interaction. Solutions that can bring together the patient and physician using real-time data will be important. Data would be stored seamlessly and historical information on patients could then be easily accessed, without the need for separate discussions, more paperwork, etc.

Shire: An mHealth Case Study

Shire’s drug, VPRIV, for Type 1 Gaucher’s disease was approved by the FDA in 2010; the drug is targeted to fewer than 5,000 patients in the United States who suffer from the incurable chronic genetic disease. This small and well-informed community of patients, who receive biweekly infusions, cheered the news of a second drug.

Shire officials say the Gaucher community is a very vocal customer base; patients are fierce advocates because they went for so many years before a second treatment was approved.

For Shire, the business model for mHealth was one that empowered an already active patient community with a tool to manage various aspects of the disease.

The result was a robust app, called OnePath, which tracks patient health metrics, provides real-time information to physicians, and connects patients to dedicated case managers, who streamline insurance coverage issues. OnePath also includes news, calendars, and iGau, which helps patients track therapeutic goals.

iGau allows the patient to track bone pain, hemoglobin levels, liver volume, platelet count, and spleen volume. Patients can take this information to their regular doctor visits.

Many patients have been treated for years but don’t have an easy way of recording their information. They will say, “Yes, I feel better,” but the doctor wants to know what the actual results are.

According to Shire officials, because patients receive infusions every other week, the goal was to create an application that would empower them with information, allow them to communicate with the company more easily, and ultimately be able to communicate with their physicians.

Throughout development of the app, Shire reached out to the tight-knit Gaucher’s community for advice.

Shire officials say they try to involve members of the patient community, whether in a formal test setting or an informal poll. The goal was to get patients to ultimately drive physician adoption of the OnePath app.

Shire’s focus is to enhance the relationship between patients and their doctors, and it is currently developing a complementary physician app.

Source: PwC, Health Research Institute; Healthcare Unwired; New Business Models Delivering Care Anywhere. For more information, visit pwc.com/us/mhealth.