

Digital Disruption 101 It's Here

Technologies and social media are greatly transforming life-sciences across all sectors.

Digital disruption is occurring all around the world, and the life-sciences industry is no exception. As technologies, telemedicine, and mHealth services gain traction, providers, health plans, and pharma companies are evolving their models to put a higher focus on services rather than just promoting the product.

According to a KPMG telemedicine report, an example of this digital disruption can be viewed in the increasing number of U.S. providers that are using a service called telestroke, in which doctors communicate using digital video cameras, Internet telecommunications, robotic telepresence, smartphones, and other technologies to remotely evaluate people who've had acute strokes and make diagnoses and treatment recommendations to emergency medicine doctors at other sites. Other examples include Aetna's purchase of Healthagen, the developer of the popular health app iTriage; and Sanofi's iPhone-enabled blood glucose-monitoring device.

Providers are partnering with health plans to define new telemedicine reimbursement models, health plans are acquiring and developing mobile applications aimed at enhancing provider quality, and life-sciences organizations are moving closer to their customers by delivering services as well as products.

Online channels and platforms are the first stop for seeking information and tools to support management of health conditions.

"The digital era is upon us as digital and social media channels are ubiquitous and part of our every-day lives, around the globe, and across generations," says Melody Toorneman, director digital practices, global medical plat-

forms and capabilities, GSK. "Stakeholders are ready and looking to the industry to provide credible, value-added digital medical content that is delivered seamlessly from desktop, to tablet, and of course mobile phones. Pharma companies need to take the necessary steps, with functions collaborating and sharing learning, in order to design customer-oriented solutions that follow changing preferences of healthcare professionals, patients, and customers."

Pharma companies will need to break from their comfort zone and get in the game fast, our experts say.

"The common experience around digital disruption across different industries is that incumbent leaders are most at risk when they do not move fast enough to embrace change," says Keith Liu, VP, Klick Labs, Klick Health. "Understandably, this is often due to their hesitation of destroying the very things upon which their success was founded."

But as healthcare-related data from devices — diagnostics, mobiles, wearables — and platforms such as digital social media, electronic medical records, and online services pro-



“The openness of social media has to be embraced and used to create a dialogue with patients and practitioners.”

DAVID MOORE
Ashfield Healthcare Communications

vide a more complete view of the patient, the impact of personal data will be felt across every stage of the product life cycle, including R&D, clinical trials, and commercialization. So the best defense to digital disruption is a good offense in the form of digital innovation.

"Strategies that provide and leverage data to go beyond the pill will position organizations to be the beneficiaries of digital disruption rather than its victims," Mr. Liu says. "Those



“All of life sciences has an opportunity to create content and tools that help patients maintain positive health behavior changes.”

EMILY TOWER / AbelsonTaylor

organizations that not only embrace this change, but contribute to or lead it will win.”

Pharma companies cannot afford to be detached and complacent in their approach to patient engagement or through social media, says David Bennett, president, global sales and marketing, Zinc Ahead.

“For the most innovative companies, adapting to become digital media leaders will allow for an improved relationship with their audiences, providing better understanding of their needs and the deeper market trends,” Mr. Bennett says. “This will all help shape clinical trials of the future, and tailor drug development to the specific needs to the patient.”

Defining Digital Disruption

Analyst Dr. James McQuivey defines digital disruption as the coming together of three major factors:

- » The availability of free digital tools and services that build products and services quickly.
- » The sudden rise of easy-to-use digital platforms that increase competition in the market significantly.
- » The rapidly-growing group of consumers eager to make use of the new digital products and services.

Source: Forrester Research. For more information, visit forrester.com.

As brands capitalize on the opportunity to be more focused on better health outcomes based around their interactions with the user, the route to providing this value will require marketers to substantially increase their engagement with the use of personalized and complex media in a compliant manner.

Companies are now challenged with managing traditional and digital compliance holistically, from concept to distribution, reuse, expiry, and withdrawal.

“Digital content development requires more intensive planning, dynamic assembly, and responsive collaboration across a wider internal audience but has the potential to reach a broader public with much more targeted impact,” he says. “A mechanism is, therefore, required that facilitates and accelerates the development of digital material, ensuring content remains compliant while speeding up approval times before publication.”

Digital Disruption in the Clinical Setting

There is no question that digital disruption is driving change and the industry must adapt. As companies get better at connecting with patients and capturing data, they will also have the potential to unlock new insights into how medicines are working.

“Our view into the life of our patients is changing and that will bring change to processes such as R&D, clinical trials, and commercialization,” says Trish Nettleship, director, social media and influence at UCB. “Digital is facilitating our understanding and giving us a tool to bring patients into the R&D and clinical trials process in a new way. We then have a venue to reach our customers where they are and how they want to be reached. This shift also means we will need to



“Capitalizing on social media means having a deeper understanding of the patient.”

MATTHEW STUMM / BBK Worldwide

be nimble enough to respond and that will require a transformation across the healthcare ecosystem to enable us to do so.”

“Digital disruption is already taking place, so research and development, clinical trials, and commercialization strategies will need to evolve,” says Stuart Sowder, Pharm.D., VP, external medical communications, at Pfizer.

Looking ahead, technologies will soon be implemented on a regular basis to interact with patients throughout the course of every clinical trial.

“These tools are to be leveraged as a vehicle for recruitment and consent to participate in a trial,” says Xavier Flinois, president, Parexel Informatics. “Where electronic clinical outcome assessment — eCOA — solutions are currently being used, we see a greater need to augment these with additional functionality to enrich the patient experience, increase study engagement, drive compliant behaviors, and lower the burden of the study thereby facilitating fewer clinic visits.”

However, Lindsay McNair, M.D., chief medical officer and president, consulting services, WIRB-Copernicus Group, adds a word of caution on using social media for patients, participating in clinical trials. As patients increas-

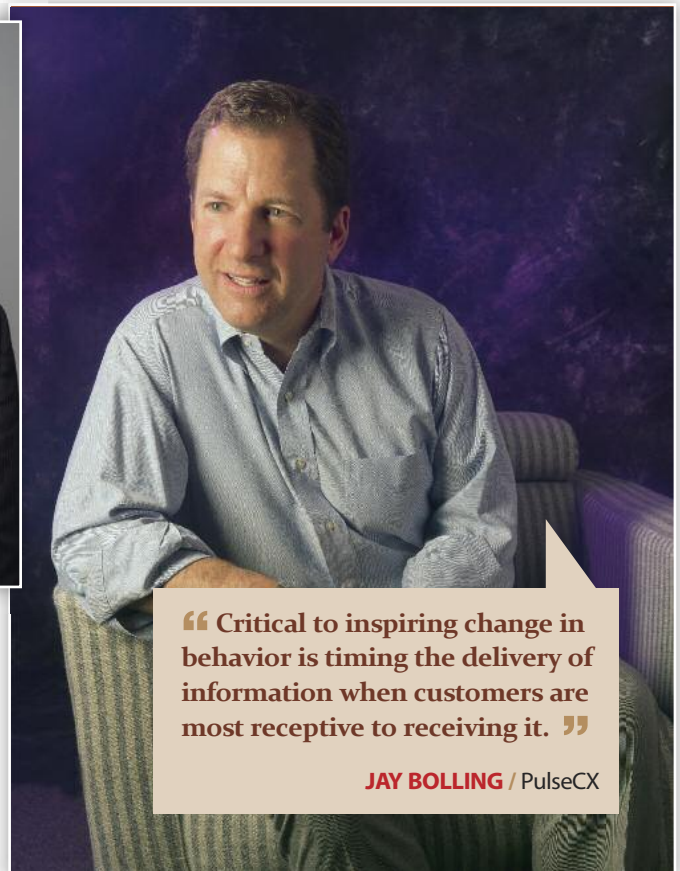
“ Social, mobile, analytics, and cloud technologies are driving innovation in business models, product innovation, patient, and provider engagement. ”

SHANKAR NARAYANAN / Cognizant



“ Meaningful engagement will build loyalty and drive better patient outcome. The trial and error will be well worth it. ”

LISA STOCKMAN / inVentiv Health



“ Critical to inspiring change in behavior is timing the delivery of information when customers are most receptive to receiving it. ”

JAY BOLLING / PulseCX

ingly using blogs, Twitter, Facebook, and other social media platforms to discuss their symptoms, medications, and coping mechanisms with others who have the same disease, they can inadvertently alter the outcomes. Patients are seeking to help each other and not cause harm; they just generally lack in-depth knowledge of the clinical trial process and are unaware of the possible ramifications of their actions, Dr. McNair says.

“By comparing notes on treatment effects and various clinical readings, trial participants can inadvertently unblind themselves,” she warns. “They can also discourage other subjects from trying an investigational new drug, which could have helped them or encourage them to leave a trial prematurely if they suspect they are getting a placebo rather than the drug being tested. Pharma companies need to address these potential issues in advance by incorporating patient social media guidance into the consent forms in their clinical trial protocols.”

Disrupting for Commercial Impact

Collectively, healthcare social media websites and groups provide patients and providers with more healthcare information and support than was ever possible.

The time has come for companies to switch from a mindset of product promotion to listening, educating, building trust, increasing health literacy, and improving health outcomes, says Dr. Ome Ogbru, medical information subject matter expert, ArisGlobal. For example, tweeting about new published cholesterol or hypertension guidelines can help raise patient awareness while building a company’s brand.

“Pharmaceutical companies can also provide value by helping providers and patients find financial resources to help with the cost of care,” Dr. Ogbru says. “Social media platforms can be used to promote product coupons, financial assistance programs, or share information about reimbursement or government assistance.

Ms. Nettleship at UCB says companies can derive significant value from social media simply through listening. Social listening provides an authentic, unaltered view into how patients are feeling, thinking, and what they need. These insights can then inform messaging and content at all levels.

“Social media is our direct connection to patients, an opportunity that is still transformational in our industry,” she says. “While personalized monitoring technology can capture an authentic view of a physical response, social media captures an authentic view of an emotional response and both can play a key role in predictive analytics. By creating a bridge between these two areas — patient engagement and analytics — we can help unearth the insights that will allow us to deliver better treatment experiences for patients and, ultimately, improve health outcomes.”

At UCB, the company is working with the

U.S. Department of Veterans Affairs’ Epilepsy Centers of Excellence on the Policy for Optimal Epilepsy Management (POEM) study, which uses the online health management platform PatientsLikeMe to show the potential of an online data-sharing network to positively influence self-management and self-efficacy for U.S. veterans with epilepsy. Supporting existing online patient communities such as these provide the tools to help patients better manage their own conditions and an invaluable opportunity to connect with people with a shared experience, Ms. Nettleship says.

Dr. Sowder at Pfizer says just as the general public created a massive uptake in smartphones and other digital technologies, people will also stimulate similar uptakes in newer technologies, including wearables.

“It is incumbent upon us to do what consumers are asking us to do — listen to their needs and wants, determine how they would like to receive and contribute to health communications, and respond,” Dr. Sowder says.

As an industry, all of life sciences has an opportunity to create content and tools that not only help patients maintain positive health behavior changes, but also inspire others in their journey toward better health, says Emily Tower, VP of digital strategy and analytics, AbelsonTaylor.

“We know that patients looking to make

“Enhanced patient-HCP communications via social tools will be commonplace in the near future.”

TIMMY GARDE / Calcium



“Access to larger pools of data and the need to share that data in a useable, efficient way will become even more important.”

MICHAEL RUSSO / Acorda Therapeutics



and change behaviors include access and the ability to choose content wherever customers want to engage.

“Customers want an experience, not a manufactured brand moment,” he says. “Companies need to provide a series of experiences and memories all tied together with a story that resonates and aligns with their journeys.”

Overall, mHealth is becoming an important component of commercialization strategies, Mr. Flinois from Parexel says. Brand support programs may include mobile apps that aim to provide greater engagement for the patients with their treatment, and increase understanding of outcomes between patients and physicians.

“The industry is seeing a greater drive to consider these as part of commercialization strategies to increase prescribing confidence, refill rates, and importantly facilitate better treatment outcomes,” he says.

However, reports show that patients tend not to stick with apps any more than they do their prescriptions. According to David Ormesher, CEO, closerlook, the issue of poor adherence with health apps is more of a reflection of the apps value than a lack of patient commitment, however.

“Most consumer health wearables are plagued by a general yawn from both users and healthcare professionals,” he says. “There is a disconnect between the design of mHealth as data capture devices and the need for understanding and meaning. This is why most health apps have a half-life of less than six months. The sector needs to move to tech-enabled personalization.”

(Editor’s note: To read more about best practices for healthcare apps, see the digital edition.)

Using Social Media to Improve Outcomes

According to Timmy Garde, managing partner/chief operating officer at Calcium, in the future, enhanced patient-HCP communication via social tools will be commonplace and social media will become a powerful way of tracking and sharing progress toward health goals.

“This latter development has already begun



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DAVID ORMESHER / closerlook

organically,” he says. “The tricky part lies with privacy issues and what types of data may be or not be available.”

The very ethos of social media is its openness and transparency, says David Moore, group director, Ashfield Healthcare Communications.

“No privacy is a foreign concept in healthcare, both in patient interaction as well as pharmaceutical development,” he says. “However, this openness has to be embraced and used to create dialogues with the patients and practitioners.”

“Social, mobile, analytics, and cloud technologies are driving innovation in business models, product innovation, patient, and provider engagement, says Shankar Narayanan, VP, global head, life sciences business Unit, Cognizant.

Companies that want to have a social media

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KEITH LIU / Klick Health



behavioral changes often turn to social spaces — both for support and accountability — within their communities,” she says. “More than that, success stories, and even everyday trials, shared by patients across a variety of conditions inspire others to embark on or maintain healthy behavior.”

Critical to inspiring change in behavior is timing the delivery of information when customers are most receptive to receiving it, says Jay Bolling, CEO, PulseCX.

Understanding the customer experience identifies moments of impact when customers are most ready and willing to engage with brands. To engage customers effectively, life-sciences companies must provide compelling stories that reach customers at critical points in their journeys. Key considerations for effectively engaging customers to improve health



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Zinc Ahead



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LARRY GIOIA / PwC

presence must be willing to be on equal footing with patients and practitioners to really partake in open discussion.

“If pharma companies are going to succeed, they need to think of social as a mindset and not just another channel,” says Larry Gioia, director, IT strategy and enterprise architecture, PwC.

To truly capitalize on the powerful tools that the digital era offers, the relationships between stakeholders within the healthcare ecosystem need to change, Ms. Nettleship says.

“The industry needs to be able to share data, integrate systems, and respond in an agile way,” she says. “For patients, this will mean a focus on privacy and the impact of sharing data — both positive and negative. As pharma looks for ways to leverage these new innovations, we must preserve the bond of trust with patients by guarding their privacy.

“ Pharma companies need to design customer-oriented solutions that follow changing preferences of healthcare professionals, patients, and customers. ”

MELODY TOORNEMAN / GSK



“ Social media as an extension of market research efforts can provide insights to optimize marketing and patient communications. ”

ROBERT BEDFORD / MediScripts

Life-sciences companies can become the convener of online communities, not only for patients, but also for healthcare providers, suggests Dr. Sowder. But a lot will depend on how regulation shapes the opportunities.

“As a society we are still searching for the right balance of good regulation and good communication,” he says.

Although the FDA recently issued social media participation guidelines for pharma companies, there is still substantial risk for pharma to use social media as an engagement tool, says Robert Bedford, executive VP, sales and marketing, MediScripts. However, social listening is extremely valuable and less risky.

“By engaging in or monitoring social media channels and patient forums, pharma companies can gather candid feedback on drug therapies and how patients think of and cope with their conditions,” Mr. Bedford says. “Using social media as an extension of market research efforts can provide insights to optimize marketing and patient communication.”

Also, he adds, making patients aware that their input through social media channels is valued helps to increase engagement between the patient and the manufacturer.

Even though pharma companies are hesitant to engage with patients due to regulatory concerns, they can start by having more intimate conversations about health with patients, using real language used by patients regarding patient concerns.



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DR. OME OGBURU / ArisGlobal

“Pharma’s pre-approved posts and Tweets on social media often seem stilted at a time when the people they are trying to reach, especially young people, are pushing in the opposite direction away from formality and interactions that feel canned,” says Lisa Stockman, president, global PR/medical communications, inVentiv Health. “It is often a challenge to offer valuable information and at the same time, say something human, sympathetic or revealing about the company or brand. The process will require experimentation, but the potential benefits are huge. Meaningful engagement will build loyalty and drive better patient outcomes and the trial and error will be well worth it.”

“Capitalizing on social media means having a deeper understanding of the patient,” says Matthew Stumm, principal, creative and media strategy, BBK Worldwide. “Social will continue to play a role by providing a useful communications platform for patients, which in turn gives the industry better insights into what patients need and how to best support them.” ^{PV}



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Best Practices for Designing Apps to Improve Adherence

XAVIER FLINOIS
President
Parexel Informatics



The most effective apps are those that provide valuable feedback not just to the patient but also to the physician. It is acknowledged that people dip in and out of app usage, but this is not necessarily a problem. Patients

should be able to adjust their self-care strategies and try new things. The applications that patients will use most will be those that pro-

vide valuable and actionable feedback and require minimal time to operate by the patient.

TIMMY GARDE
Managing Partner/Chief Operating Officer
Calcium



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The answer is simple — the app must bring value to the user. This value must outweigh the “cost” of using it, whether that cost is measured in money, time, or data sharing. So you can increase the benefit, but you can also decrease the cost. Wearables and other sensors that require zero input from the user are promising because they slash the “time” cost substantially.

DAVID MOORE
Group Director
Ashfield Healthcare Communications



needed, and then have the right quality to deliver the information or result needed quickly and easily. People expect technology to be assimilated into their daily lives. They expect to get reliable information they want immediately and it must give them value. In meeting that, the potential benefits are huge. We can

provide greater empowerment to the patient and their caregiver to engage in richer conversations with their physicians. We can give the physician tools to identify patient issues, such as an app that addresses drug-to-drug interaction in HIV/AIDS patients. Also, the beauty of the digital age is that the Internet never forgets. We are constantly collecting real-time data that helps in the care and support of patients throughout their journey. Diabetes is a perfect example of this. With the real-time data collected we can help improve the patient’s lifestyle, allowing them an opportunity for better decision-making in their daily routine, which can lead to overall improvement in the management of their disease.

The aim of supporting the patients through their journey is to minimize the negative and emotional impact of the disease. Google Glass, the Apple Watch, game consoles all help to embed the function of tracking health as part of daily life, moving it out of the corner where it can be overlooked. Technology has certainly become part of our daily life, and healthcare is moving in the same direction.

SHANKAR NARAYANAN
VP, Global Head, Life Sciences Business Unit
Cognizant



ogy should run in the background, and data collection needs to be automatic. This is why the integration of wearable “quantified-self devices” with apps is in focus today.

To improve adherence, apps need to be designed without causing friction in the user experience. Technology has to be invisible to users as they perform their daily routines. Technol-

App Retention Rate Study

- » 20% of apps are used only once, an improvement of 6% from four years ago.
- » 20% of apps are only opened once, improving from 26% four years ago.
- » During the same period, the percentage of apps used 11 or more times increased 13% and now comprises almost 40% of all apps.
- » Android has greater percentage of users opening an app 11 or more times.
- » Sports and games apps have the highest app abandonment rate of all categories, whereas weather and social networking apps have the lowest.

Improvements can be attributed to an increased understanding of and focus on user engagement that has enabled developers to create more useful and personalized apps.

Source: Localytics.
For more information, visit info.localytics.com.

TRISH NETTLESHIP*Director, Social Media and Influence
UCB*

The sheer variety of apps is overwhelming and the key to continued use is focusing on patients' needs. Their needs are many and they are looking for integration, not another tool to download. Inte-

gration with the current medical system, primarily electronic medical records, and ease of use, is paramount not just for patients, but for all stakeholders. From the point of view of healthcare professionals, information input needs to be simple yes, but trendspotting and meaningful data collection need to be just as simple, and then absorbed into current systems.

MICHAEL RUSSO*Senior Director, Corporate Digital Strategy and Innovation
Accorda Therapeutics*

To help ensure recurrent use, a medical mobile app needs to be user-friendly and meaningful to an individual's daily life. For example, we are developing MS self, an app for patients with multiple sclerosis.

Many patients only tell their doctor how they've been feeling the few weeks prior to their visit, because they're unable to remember beyond that. The MS self app serves as a journal so patients can jot down how and what they're feeling on a daily basis and refer back to it during doctor visits. In addition, predictive algorithms use previous journal entries to send personalized information to the user. For instance, people with MS can get fatigued easily, particularly in hot weather. The algorithm accounts for factors like weather and activity level on a personal calendar, and can send a notice on a particularly busy or hot day. The app provides useful content and tips on how to manage symptoms and feel better. This provides ongoing value to the patient and not only encourages consistent use of the app, but also better health.

STUART SOWDER, PHARM.D.*VP, External Medical Communications
Pfizer*

Apps are not carved in stone. Apps are and should be for a specific time and situation. In the future there will be new and better ways to both collect and monitor a person's health informa-

tion, and that information will guide the creation of apps. For example, sensors and wearables are in early stages and promise a more convenient way for patients to monitor their conditions. We will have to create apps for that and understand that the apps will not last forever. We need to keep evolving and creating ways to reach patients personally and help them incorporate better health into their day to day living.

MATTHEW STUMM*Principal, Creative Media Strategy
BBK Worldwide*

Designing apps with the patients in mind is key to use and engagement. Successful medical apps keep it simple; they automate simple tasks, provide easy access to information related to health conditions

or treatments, and many have the ability to interact with personal health records (PHR) or electronic health record (EHR) systems. Over the next few years, apps will become an even bigger part of the overall healthcare mix, with patients relying on apps to self-manage their disease or condition, and physicians and sponsors must continue to innovate in support of this trend. Just as employees changed IT for the enterprise, patients are helping to drive change in healthcare. For the clinical industry, apps will play a big role in ensuring that clinical trial patients, and their family members, have the support and information they need, when they need it, every step of the way. This kind of support, and the positive effect it can have on the study as a whole, cannot and should not be underestimated.

MELODY TOORNEMAN*Director of Digital Medical Practices, Global Medical Platforms and Capabilities
GlaxoSmithKline*

People have shifted their consumption of health-related information from desktop to mobile devices, and there is a proliferation of both free and for-fee medical mobile applications. The

challenge is that many of these apps are poor quality, not designed with the customer in mind, and provide minimal value-add content and tools to sustain ongoing repeated use of these apps. There is opportunity for the industry to become the leader in the creation of credible, quality mobile medical applications by putting the customer first and clearly identifying what customers want and need.

EMILY TOWER*VP of Digital Strategy and Analytics
AbelsonTaylor*

Developers of all apps are looking for ways to extend their shelf life. There is, however, a limit to the total number of apps consumers are willing to interact with, which is about two dozen,

according to a recent Nielsen report. Health apps are competing for share of mind among the plethora of other apps, from photography and social networking to gaming and lifestyle. The key to the success of any health app, however, is its ability to be sticky. It has to go beyond tracking medications to find ways to be indispensable to people's lives. If it's an allergy app, can it tell users the weather and the pollen count? If it's a weight loss product, does it integrate with MyFitnessPal calorie counter and FitBit? Pharma companies must look at the bigger picture and determine how to softly sell the product information and relate more to the users and their lifestyles in order to break through and stay relevant. **PV**