

The Merger of Healthcare and Technology

(Sources: Edited excerpts from an article prepared by Joseph Haas and published by Scrip; an EY report, *In Life Sciences 4.0: Securing value through data-driven platforms* by EY Global Life Sciences Industry Leader Pamela Spence)

In the EY report issued March 13, Spence notes that every company producing health care products and/or services is a data company – “and therefore a technology company” – while likewise “every technology company that has access to health-related, consumer-generated information or other health data is a healthcare organization.” The report goes so far as to speculate that by 2023, about 75% of life science companies currently in the Fortune 500 may fall out of that category thanks to increasing competition and industry convergence. Forward-thinking life sciences firms, including those in biopharmaceuticals, need to ensure future value creation by focusing on ways to unlock the power of data through connecting, combining and sharing it, Spence said in an interview.

Focusing on patients as the customer, over health care providers and payers, and providing services around their products should drive “where [biopharma companies] deploy their capital and ultimately what business model they seek to achieve,” Spence said. For example, some drug makers might decide their future prospects look best if they turn to a disease-management model, which would be service-heavy and certainly focused more on the patient/consumer than on the health care provider, she explained.

In other industries such as retail and transportation, EY has seen that providing services can increase brand loyalty. For life sciences companies, a clear opportunity to do this is in addressing the needs and concerns of “patients and consumers and also physicians and HCPs [who] are increasingly becoming more empowered with the data that they are exposed to,” Spence said.

In tracking deal-making between life sciences companies and technology firms, the EY report suggests that there are three primary motivations to such partnerships: creating a new product or service, improving an existing product or service and collecting real-world data. Of the deals tracked between 2014 and 2017, EY said 51% fell into the first category, with examples including Novo Nordisk AS's alliance with software firm Glooko to develop a diabetes management app and UCB Group's partnership with GPS technology company Garmin to pilot a wearable device for the drug *Cimzia*.

All three of the major diabetes companies – Eli Lilly & Co., Sanofi and Novo – have been early adopters of the model of partnering with technology firms to empower and engage patients, the report points out, and diabetes as a disease has lead the way in delivering patient-focused solutions rather than drugs alone. Sanofi inked a joint venture in 2016 called Onduo – described as a virtual diabetes clinic – with Alphabet/Google's Verily Life Sciences LLC unit. Meanwhile, in January, Lilly teamed with consumer digital health firm Livongo Health to conduct real-world trials to better understand patients' health behaviors and get diabetes patients more actively engaged in their own care.

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In Brief...

- ♦ **Walgreens Boots Alliance** on Wednesday posted sales of US\$33 billion for its second quarter ended Feb. 28, an increase of 12.1% from the year-ago quarter, and an increase of 9.4% on a constant currency basis. “Our growth strategy of increasing and consolidating volume, differentiating ourselves through value and quality of service, and controlling costs is bearing fruit across our businesses,” *Stefano Pessina*, executive vice chairman and CEO of the Deerfield, Ill.-based retailer, said. “This is reflected in another good set of financial results in which we delivered the highest sales growth in eight quarters, as well as strong cash generation and record U.S. pharmacy market share. We expect to continue to grow, in part through the recent acquisition of stores from Rite Aid, and today we are raising our fiscal 2018 guidance.” In addition to beating revenue expectations by US\$1 billion, Walgreens Boots Alliance earned US\$1.73 a share.

- ♦ Japanese wholesaler **Toho Holdings** announced that it has forged a capital alliance with Tokyo-based biotech company **HekaBio**. The alliance gives Toho a 6% stake in the company, effective March 20. HekaBio develops new therapeutics from overseas, concentrated mainly in intractable cancer, and autoimmune and inflammatory diseases. “Toho Holdings and HekaBio share the same philosophy of contribution to society and medical care. Through this investment, Toho Holdings will collaborate in the development, marketing and distribution of new and innovative therapeutics in Japan,” the wholesaler announced in a statement.

- ♦ **Pfizer China**, a branch of US-based drug manufacturer **Pfizer Inc.** announced that it would partner with the country's internet giant **Alibaba** in a campaign to verify the authenticity of their drugs through a QR code scanning initiatives. The effort would target counterfeit drugs in the

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Zuellig Pharma and Bayer Develop a Patient Assistance Program

(Source: Zuellig Pharma)

Cancer affects patients in many ways. Managing this disease is challenging for both patients and caregivers, which is why Bayer Malaysia and Zuellig Pharma CareConnect have come together to facilitate better treatment outcomes.

In conjunction with World Cancer Day, Bayer Malaysia partnered with Zuellig CareConnect team to launch an integrated Patient Assistance Program (PAP) through a web app called BayPAP. Specially targeted at Malaysian patients diagnosed with liver cancer, the app serves as a digital healthcare management tool that hosts comprehensive patient medical records and helps ensure patients stay on course with their treatment. BayPAP web app allows easier administration of PAP, where patients have easy

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Merger (cont.)...

Of the 90 deals tracked between 2014 and 2017 focusing specifically on developing a treatment platform technology for a specific disease, EY found that 25 centered on diabetes treatment, with 13 on respiratory disease and 10 on oncology. "The emphasis on new platforms in respiratory care and diabetes is unsurprising," the report notes. "In both cases, the competitive landscape is fierce — many products are either already generic or soon will be — and advances in sensors have created opportunities for smart, connected devices to capture user-generated data to inform care management. In 2018, for instance, every major biopharma with a significant respiratory franchise has now partnered with, or invested in, companies developing connected inhaler technology." Meanwhile, the prevalence of cancer-related life sciences/technology partnerships likely reflects the reality that cancer patients require a high degree of care, Spence said.

Beyond efforts to develop a new product or service, 23% of the life sciences/technology company pair-ups during 2014-2017 were aimed at improving a product or service by "adding capabilities linked to real-time data capture or improved customer engagement," the report states. Access to data is also a major driver for alliances; 26% of the partnerships reflected a need by the life science company to combine its clinical data with real-world data to inform its R&D and commercial decision-making. These efforts include Novartis AG's tie-up with Microsoft and Swiss and Dutch researchers to develop reliable, sensible assessments of neurological dysfunction and motor problems in multiple sclerosis patients.

Another example of this type of deal is Teva Pharmaceutical Industries Ltd.'s 2016 collaboration with Intel to incorporate data from wearable devices in a Phase II study measuring disease progression in patients with Huntington's disease. In 2017, a collaboration focused on therapeutic adherence between Otsuka Holdings Co. Ltd. and Proteus Digital Health Inc. led to the first US approval of a digital pill, *Abilify MyCite*, which combines the oral antipsychotic drug aripiprazole with a sensor that tracks the patient's ingestion, paired with an app to record activity and mood.

"Companies are aware that data streams from wearables and sensors allow real-time feedback, creating an opportunity for continuous learning in clinical trials via analytics," the report says. "Many of the first efforts are clustered in neurological indications where measuring product efficacy and disease progression have historically depended on subjective survey data."

A complex web of relationships has gradually developed from efforts between life sciences firms and technology companies to create new patient care platforms. The result is a complex network as different players come together, including life sciences companies such as Lilly, Novartis, Pfizer Inc. and Johnson & Johnson; incumbent tech companies like Apple, Microsoft and IBM Watson; newer digital information companies like Helix, 23andMe Inc. and Innovalan; and, other health care-concerned groups such as the CRO Parexel International Corp., the insurer Blue Cross Blue Shield Association, the pharmacy benefit manager Express Scripts Holding Co., the Chinese conglomerate Alibaba and Duke University. One of the primary challenges facing biopharma companies that want to incorporate data-driven technology applications into their business models is whether to try to do this on their own or through partnerships, Spence noted.

In most cases, collaboration will be the more sensible approach, she asserted. "I think we're moving into a new way of working in the world, that you don't have to own everything. If you look at great innovations and how great things are scaled, it's often via networks," she explained, adding that, "I just don't think it's affordable for everyone ... to do everything in a proprietary way. Nor is it sensible, because you can't be the best of the best in everything."

Zuellig & Bayer (cont.)...

access to a one-stop web-based medication assistance resource. By going digital, patients can redeem their free medication within three days, reducing medication redemption lead time which typically takes up to a few weeks.

Forgetting to and not knowing how to take their medication have deterred patients from staying on course. With BayPAP, patients are reminded through text messages and can seamlessly keep track of their medical records, treatment and upcoming appointments.

With an increasing number of Malaysians suffering from liver cancer, the introduction of BayPAP is timely. Liver cancer is the sixth most common cancer and the second leading cause of cancer-related deaths worldwide, according to Zuellig Pharma. Patients in advanced stages of liver cancer generally have an expected survival rate of up to a year.

Moses Hee, Vice President, CareConnect at Zuellig Pharma shares, "Unless we dramatically change our approach, we will never be able to keep up with the region's fast-growing healthcare needs. Effective and affordable disease prevention measures are important, but disease management are equally important and there is a real need for us to help patients better manage their medical conditions, especially chronic conditions." BayPAP is a milestone in the healthcare industry's digital journey.

The World Health Organization confirmed that an electronic system for medical records has resulted in an increased adherence to guideline-based care, enhanced surveillance and monitoring, with fewer medication-related errors, such as incorrect prescriptions. Going paperless will not only ensure records are available at one's fingertips, but improve operational excellence by reducing time spent on paperwork.

The web app is an extension of Zuellig Pharma's focus on digital innovation in healthcare. In 2017, the company launched a universal and interactive lifestyle management application called SWITCH, to help users manage diseases caused by lifestyle choices. Zuellig Pharma also invested in a health-tech startup which helps doctors migrate to electronic records using tablets, making the digitization of medical information much more efficient.

(For more information on BayPAP, contact Sandy Ho, Regional Head, CareConnect at Zuellig Pharma Solutions at sandyho@zuelligpharma.com)

Pfizer Inc. has joined IFPW

IFPW is excited to welcome **Pfizer Inc.**

as its newest manufacturer member!

We look forward to having Pfizer add its insight and perspectives on the pharmaceutical industry and engage with pharmaceutical wholesalers worldwide!

Every Day Pharmaceutical Wholesalers are Focused on Patient Safety

(Source: Cardinal Health)

All full-line, full-service, duly licensed, pharmaceutical wholesalers/distributors, worldwide, are continually focused on patient safety. A case in point is the U.S. based Cardinal Health.

In honor of Patient Safety Awareness Week, Cardinal Health and the Cardinal Health Foundation reinforced their ongoing commitment to improving patient safety across the continuum of care through a number of grants and initiatives. Medical errors are the third-leading cause of death in the United States, according to a recent study by researchers at Johns Hopkins University, published in *BMJ* (formerly the *British Medical Journal*) in May, 2016. The researchers estimate that medical errors claim as many as 251,000 lives every year.

Cardinal Health first recognized patient safety as an issue in 2009 when it supported the creation of Children's Hospitals' Solutions for Patient Safety (SPS) – a network of what is now 130 hospitals sharing data and best practices with the mission of eliminating serious harm across their hospitals. Recently selected for the John M. Eisenberg Patient Safety and Quality Awards, SPS has saved an estimated 10,000 children from serious harm and has eliminated more than US\$151 million in healthcare costs.

"From the beginning, Cardinal Health shared our vision that no child should experience serious harm during treatment," said Nick Lashutka, president and CEO, SPS and the Ohio Children's Hospital Association. "We're grateful for their support and acknowledge their efforts to emphasize the importance of safety in the delivery of healthcare."

In addition to its support of SPS, Cardinal Health has shown its commitment to patient safety through the following initiatives:

- *E3 (Effectiveness, Efficiency & Excellence in Healthcare) grants*. Through this grant program, the Cardinal Health Foundation has invested more than US\$9 million in hundreds of healthcare organizations as they work to improve patient outcomes and reduce healthcare costs.

- *Generation Rx Best Practices in Pain Medication Use grants*. The Foundation's Generation Rx Best Practices in Pain Medication Use and Patient Engagement grants are helping clinicians meet Centers for Disease Control opioid prescribing guidelines to improve the safety and efficacy of pain care and reduce the risks of long-term opioid use. The Foundation expects to announce the recipients of its 2018 Best Practices in Pain Medication Use grants this spring.

- *Patient Safety Movement Foundation*. Cardinal Health has become a committed partner with the Patient Safety Movement Foundation, a global movement with the mission of zero preventable deaths by 2020. As a committed partner, Cardinal Health will spread the mission of zero preventable deaths by 2020 and encourage and facilitate the sharing of successful patient safety processes among healthcare leaders within the Cardinal Health community.

- *The Award for Excellence in Medication Safety*. This national awards program, a collaboration between the American Society of Hospital Pharmacists (ASHP) Foundation and the Cardinal Health Foundation, recognizes pharmacist-led inter-professional teams for significant system-wide improvements in

medication safety that have demonstrated patient and organizational outcomes.

"For nearly a decade, the Cardinal Health Foundation has invested more than US\$16 million to improve care, reduce costs and increase efficiency," said Dianne Radigan, vice president of Community Relations at Cardinal Health. "While we've made great progress in helping improve patient safety by collaborating with healthcare organizations and providers, Patient Safety Awareness Week reminds us all that there is still more work to be done."

In Brief (cont.)...

Chinese pharmaceutical market, particularly over-the-counter products, health supplements and prescription drugs. Last fall, police in Nanjing arrested a criminal organization involved in the distribution of fake *Viagra*, one of Pfizer's pillar products. Through this new system, every pill would be part of Alibaba's *Ali Health Reliable Code Platform* in order to enhance drug safety and prevent drug forgeries.

- ♦ U.S. manufacturer **Johnson & Johnson** announced the potential sale of its **LifeScan** division which specializes in blood glucose monitoring products. Private investment firm **Platinum Equity** made a binding offer of approximately US\$2.1 billion for the diabetes company. Revenues in 2017 for LifeScan were approximately US\$1.5 billion.

- ♦ *Olga Golodets*, Chairman of the Russian government, extended an offer to Japan to make a concerted step towards cooperation in the establishment of a "green corridor" for Japanese companies involved in the medical equipment and pharmaceutical industry. "Yesterday, during the negotiations we offered to take the next qualitative step in our cooperation. We proposed to examine the possibility of implementation of the program of the so-called 'green corridor' for companies that are engaged in medical equipment and pharmaceutical companies," said Golodets. Japan's vice prime minister also expressed his positive interest in granting access to Japanese companies to the Russian market.

(Sources: *China Daily*, *Company Press Releases*, *Drug Store News*, and *Pharma Japan*)



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in Washington D.C. October 10th - 12th!**

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