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## Accelerating Innovation to Cut Drug Prices

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Americans spend a staggering amount of money for prescription drugs, and the prices keep rising. Cases of corporate greed like the infamous Martin Shkreli, former CEO of Turing Pharmaceuticals who increased the price of the life-saving medication Daraprim by 5,000 percent, have become the public face of the entire industry. That's unfortunate because it's grossly unfair to paint all drug manufacturers with such a broad brush. However, the industry does need to take it upon itself to overhaul a research and development process hamstrung by clinical trials that drag on for years and cost billions of dollars.



Chris Stirling, global head of KPMG's life sciences practice, says the business model that has powered the pharma industry over the last few decades has become outdated. There's too much pressure on drug companies to make shareholders happy, and that takes the focus off of the patients who stand to benefit the most from breakthrough discoveries.

"Although healthcare demands are higher than ever before, we're also in a golden age of discovery," says Stirling. "If the pharmaceutical industry is to capitalize upon this potential, it must innovate to develop new business models and find better ways to collaborate across the healthcare ecosystem – all the while putting the patient at the heart of everything it does."

Big drug companies are certainly not alone in their struggle to prevent their rates of innovation from slowing, even as they spend billions on R&D. The red tape that internal politics and bureaucratic processes create is common to large corporations across all industries. However, drug companies can look to the technology sector, where a growing number of companies are overcoming these obstacles to innovation by adopting the co-opted model.

The key is embracing a startup's mentality. The co-opted innovation cycle begins with entrepreneurs who set out to disrupt their markets. They don't have the market reach or brand credibility to quickly push their breakthroughs to the market. That's where big companies enter the cycle to provide the necessary funding and introductions to established customer bases.

Corporations like Google, Cisco, Dell and Intel are augmenting their traditional R&D teams with incubators that operate like startups, or supplying venture capital to startups. In 2015, corporate venture groups participated in 17 percent of all North American deals, up from 12 percent in 2011. That number jumped to 26 percent in the first quarter of this year.

Co-opting innovation is working in the tech sector, and it can work for Big Pharma. But it's just a first step. There are four other measures drug companies can take to make the clinical trial process faster and more effective:

One is the adoption of eClinical systems to eliminate manual processes, with an emphasis on the plural of the word "system." There is no one single solution that can accelerate clinical trials. Yes, implementing separate sets of best practices and disparate technologies may sound like an inefficient approach, but actually the opposite is true. Optimization requires separate but complementary tools that work together to streamline operations, automate processes, increase visibility and improve collaboration with drug manufacturers, their partners, regulators, and review boards. Less is not more. Pharmaceutical companies have access to a variety of cloud-based technologies that can both improve the clinical trials process and lessen the burden on IT departments by eliminating the need to install and maintain hardware and software on-site.

Next, put "Big Data" to work by leveraging business intelligence solutions to mine and analyze data and allocate clinical trial resources more efficiently. This will enable a drug company to engage in what I call "intelligence outsourcing" to further shorten the clinical trial timeline.

Selecting locations for clinical trials has become too complex. It requires sponsors to select sites, negotiate contracts, fund and staff the trial, gain institutional review board (IRB) approval, obtain supplies of the drug to be tested, and comply with pre-enrollment regulations. Most pharmaceutical companies still track these tasks and documents using email, spreadsheets, shared file drives, or homegrown applications. With multiple parties making updates, materials get out of sync rapidly, making it difficult to track the overall status of the project. Implementing cloud-based Business Intelligence (BI) solutions, from technology companies like goBalto, eliminates those time-wasting and error-prone processes by automating the collection, analysis and sharing of data to help stakeholders determine study status, and identify and resolve bottlenecks.

Finally, adopt a process of continuous change. Embrace innovation instead of falling back on the 'status quo' mentality. Here too, Silicon Valley can provide a template to follow. For example, consider the transformative effect companies like Uber and Lyft have had on the public transportation industry. Getting a ride home from the

airport used to mean standing in long taxi lines. Today, you can use an app on your smartphone to summon a car as you're getting off the plane, and it will be waiting for you when you're ready. Striving to make our lives easier and more convenient can apply to clinical trials.

Innovation has long been critical to pharmaceutical companies engaged in drug discovery, and it remains the key to discovering new treatments and curing illnesses that still plague modern society like diabetes, cancer and heart disease. But those efforts are being stunted by a clinical trial process that - even in our digital, always-connected age - remains a largely manual, laborious process. Embracing a start-up's mentality and technology tools that facilitate information collection, analysis and sharing will go a long way to speeding new drugs to market and reducing our nation's healthcare costs.