Cross-sector convergence in health

An interview with Jacques Mulder
Non-traditional entrants are disrupting health. We are already past the point of no return, says EY’s Jacques Mulder.
Jacques joined EY in late 2014 as the Global Industry and Market Strategy Leader and was named Global Health Sector Leader in 2015. With 20 years’ experience providing strategic assistance to life sciences and health companies, Jacques has guided organizations through numerous strategic transformations. We sat down with him in May 2015 to get his perspective on why entrants from disparate sectors are entering health – and what this disruption means for life sciences incumbents.
EY: In recent years, we’ve seen a sharp uptick in cross-sector convergence in health. Why is this happening now?

Mulder: There are a number of things driving this trend. The first is unsustainable health care spending. In the US, for instance, expenditures on health care are now approaching 20% of GDP, a truly unprecedented level of spend that puts the US at a competitive disadvantage. This is motivating health care systems around the world to focus more specifically on the outcomes of clinical interventions. We have seen this in markets such as the UK, and more recently in the passage of the Affordable Care Act (ACA, or “Obamacare”) in the US. This is a catalytic event. The ACA has significantly boosted funding for improving health at the population level. For health care providers, it is requiring very specific changes that are completely reshaping the provision of care.

Related to this trend is the increased application of data and information technology to health care. Electronic health records and rapidly maturing digital health technologies are enabling approaches that weren’t possible as recently as two years ago. All of this – the focus on taming health care costs, the unprecedented use of IT – has made health care an attractive target for new entrants.

Compared to other industries, health care has traditionally been slow to adopt new technologies. However, I see the pace of change accelerating exponentially over the next five years. We are past the point of no return. Already, we are seeing responses such as payer-provider convergence, accountable care organizations and more.

EY: What sorts of entities have you been working with and what are they looking to achieve?

Mulder: A number of years back, I started seeing a lot of interest from large telecommunications companies in markets such as India, China and Japan. These firms were very explicit about expecting a significant portion of their future growth and revenue to come from health and wellness. But what really got my attention was their focus on big data management, where their capabilities often rival those of companies such as Google or even Amazon. That piqued my interest and I started engaging with these companies around alliance and
acquisition strategies in health and wellness. What followed was rapid consolidation in specific disease areas such as diabetes, central nervous system indications, oncology and pain. When I started seeing acquisitions in the range of US$1 billion–US$2 billion, and saw 10–12 of them sequentially, I realized that these organizations were serious.

One creative alliance was the partnership between SoftBank, the Japanese telecom giant, and Fitbit to bring a subscription-based activity tracker service to Japanese customers. Such offerings can create very compelling combinations of competencies. Mobile telecommunications companies’ strengths in automatic information transfer and customer intimacy uniquely position them to provide biofeedback to patients and consumers. And the fact that these technologies are real-time, Bluetooth-enabled and automatic removes many traditional stumbling blocks related to operator error.

These titans of telecom are unleashing vast resources in health care. Consider, for instance, that Japan’s NTT DoCoMo, one of the world’s biggest corporations with about US$75 billion in market capitalization, spends more than the average pharmaceutical company on core basic research and already derives significant revenue from health care-related applications and services.

We’ve also seen a lot of activity from information technology companies – Google, Amazon, Apple, Samsung and others. A couple of years ago, most people would not have considered these firms critical players in health. Indeed, the strengths they bring – advanced analytics reporting, cloud- and web-enabled capabilities, big data – may seem tangential to health care. But I expect tech firms to become increasingly critical partners as health care providers race to work with data and develop tools for decision support and risk mitigation.

We are now approaching what I consider the holy grail: taking the data generated by these digital health applications and feeding them right into electronic medical records. While pulling this off raises technological challenges, it’s very meaningful from a clinical perspective. This marriage of data would give us an unprecedented understanding of the value of interventions – not just drugs, but also behaviors such as activity levels, sleep patterns and diet – all of which are critical for managing chronic diseases more effectively.

EY: Based on your experience in this space, what challenges should companies focus on?

Mulder: Patient privacy and data ownership continue to be battlegrounds. People are rapidly coming to understand the difference between raw data and actionable information based on analysis. This is actually an analysis game, not a data game – so issues surrounding patient privacy and personally identifiable information will remain contentious.

Another challenging area is that of regulatory approval. As apps become more sophisticated, they will increasingly have to contend with regulatory approval, similar to medical devices that need to file for a 510(K) clearance. If a diabetes app is performing dosage calculations, for instance, someone has to be accountable for the correctness of the algorithm used. For companies outside of life sciences, this is an entirely new and unknown space.

The increased volume of data also raises issues of risk and accountability. For example, as digital health applications get deeper into providing coordinated care, this raises questions about what information is shared with different participants and how accountable they are as a result. A key lesson from my experience is that one shouldn’t have direct data feeds pushing every piece of patient information to health care providers, because once providers see information, they have a legal responsibility to act on it. When you’re talking about vast volumes of fast-moving, real-time data, that’s an unfeasible expectation. Instead, information should be provided only in response to a specific request from a provider.

EY: What about life sciences companies? What specific implications does convergence have for their business models and what advice would you give them?

Mulder: The life sciences industry faces a number of unique challenges, especially with the emergence of very high-priced specialty therapeutics, which increases the need to understand and demonstrate the value of drugs.

So far, life sciences companies have used a few strategies to demonstrably increase the value delivered by high-priced drugs.
Targeted therapies are often paired with companion diagnostics – genetic tests which improve the economics by weeding out patients unlikely to respond to treatment. Life sciences firms also spend lots of money and time on retrospective data analyses and large follow-up registries.

Companies now need to take the next step: collaborate with providers and payers to demonstrate the value of interventions in real-world settings, rather than just placebo-controlled clinical studies. With the pressure from payers increasing and the new world of health care big data, we are moving to a future in which many treatment decisions will be made by technologies and algorithms.

Consider non-small cell lung cancer, for which there are several products, each with a companion diagnostic. Ultimately, any patient will be treated with some combination of two or three of these products. Right now, a physician is faced with a number of decisions for which she has limited information and decision support. What tests do I need to determine the optimal drug cocktail and what is the upfront cost of these tests? How long will it take to get test results? How quickly can I use those results to pick a course of treatment and how do I understand the economics of that decision?

This is far too complicated for an individual treating physician to figure out. What we need is for someone to do the math and guide the doctor to the best prescription based on the patient’s genotype/phenotype and other variables. And that’s exactly where we are headed.

This shift is being enabled by significant advances in testing capabilities – for instance, the ability to test using blood rather than tissue samples. With just a couple drops of blood, one can now run an assay to identify a patient’s genotype and phenotype and her likely response to different drug cocktails. Ultimately, those decisions will be based on algorithms that determine the treatment cocktail. We are moving to a world in which all three steps – diagnosis, decision and prescription – will be done by an algorithm on a chip. These applications, including the recommendation package and corresponding intellectual property, will be FDA-approved. This eliminates most of individual physicians’ decision-making. It’s an entirely different world.

The challenge for life sciences companies is how to adapt to this environment, one in which much of the variability in care will be removed and prescribing will be determined not by providers’ decisions but by algorithms. This is an area where the industry is moving too slowly. Companies should make sure they are involved in the consortia and collaborations driving this shift, otherwise someone else is going to decide how your products are used rather than you influencing that decision. As it becomes critical to control more of the cocktail, we are likely to see fewer companies in any given disease space – but each will have a broader swath of offerings. This is one reason we are seeing the current wave of pharma realignment across therapeutic areas.

EY: Is this just about influencing drug prescriptions? Or does convergence also create opportunities for life sciences companies to develop new stand-alone models that are truly “beyond the pill”?

Mulder: The drug development business involves several kinds of risk. Companies take on financial risk because drug development involves placing bets with large amounts of capital. Together with this financial risk, of course, is scientific risk, the inherent uncertainty that a pipeline candidate will work as predicted and make it to market. Lastly, companies deal with market risk once products are on the market, because actual uptake and usage are beyond their control.

Companies are used to dealing with financial and scientific risk. These uncertainties have always been an inherent part of drug development and are relatively well understood. And, as we just discussed, there is a lot they are doing to manage market risk, such as using companion diagnostics and conducting comparative studies.

But drugs influence only 50% of treatment response. The other 50% is driven by patient behaviors such as diet, exercise, drug adherence, etc. This is an area in which life sciences companies aren’t really playing, even though they have valuable and relevant insights from their deep understanding of overall disease states. There is a huge untapped opportunity for life sciences companies to bring their knowledge of disease states to inform interventions that aren’t just chemical or biologic, but behavioral.

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EY: How do you see this space evolving over the next 3–5 years?

Mulder: So far, the entrants from IT, telecom and other sectors have been generally unwilling to assume financial risk for delivering improved outcomes – they remain wedded to a pay-per-unit revenue model. This is largely because they’ve typically lacked the clinical or disease state expertise required to take on such risk. Instead, companies have been focused on getting to proof of concept on technical aspects. Does the data transfer work as intended? Are the integrity and privacy of the data adequately protected? Can we generate the analytical insights we need?

The next stage, of which we are starting to see early signs, involves arrangements in which provider networks and data/technology providers collaborate to improve outcomes. Examples could include using mobile health technologies to improve non-clinical care coordination, or reducing unnecessary and redundant procedures by improving the transparency of medical records across multiple practitioners. As such arrangements become more commonplace, we will see more willingness to take on risk in exchange for shared savings. This, in turn, will require developing the right metrics for measuring and apportioning savings.

We are also likely to see considerable consolidation. We will move away from one-off point solutions toward companies that are focused on entire disease states. This will require them to bring together capabilities rather than trying to reinvent the wheel — driving consolidation through partnership or acquisition. We will see new aggregators and consolidators emerge, though it’s too early to know who they will be.

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EY's Health Reimagined initiative is a cross-sector program that brings together professionals and perspectives from multiple industries to develop insights and solutions that are aligned with the future of health. We can help you navigate your way forward and achieve success as you transition to Health 2.0.

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