

The CEO Interview

# Novartis on digitizing medicine in an aging world

June 2015

CEO Joseph Jimenez explains where the company is placing its bets and how it's seeking to bridge biology with technology.

**The global population** is aging as life expectancy increases. That means not only is demand for healthcare rising, but the very nature of that care is changing. In this interview, the CEO of Swiss pharmaceutical company Novartis, Joseph Jimenez, discusses with McKinsey's Rik Kirkland issues including the emerging need for regenerative medicine, how digitization is driving innovation, and why Novartis is shifting to an outcomes-based approach for patient treatments. An extended and edited transcript of Jimenez's remarks follows.

## Serving an aging population

Part of our view of what's going to happen over the next ten years is, first, the global population is going to increase by about a billion people, from seven billion to eight billion. Second, 50 percent of that increase is going to be people over the age of 50. So you have not only an expanding population but an aging population.

We're thinking about two big areas. The first is regenerative medicine—hearing, sight, muscle—and also the digitization of medicine, where biology and technology comes together. There is a geographic lens as well, particularly in the fast-growing markets. Emerging markets account for about 25 percent of our sales, and we project that over the next ten years that number is going to increase substantially as a percent of the total sales of the company.

What we have to do to seize those growth opportunities is to make sure that our innovation is strong. That means finding the right scientists, the right physicians, and then giving them the budget it takes to discover. We have to build a data-analytics capability that we don't have today. We're also going to have to create partnerships and think about different types of people that we need to bring into our company so that we can take full advantage of that part of healthcare. A good example is what we did when we partnered with Google. We took their smart-lens technology, and we're using it for contact lenses. This is a lens that will actually have a miniature sensor and miniature batteries in it, which will allow your eye to autofocus like a camera. It's a great example of biology and technology coming together.

So where Novartis is placing its bets from a portfolio standpoint is in three areas: innovative pharmaceuticals, because that changes the practice of medicine and that's what we're all about; eye care, because with an aging population, there's going to be tremendous need for vision correction; and generic drugs, because it is especially difficult to make generics, like biosimilars. And the need for biosimilars comes from the pressure that health systems are going to be under over the next ten years.

### Pharmaceutical discovery and innovation

Digitization is going to change our industry in a couple of ways. The first is around drug discovery. Because we built a bioinformatics capability with deep sequencing of the human genome, we're now able to map tumor types like we have never been able to before. And we're then able to develop new targets based on seeing multiple genetic mutations.

The next area is around the shifting from a transactional approach to an outcomes-based approach. Transactional means, for example, just selling a pill. An outcome approach focuses on delivering a positive patient outcome, of which that pill is one piece. A perfect example is what we would potentially do with our new heart-failure drug. By partnering with companies that could monitor some patients remotely, we look for vital signs that would tell us whether they should go to the hospital. This is something that is starting already.

### Investing in health outcomes

We have to be very fast moving to be able to capitalize on these trends. But we also can't get into this cycle of disinvestment that many of our peers have, where they're trying to make short-term earnings targets, and that ends up leading to a reduction in research-and-development spending.

At Novartis, we're trying to take costs out of procurement areas that are not leading to innovation, and we're investing in research and development. Last year we spent almost \$10 billion in R&D, and that number is going to continue to go up, because that really is the driver of our business: innovation, new medicines.

We spend a lot of time measuring the productivity of R&D, but we take a very different approach than some of our peers. We resource-allocate in R&D based on the unmet medical need in a particular area, not necessarily based on how big the market size will be, because we believe that if we follow the science and we deliver on that unmet medical need, that the financial returns will happen.

When you think about the challenges in the healthcare system over the next ten years, spending is going to have to double because we're coming out with even more expensive new therapies. But if you forget about the transaction and think about the cost of managing a disease through the entire chain, you find a lot of waste in the system. We project that probably 25 percent of all healthcare spending is wasted. Shifting to an outcomes-based approach, where you just focus on what delivers the outcome, you get rid of everything else, and the physical medicine is going to be part of that. Those medicines are only about 10 percent of the total healthcare cost. So it's not that much of a contradiction when you think about the fact that these new technologies are more expensive, but at the same time you're going to have downward pressure. There's a lot of efficiency that we can get out of the system.

We're going to have to partner with tech companies. We're going to have to partner with data-management companies. We're going to have to partner with providers in ways that can deliver a positive outcome so that we can improve the efficiency of that system. That's the only way that we're going to be able to deal with this aging population and constrained budgets.

### Leadership priorities

My role in the company is to make sure that we have the best physicians and the best scientists. I spend a lot of time with our research organization, ensuring that we recruit the right people. I also ensure that they have the money that they need to do their magic.

The second thing that I spend a lot of my time around is execution. Many companies that get into trouble in our space are maybe great at discovery and development, but then they don't execute. This is where the CEO of the company must not just preside over execution but participate in it.

And then the third area's around talent. How can I personally help develop talent around the world? I spend a lot of time building emerging-market talent, because if you look around Novartis, we don't have enough senior leaders that are from Asia or Brazil, for example.

There's an initiative called the Lead Program, where we pick 30 to 40 high-potential emerging-market leaders and we give them a 12-month assignment, during which they work on a real problem that Novartis is facing. We're in our third year, and a number of these leaders have already been promoted into areas of greater responsibility within the company.

Novartis is also elevating some values that reflect the way society is changing. For example, being more collaborative with other types of companies, other types of institutions. Having the courage to try and to fail. Because in our business, when you innovate, nine times out of ten, you're going to fail.

And the final one is integrity, because society's expectations about healthcare companies have shifted over time. Doing what's legal is not enough. We have to do what's right. And so that means making some hard choices. It's perfectly legal to pay a physician to speak about your drug to other physicians. So when you have a new-product launch, that's the way that we educate physicians, by paying some physicians to speak. But if you think about this as a person who's going to that physician and thinking, "Well, Novartis paid this physician to speak about their new drug. Is that doctor prescribing it because they paid him? Or is that doctor prescribing it because that's really what's necessary for me?" So we're looking for other ways to educate physicians and other ways to ensure that the benefits of our drug are known among the physician community. □

**Joseph Jimenez** is the CEO of Novartis. **Rik Kirkland** is the senior managing editor of McKinsey Publishing, based in McKinsey's New York office.