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New Approaches To Innovation Needed To Reach Globe's Poor At The "Bottom Of The Pyramid" – And To Fend Off Emerging Competitors Around The World

CAMBRIDGE, Mass. - Life science companies looking to provide healthcare solutions to the poorer, "bottom of the pyramid" - a population reaching more than 600 million people in India alone - should focus on business model innovation as much as on innovative products, according to delegates at the U.S.-India Chamber of Commerce biopharmaceutical and healthcare summit in Cambridge, Mass.

In a position paper released during the early May summit, McKinsey & Co. researchers outlined four barriers that prevent multinational companies from capitalizing on the opportunity, including: (1) little awareness of the most critical healthcare needs; (2) access and supply chain challenges; (3) affordability; and (4) a failure to align products and business models to the unique needs of the segment.

To overcome these barriers, international firms must innovate locally and across the value chain. Or put another way, they should turn India and China into a "second home market," McKinsey India Principal Vikas Bhadoria told those attending the summit, with the same level of C-suite focus as traditionally enjoyed by the U.S. and Europe.

Supply chain and health system challenges mean life science companies must look to non-healthcare examples for innovation at the bottom of the pyramid, such as leveraging mobile phones for e-payment and e-medicine solutions, McKinsey analysts say. Infrastructure challenges may mean utilizing community health workers on bicycles or motorcycles, and developing new formulations that won't require refrigeration. Companies may need to minimize cost per purchase by developing single-serve packages, or invest in education for rural health care workers.

It sounds tough. So why bother? For one, McKinsey estimates that expenditures by the bottom of the pyramid will reach $2 trillion to $3 trillion globally by 2020. It's also the kind of feel-good story to boost the reputation of an industry that needs a boost, McKinsey researchers point out.

But that's only half of it. The other half, according to companies like GE Healthcare, is that multinationals should learn how to innovate in emerging markets so they can transfer that know-how back to established markets, selling cheaper, lighter, more efficient products to a Western World staggering under spiraling healthcare costs. And they better learn quickly. Because emerging competitors - from India, China and elsewhere - have their sights on the U.S. and Europe, and are nipping at the heels.

Best In Class Or First In Class?

Indian pharmaceutical companies could play a starring role in innovation, delegates agreed, despite a history of serving as the developing world's generic drug engine. That's because multinational firms are desperate to speed up drug development and conserve resources, and are looking to R&D partnerships, and even networks of partnerships, as a potential solution to their productivity crisis (PharmAsia News, May 11, 2010).

But to foster innovative R&D, India needs to make changes.

Merck Chief Strategy Officer & Senior VP Emerging Markets R&D Merv Turner, said that summit organizers had requested a provocative presentation to catalyze discussion. So, after dispensing with the obligatory plea for stronger IP protection, Turner got down to brass tacks.

Case in point: India pharmas should focus on small molecules that are "best in class" rather than "first in class," according to Turner. That's because the failure rate for first in class is very high, which may not match the tolerance level of investors in emerging markets like India.

Instead, Indian firms could partner with innovative companies like Merck and Pfizer to fast-track development of best-in-class projects that have demonstrated clinical proof of concept, Turner said.

This would play to India's strength, which includes expertise in chemistry, formulation and drug delivery technologies, and a large, treatment-naïve patient population for clinical trials.

McKinsey researchers pointed to another area where Indian pharmaceutical outfits can leverage their strengths: partnering with the Western drug giants on branded generics in emerging markets. To succeed in branded generics, companies need broad product portfolios to build leadership in specific therapeutic areas - that plays to the strength of Indian companies.

Just last week, Abbott joined a long list of Western firms jumping into this opening when it signed a deal with India's Zydus Cadila for 24 pharmaceutical products to fuel its new established products division in 15 emerging markets, including Russia, Mexico and Turkey (PharmAsia News, May 13, 2010).

Pfizer has taken it one step farther by teaming up with Indian companies like Strides Arcolab, Aurobindo Pharma and Claris Life Sciences for oral and injectable generic products that Pfizer will market in established markets, including the U.S. and Europe (PharmAsia News, May 16, 2010).

Business Model Innovation

Turner called business model innovation the true strength of India. That strength matches an acute need, Turner said, as big pharmaceutical firms understand that truly innovative drugs are innovative only if they reach the right patients.

"We have to think very hard about a number of approaches to innovation in the business model, to surround our products with business and services, and to make sure that the molecules we do discover reach patients all around the world who can benefit from them," Turner explained.

"India has a phenomenal track record in innovating in the business model," Turner said, and cited as an example the Nano, Tata's low-cost, four-passenger car, launched in India in 2009. "I am quite sure that innovations in the healthcare delivery model will be made in India, and they will turn out to be transportable into other parts of the world."

Indeed, innovative healthcare delivery models are essential to succeeding in emerging markets like India that feature a large rural population and major infrastructure challenges. Global firms including Novartis and Sanofi-Aventis are experimenting in these markets with holistic approaches to healthcare delivery, including medical education for rural doctors and efforts to raise patient awareness of diseases, prevention and treatments (PharmAsia News, Sept. 18, 2008).

But products are needed, too, of course. And Turner said life science companies must develop products that are portable, rugged, unconventional and easy to use in order to succeed in India and other emerging markets.

Bangalore, India-based Bigtec, for example, has developed a polymerase chain reaction diagnostic test for infectious diseases that is portable and can be used by rural doctors at the point of care, Turner noted.

Reverse Innovation vs. Glocalization

One Western company that gets it, according to McKinsey researchers and Turner, is GE Healthcare, whose innovation center in Bangalore developed a $500 electrocardiogram device, the MAC, that is portable and features a long battery life - essential in India, where many rural villages lack electricity (PharmAsia News, Sept. 29, 2008). GE has also teamed up with an Indian national bank to offer zero-interest loans and financing options for roughly $0.50 per day, McKinsey analysts noted, and outlined plans to train paramedics to read ECG reports to adapt to local conditions.

But local innovation is only the beginning of GE's strategy. The remainder hinges on bringing locally engineered solutions back to the U.S. following a strategy it calls "reverse innovation."

For instance, GE has launched the MAC 800 portable ECG in the U.S. for roughly $2,500, compared to more than $15,000 for a standard machine (PharmAsia News, March 16, 2009). While originally designed for rural villages in India, portable ECGs and ultrasounds - which took off first for GE in China - also are useful for rural clinics in the U.S., and for situations where portability and compactness are important, such as accident sites.

In an article published in the *Harvard Business Review* in October, GE CEO Jeffrey Immelt and two colleagues explain that reverse innovation essentially flips the traditional business model used by GE and most multinational firms, where a product is developed first in the West, and then introduced into emerging markets with some adaptation for local conditions. According to Immelt, that model - which he calls glocalization - worked well when wealthy countries represented most of the global market and emerging markets stood on the distant periphery, with sales focused on the top of the pyramid.

But in an era of rapid growth for emerging markets like India and China, and stagnant growth in the West, GE says it must harness the ingenuity of its own units in India and China to develop solutions for both emerging *and* established markets, or one day risk facing Indian and Chinese competitors in the U.S. and Europe that could supplant GE with disruptive technology that changes the price-performance paradigm.

"GE badly needs innovations like the low-cost ECG and ultrasound machines, not only to expand beyond high-end segments in places like China and India but also to preempt local companies in those countries - the emerging giants - from creating similar products and then using them to disrupt GE in rich countries," Immelt writes while referencing leading Chinese medical device manufacturer Mindray Medical International as one competitor that could fit the mold.

Mindray, in fact, made waves in 2008 when it purchased the patient monitor business of New Jersey's Datascope Corp. for $240 million, securing a beachhead in the U.S. market (PharmAsia News, Nov. 13, 2009). And the Shenzhen, China-based company has made no bones about its global ambition, telling *PharmAsia News* in an earlier interview that Datascope will allow Mindray to compete in the long run with the likes of GE and Philips in the U.S. and Europe (PharmAsia News, May 12, 2008).

Meanwhile, Zhejiang Huahai Pharmaceutical could become the first Chinese company to launch a generic drug in the U.S. when the patent on Boehringer Ingelheim's AIDS drug ***Viramune*** (nevirapine) expires in 2012. Zhejiang Huahai has ambition, too, recently expanding a deal with Merck to manufacture finished tablets in the HIV space (PharmAsia News, March 15, 2010).

Blindness To The Periphery

It's early in the game, of course, and many emerging market leaders have wound up being acquired by established Western or Japanese companies, including China's top CRO WuXi PharmaTech (PharmAsia News, April 30, 2010), Indian vaccine play Shantha Biotech (PharmAsia News, Aug. 28, 2009) and leading Indian firm Ranbaxy (PharmAsia News, Feb. 26, 2010). Others, like Aurobindo, have sold some U.S. rights to the Pfizers of the world.

And perhaps that's how it will play out.

The risk for established companies, though, is what McKinsey Partner Ajay Dhankar calls "blindness to the periphery," where the goal becomes maximizing revenue from current business rather than looking for new sources of growth. And in today's world, the periphery emerges quickly, Dhankar told summit delegates.

He used the S&P 500 to illustrate his point. In 1935, a company could expect to remain in the S&P for 90 years, Dhankar said. (The S&P 500 launched in 1957, but has been extrapolated backwards for performance comparison.) By 1955, a company averaged 45 years in the S&P. In 1975, it was 30 years. It had dropped to 22 years by 1995. Today the average is 15 years, Dhankar says. Most will fall back or be eaten.

Defending the status quo, according to Dhankar, leads to failure.

An established company that fails to innovate will be skewered by a more agile competitor, perhaps one from India or China, Dhankar says. His example? A device company that fears reducing the price tag of a stent or pacemaker because it reduces revenue.

GE, of course, has been in the S&P since its inception. But Immelt, for one, isn't banking on the status quo.

"To put it bluntly," Immelt writes, "If GE's businesses are to survive and prosper in the next decade, they must become as adept at reverse innovation as they are at glocalization. Success in developing countries is a prerequisite for continued vitality in developed ones."

Yes, it's early in the game. But the game is speeding up even as its rules change.

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