

Industry Summary: Healthcare & Life Sciences

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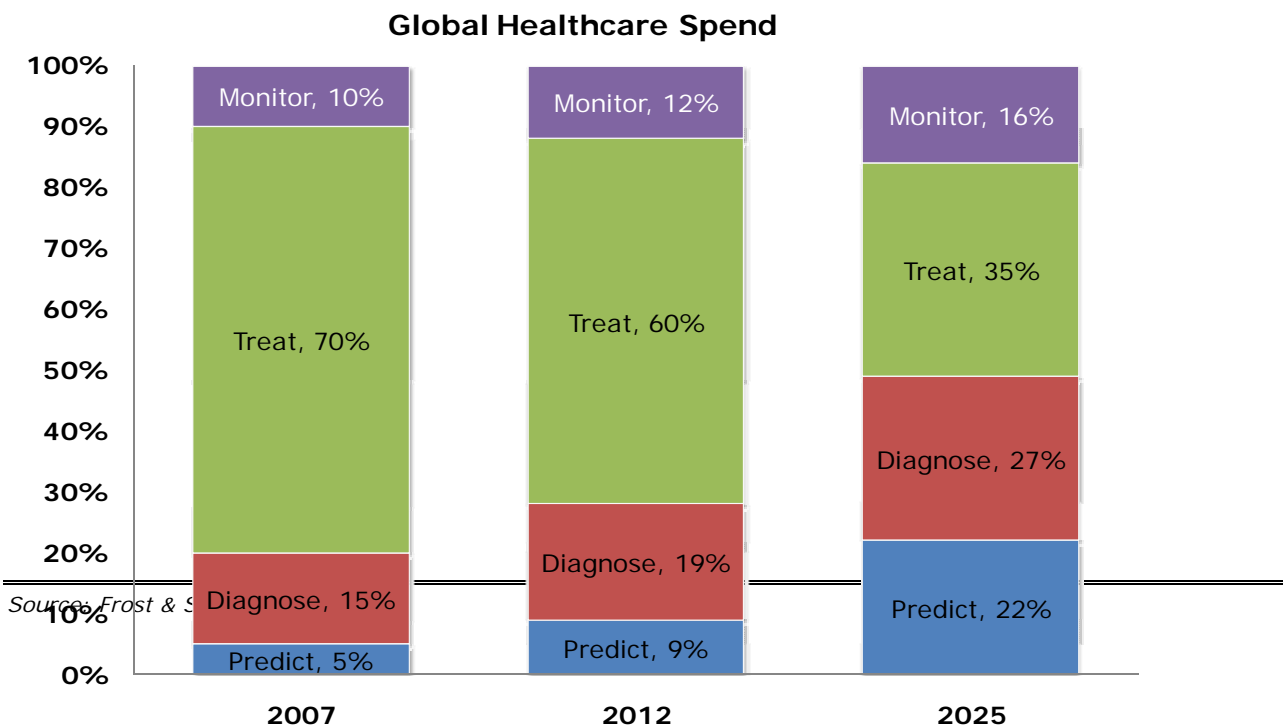
Frost & Sullivan

At the Frost & Sullivan 4th Annual Growth, Innovation & Leadership Global Congress on Corporate Growth, held September 14 – 16 in San Francisco, CA, 50 executives from the Healthcare world met in a separate session to discuss key issues in the current and future healthcare industry. Speakers at the session included Charlie Raffin from Ortho Clinical Diagnostics, Corinne Lyle from Edwards Life Sciences, Dean Zikria from Pfizer, Deepak Basra from Smith & Nephew, Kien Nguyen from Kinetic Concepts, Holly Hillberg from Carestream Health, Linda Trevenen from Respiroics, and Darren Ewaniuk from Frost & Sullivan.

Greg Caressi, Senior Vice President of Frost & Sullivan's Healthcare and Life Sciences group, started off the session with a discussion of how the healthcare market will be changing in coming years, and important opportunities that the industry needs to address to meet customer needs – whether those customers are physicians, hospitals, payers or patients. Looking at the complex business universe of the healthcare industry from the point of view of a CEO, Caressi discussed the key industry challenges in each of seven perspectives: Technology, Customer, Competitive, Economic, Global, Integrated Industry, and Best Practices. From each of these perspectives, Caressi provided insights into key issues that are driving change in the healthcare industry, drivers and restraints that market participants need to react to in order to best position themselves for success in the future healthcare world.

Caressi discussed the three interlocking forces of Rising Costs, Changing Demographics, and Quality that are impacting healthcare markets in all geographic locations. The group discussed the changing expectations consumers in the U.S. are bringing to the healthcare provision, based on experiences from retailing, entertainment/media, and manufacturing, expectations such as information on pricing and quality comparisons, one-stop shopping, and more customized services. Also discussed was the shift from a system and technologies built around acute care – “sickcare” – to increased investment in information flows, and systems and technologies more focused on preventative care in the future healthcare world. Included in this was a quantitative view of the shift toward more investment in diagnostics and preventative care, as shown in Figure 1 below

Figure 1: Shift in Spending: From ‘Sickcare’ to ‘Healthcare’ (The Source “Frost & Sullivan is hiding behind the graph below)



Frost & Sullivan's view of the paradigm shift in the healthcare industry was summarized in this diagram, as discussed by the audience.

Figure 2: Healthcare Paradigm Shift

From..		...To
Fragmented	Patient Flow	Integrated & Automated
Invasive	Diagnosis & Treatment	Less Invasive, Preventative, Image Based
Provider Centric	Focus	Patient Centric
Centralized - Hospital	Monitor	De-Centralized-Shift to Community
One Size Fits All	Approach	Personalized Medicine
Therapeutics/Diagnostics/ Devices	Tools	"Theranostics"
Treating Sickness	Objective	Preventing Sickness - "Wellness"

Source: Frost & Sullivan

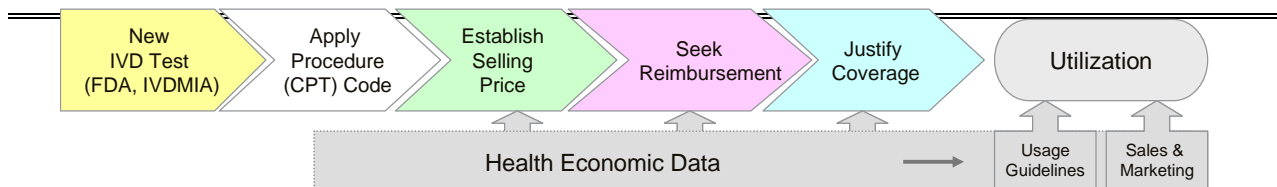
Charlie Raffin, Vice President of Commercial Assessment for Ortho Clinical Diagnostics, followed with a discussion of the true costs to develop the tools necessary to realize the potential of earlier diagnosis and better preventative care, and the role of healthcare economics, not just clinical results and regulatory approval, in deciding what tests are utilized by providers. Raffin pointed out that factors affecting the industry's ability to meet the promise of this future world include higher development costs, the way the system values and reimburses for diagnostics, along with where the tests are performed.

Raffin reinforced the impact of the conflicting issues of rising healthcare costs and demographics, and questioned whether the current system correctly values diagnostics. He quoted from a study by the Lewin Group that indicated that while the findings from diagnostic testing influenced 60 to 70 percent of healthcare decision-making, these tests make up less than 5 percent of hospital costs. As opposed to drug and device markets, where clinical outcomes have more influence over utilization and payment, payers have more influence on utilization of diagnostics, based on their view of medical economics.

Raffin gave several real world case studies of diagnostics that had shown efficacy and had cleared regulatory approvals that had not been authorized for reimbursement by payers - due to lack of cost savings in treatments that could be tied to information coming out of the tests - while other diagnostics that were able to show impacts on health economics (read: cost savings due to avoidance of unneeded treatments) were approved for reimbursement by payers, even though they lacked full regulatory approval. The key concern for the system that may restrict the development of needed diagnostics is that there is no clear and uniformly applied methods for decisions regarding coverage for diagnostics. Raffin's recommendation to the diagnostics industry is that they need to focus on developing evidence of both health and economic outcomes, not just regulatory clearance, in bringing a product to market, as shown in Figure 3 below.

Figure 3: Bringing Diagnostics to Market in a Changing World

Novel New Tests – What does it take?



Regulatory clearance not enough

Clinical use decisions more directed by medical-economics

Higher hurdle for “new-to-the-world” IVD (?)

Reimbursement & Coverage determinations before broad utilization

Source: Charlie Raffin, Ortho Clinical Diagnostics

A panel of Healthcare vendors discussed the challenges and growth opportunities in a changing market. Monali Patel Shastry, Research Director for Frost & Sullivan's Healthcare group, moderated the panel discussion. The group reinforced Raffin's earlier point that clinical trials must be designed to develop economic value data to prove cost savings, in addition to showing superior outcomes regarding efficacy. One panel member characterized this principle as “If we build it, how and where will it reduce cost.” Innovation is not always about the “next great technology...cost savings are required to get customer attention.”

Along with this change in the process of innovation, the vendors also stated that workflow issues are much more of a focus in bringing a solution to market than in the past. The group pointed out that this is relevant whether you are providing products for private physician/dental practices or for hospitals. Practitioners want workflow solutions as much as they want technology solutions, forcing vendors to change their focus in product development to questions regarding “What is the problem the practitioner is trying to solve?” as compared to the more narrow focus on “What technology is needed?”

The panel also discussed growth opportunities in emerging markets, with one vendor pointing out that apart from the past, where products were developed for the U.S. market, then taken overseas as opportunities arose, some product development is now being reversed: products are being designed for emerging markets, then the vendor looks for new markets at home where this solution can be sold.

Finally, the panel discussed outsourcing as a growing trend, as part of vendors' goal “to get there better and faster.” Outsourcing strategy is being adjusted based on product lifecycle management planning. Outsourcing is moving from simply mature product manufacturing to reduce costs to collaborations on research & development and early design work, things previously held in-house as core competencies. Outsourcing is also used as a way for smaller companies to access technology talent globally.

Corinne Lyle of Edwards Life Sciences described a multifunctional approach to product innovation, as opposed to a more pure R&D focus that companies may have used in the past. As a company that brings relatively few new products to market, Edwards Life Sciences has a process to make sure every product idea that is carried forward is a winner.

Lyle described the success Edwards has had in creating a mixed discipline, cross-functional team to make decisions on new product development. While bringing analyses and decisions on cost effectiveness, reimbursement, distribution channels, and packaging into the process of funneling new product ideas adds six to twelve months on

the front end of new product development, Lyle said Edwards' experience is that it saves years on the back end. These multidisciplinary teams can anticipate and resolve challenges quickly, and early enough that they do not become significant hurdles later on, once product choices have all been made and change is difficult and costly.

The track concluded with a session that combined healthcare industry participants with industry leaders from Telecom and IT to discuss convergence issues between the two industries. Much time was centered on the discussions of remote patient monitoring, what would enable the market and what was holding it back. While healthcare participants educated their Telecom and IT colleagues on the importance of reimbursement as a factor in unleashing this market, the competitive landscape - including the involvement of IT firms like Intel - was also a focus of discussion.

Questions were raised from the healthcare side regarding the participation of Google, Microsoft, Intel, and Cisco in the healthcare world, and how they would alter the competitive landscape. In a world where technology and information flows are more important than ever, it was concluded that in the B2B segment, these companies were more likely to be partners, and in the B2C segment, competitors. Rufus Connell, Vice President of Research for The Frost & Sullivan Information and Communication Technology group pointed out that Google's core business is advertising, not business applications that would be sold to hospital customers, and this should be an indicator of where they are best positioned in the healthcare industry - information flows to consumers align better with this core than providing image storage for hospitals.

The day concluded with an awards banquet, where over 30 companies received awards from Frost & Sullivan's analyst team for outstanding achievements in the healthcare and related industries. A variety of companies shared their stories of growth, innovation, and success in providing solutions to improve healthcare around the world. Every company in attendance learned something new from the wide range of experiences discussed, providing a great closing event to the day of shared experiences and views of the future of the healthcare industry.