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Moderna CCO Highlights Panomics, Pre-emptive Care As Pharma's Future

Onshoring Is Essential

by Vibha Ravi

Moderna's CCO Corinne Le Goff highlighted panomics and pre-emptive care as the industry's future at a recent event, even as she saw on-shoring and "regaining sovereignty" over health expenditure as being essential to medicines security.

While digital adoption in the pharma industry is inevitable and COVID-19 has only crunched the timeline, the future lies in "panomics" – a term that encompasses genomics, transcriptomics, proteomics and metabolomics – and precision medicine, [Moderna, Inc.](#)'s chief commercial officer Corinne Le Goff said at a recent event.

In a keynote address at the Indegene Digital Summit on the new paradigm for a post-pandemic world, Le Goff mentioned that COVID-19 had changed "everything". The disease killed more Americans than the Second World War, Korean War and Vietnam War combined and while it's an experience that none of us would wish to repeat, it is also changing the face of medicine through the sophisticated use of technology, she added.

With healthcare providers (HCPs) embracing the concept of "moving information, not patients", data and digital technologies will be used to better connect care teams and patients. However, artificial intelligence (AI) has highlighted current deficiencies in evaluating a patient's overall health and parameters that entail evolution of pathology.

The future of medicine "is one where omics data are leveraged to create diagnostic tools with greater power and increasingly tailored to each patient." Panomics uses measurements taken systematically across samples for deep analyses to determine the origins, relationships and



effects of biological processes.

Besides, advanced data mining can allow for an understanding of associations and trends within health data, allowing predictive models to be built that can identify high-risk patients and develop early intervention plans to proactively improve health

A range of diagnostic, descriptive, predictive and prescriptive analytical methodologies should be applied to maximize insights from the data. As molecular biology technologies advance, the integration of data from panomics subfields will require ongoing improvement and standardization of data acquisition.

“With this panoramic view, we must extend beyond just point of care medicine and incorporate a holistic view of the patient, his diet, daily habits, routines, work habits, living conditions and environment,” Goff said.

New Clinical Decision Support Tools

Apart from changing care models, the pandemic has also led to rapid implementation of better clinical decision support tools.

“The silver lining of this pandemic is that it has revealed our ingenuity and near limitless capacity for innovation”, Goff said citing examples of Vocalis Health, which developed a vocal indicator for COVID-19 using audio technology, machine learning and AI, and NanoScent which uses AI sensors to detect and digitize odors, including in COVID-19 patients who produce a distinctive odor due to proliferation of virus cells in their nasal passages.

“The greatest breakthrough artificial intelligence has given us is it has shown us that traditional point of care medicine is not proficient enough to capture the complexities of disease or more importantly, of wellness.” - Moderna’s chief commercial officer Corinne Le Goff

Besides, personal robotic assistants have made the jobs of HCPs easier by allowing them to monitor patients and administer medicines without the need for physical contact. (Also see "[Future Of Surgery: Virtual Reality, Robotics And Collaboration](#)" - In Vivo, 7 Sep, 2021.)

“So I believe that it is to these types of high value generating partnerships between healthcare providers and medical technology companies, that we will see enduring investments in digitization efforts that will help the providers or upgrade the organizations that grade their levels of services. And that will help them deliver meaningful improvements not just in clinical outcomes, but also in financial outcomes.”

More Power To Consumers

However, the biggest lesson from the pandemic was the need to prevent threats to health. Given that COVID-19 disproportionately affected those with conditions or co-morbidities like diabetes, obesity and hypertension, pre-emptive care has taken center stage.

“We believe and experts agree that this virus is here to stay” Goff said while adding that the next pandemic could be even more devastating. The development she’s “the most excited about because it opens the door to new opportunities in preventative care is the development of new consumer decision support tools.”

The move has already started as an increasing number of “consumers, not patients” have begun using health apps, accelerating the trend towards health consciousness and self-care, more so during COVID-19.

During one month of the lockdown 90% of smartphone owners used a health or fitness app, a staggering 97,000 of which are currently available. “It’s phenomenal,” Goff said adding that the next level of development will be active decision support, like health informatics apps and dashboards for personal health data.

While most wellness apps today focus on nutrition and physical activities while providing very limited, customized consultations, “in the very near future” predictive wellness coaches may provide continuous advice to help people adopt customized healthy behaviors using

Sleeping With The Enemy? Open Mind Needed For Tech Giant Partnerships

By **Vibha Ravi**

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The entry of tech giants Amazon and Alphabet into healthcare has the potential to disrupt the industry, but can established pharma players partner with them in the move towards a customer and data-oriented future? Panelists from Gilead, Merck KGaA, Bristol-Myers Squibb and others deliberated the question at a recent summit.

lifelong patient data to prevent sickness.

With consumer decision support tools gaining importance, consumers will begin expecting tailored support. (Also see

["Digital Acceleration And 'Broken'](#)

[Customer Experience: What Pharma Should Look Out For](#)" - Scrip, 29 Sep, 2021.)

[Read the full article here](#)

Pre-empting Disease

Goff also predicted that detection of pre-disease states, new interventions to prevent or postpone disease and empowering people to improve their own health while assessing it via artificial intelligence (AI) enabled applications are going to be the new face of medicine.

This will involve a shift to detecting biomarkers rather than addressing symptoms, to pre-empting health issues instead of reacting, to planned interventions instead of managing health crises and extending a healthy state rather than treating sickness, she added.

A shift to personalized preventive medicine or health will be achieved through the meaningful interpretation of terabytes of patient level longitudinal data set containing both phenotypic and panomics data. (Also see ["Ex-Amgen CIO McKenzie: 'We All Have To Think Like Software Companies'"](#) - Scrip, 27 Sep, 2021.)

On-shoring, Rolling Reviews

Responding to a question on efforts to improve public health infrastructure post the COVID-19 experience, Goff said governments are realizing the importance of regaining sovereignty over health expenditure.

"So, what is certain is that health systems had been caught off guard. This has stirred the realization that they need to have the right resources in place. I spend a lot of time discussing with governments around the world and that's a common point of discussion...they now want to really regain control over health expenditures," she added.

Several countries are now going through their budget process for the next year, with the exercise expected to result in renewed investment in health. (Also see ["Public-Private Consortium To Strengthen Essential Medicines Supply Under White House Initiative"](#) - Pink Sheet, 9 Jun, 2021.)

"Regulators are also tired...this process [of rolling reviews], those

18 months have been exhausting. So, they're going to have to resource appropriately to be able to continue...but through digitization of the relationship [between] the manufacturer and regulator, I think we can get there." Corinne Le Goff, Moderna's chief commercial officer

Among the ways of achieving the objective, on-shoring of production to prevent supply chain disruptions is an “essential” component. During the pandemic, while US vaccine manufacturers benefited as the government prioritized supply of raw materials ranging from reagents to culture media to domestic companies over overseas ones, manufacturers in other segments like those producing anti-cancer products suffered due to limited supplies.

“Hopefully, you won’t have to deal with pandemics all the time, but we need to find a better way to ensure that the opportunity of care” doesn’t suffer and surprises are avoided.

To a question on regulators continuing rolling reviews, Goff said “I do believe we have turned a corner here.” During the pandemic, countries across the world put in place mechanisms for emergency use authorization, allowing the right treatment and prophylactics to be administered to patients quickly.

Given that there is a commitment to produce real world evidence and data to constantly monitor the effectiveness and safety of products, she expressed hope that rolling reviews would remain common practice.