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## Pfizer Seeks Insights Into Big Data Analysis, Personalized Medicine Through Optum Labs

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**P**fizer Inc. will focus on gaining insights into personalized medicine and testing new methodologies for analyzing real-world data in its new collaboration with Optum Labs.

“We want to make sure we can enhance the efficiency and effectiveness of how we leverage real-world data, and I think there is a lot of benefit that can be achieved by sharing and coordinating these efforts at the industry level and with other partners using advanced technology and analytics,” Pfizer VP of Real-World Data and Analytics Marc Berger said in an interview. “Optum Labs provides a great place to do that.”

In particular, Berger pointed to a wealth of electronic health record data that will be available to the members of the collaborative. Optum Labs launched in January 2013 as a collaborative between Optum, the research business of UnitedHealth Group Co., and the Mayo Clinic. It links claims data with clinical health records in a way that allows researchers to analyze the data to find ways to improve outcomes and reduce the cost of health care delivery (“*UnitedHealth’s Optum, Mayo Clinic Link Claims And Clinical Data For Research*” – “*The Pink Sheet*” DAILY, Jan. 18, 2013). Pfizer was among seven organizations that were announced as new members in the research collaborative, joining additional founding member AARP (“*Reimbursement Briefs: Pfizer Joins Big Data Group; Part D Protected Classes; Wikipedia Partners With Cochrane Collaboration*” – “*The Pink Sheet*,” Feb. 17, 2014).

Joining Optum Labs “offers us an opportunity to leverage a large trove of electronic medical record data and other novel sources of information to better understand diseases and how to better target treatments to the right patients,” Berger said. “We are looking at very early disease research, and a real focus of ours is to understand how patient heterogeneity influences disease progression because by understanding that, we hope to better be able to target treatments to patients who will benefit the most.”

Berger said it was too early to talk about specific projects, as the company is still developing its research agenda.

### Contributing Expertise

Pfizer will not contribute data it has gathered during clinical development of products to the collaborative, but will provide its research expertise for other members to tap into, particularly in the area of analyzing data from electronic health records.

“We are providing support in a variety of ways,” Berger said. “Not only do we have broad research expertise and deep clinical insights, but we also have a fair amount of experience over the last year and a half in understanding how to use electronic medical record data for health research.”

But Pfizer also hopes to gain from the expertise of the other members of the collaborative. The company is looking to Optum Labs and its members to help it learn new ways to work within the growing field of “big data” as well as to provide a testing ground for new analytical approaches.

“I think a lot of health research has been using the same analytic approaches, predominantly, for the last 30 years,” Berger observed. “As data gets richer and richer, as we get more and more different varieties of data, it now opens up opportunities to use new and novel analytic approaches, and we want to see if we can get more robust insights by using some of these new analytic approaches.”

Data analysis experts have been telling biopharma companies that they may need to bring in experts from fields outside of health care, including mathematicians and economists, to get the most out of data (“*To Get The Most Out Of Health CER, Hire A Mathematician, Conferees Say*” – “*The Pink Sheet*,” Feb. 3, 2014).

### The Role For Pharma At Optum Labs

As Optum Labs brings together various health care delivery stakeholders, the collaborative will be looking to the pharmaceutical industry to bring its unique perspective to the research that will be conducted, Optum Labs CEO Paul Bleicher said in an interview.

"Pfizer and other major pharmaceutical companies approach a problem from a particular perspective and Pfizer brings incredible skills in epidemiology, outcomes research, health economics and clinical research in general, a great understanding of the biology of disease and a passion to bring medicines and therapies to patients in a way in which they can provide the maximum benefit," Bleicher said.

But stepping back, he noted that the "foundational concept" of Optum Labs is that it will blend the perspectives of all the research partners that participate.

As an example of a research topic that could benefit from those combined perspectives, he talked about the effect of mental illness, such as depression, on those being treated for other chronic diseases.

"Depression itself probably increases the cost of treating most chronic diseases by about double," Bleicher said. "So that's a problem for the ... employer and the payer because they are footing the bill and they are at risk for that. They'd love it to be 1x."

Providers will see complications as they try to treat patients because of medication adherence and other issues. And as payments to providers become based more on outcomes than on volume, they are at risk as well. "Life sciences [companies] would like to be able to make sure that the drugs that they [manufacture] to treat hypertension or diabetes are being effectively used, so they have a lot of skin in that game," he added.

So pharma companies participating in Optum Labs "bring a perspective about medicines and the effectiveness of medicines that isn't necessarily going to be the perspective that other partners bring."

To that end, Bleicher said that Optum Labs sees itself as the "convener. We are providing an environment that includes all the data, technology and analytic tools that we've developed at Optum Labs and some that we've brought in from some of our partners."

In addition to gaining a better understanding of outcomes and related health care costs, Bleicher believes Optum Labs will help foster innovation of new products and could lead to new companies and partnerships being formed between its members.

"A number of projects at Optum Labs might actually be done for the purpose of developing a new innovation that could

be commercialized, and that's absolutely something we are interested in," Bleicher said. "Very often, in order to take something that's a great idea, especially a system-wide idea in health care, and get it applied in a major way, you really need to be able to put it into a commercial package and have that package distributed by a commercial organization in a very significant way."

Bleicher anticipates that "there may be spin-out companies that come out of Optum Labs and joint ventures or incubated companies coming in who might make use of the data at Optum Labs" to bring innovation to the market. And that innovation is "part of the story that helps make Optum Labs sustainable over time - the ability to jointly, with shared economics, develop and commercialize new innovations that can help pay for the continued activities of what we hope [will become] a national resource."

But Bleicher was quick to add that the collaborative is not a research environment for companies looking to develop specific products for themselves.

"They should not be coming to Optum Labs to work on a problem of specific commercial interest to them," Bleicher said, adding that UnitedHealth's Optum business unit can provide services in that regard. "The problems that people come to Optum Labs about are more general problems. They might be from a pharma company's perspective about a [drug] class, they might be about the impact of the system of delivery of care on the actual use of a class of medications, etcetera."

Bleicher expects that results of research conducted through the collaborative will be published. The research topics will primarily be determined by who is doing the research.

There are about 18 research projects already under way at Optum Labs. Bleicher identified a few, including variations in care around hip and knee surgery, step-down protocols in asthma medication, the uptake of newer anticoagulants in atrial fibrillation and hospital readmissions for complications of various diseases. It also is looking at methodological research around propensity scores and how to impute data from large data sets, such as electronic health record and claims data that might not necessarily have a large overlap, to find ways for more, if not all, data to be statistically valid and research-applicable.



