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Astellas Positions Patients At Center Of Digital Push

‘Best Mix Of Digital And People’

by Ian Haydock

While Astellas, like many other large pharma firms globally, is pursuing the adoption of digital technologies across multiple disciplines, it is aiming to keep patients at the center of its initiatives and also sees a strong need for the "best mix" of the human touch and technology.

Astellas Pharma, Inc.'s over-arching goal in pursuing its own digital transformation strategy is to "turn innovative science to value for patients." Pointing to shifting practices and new technologies in key areas including drug discovery, R&D, clinical trials and interactions with physicians, the major Japanese pharma firm's objective is, in one way or another, to keep those who ultimately receive its products at the center of these efforts.

In addition to improved value – which it defines as outcomes important to patients divided by the cost to a healthcare system – other benefits of the push include reduced corporate costs and increased productivity. As chief strategy, chief financial and chief business officer Naoki Okamura told a recent media briefing, digital transformation as a broad undertaking forms a key pillar of Astellas' current strategic plan to become a "value-driven life science innovator."

Shinya Suda, senior vice-president for Information Systems, pointed to estimates by consulting firms of substantial cost and time savings from pharma's adoption of digital technologies – ranging up to 60% for costs. With Astellas deriving 78% of its fiscal 2020 revenue from outside Japan and having global integrated operations, the benefit in its case could also be substantial.

But while its own initiative, overseen by a Digital Acceleration Committee to formulate strategy and investment, is global in scope, remaining uncertainties in the area mean Astellas' approach has an element of caution – "start with one country or function on a smaller scale, do proof-of-

concept, see the results and then decide to expand,” as he put it.

Discovery And R&D

The company is now considering the use of cloud computing services and artificial intelligence/machine learning to implement ultra-large-scale virtual screening, which simulates the binding of actual and theoretical drug structures in order to identify hit compounds with desired characteristics. “This could shorten the time from hit compound to drug candidate by as much as 70%,” Suda predicted.

But a key point is that there are still “humans in the loop”, who can apply their judgement and experience to the findings. Practical experience so far with the combination of automation and manual techniques has shown the time from hit to candidate can be cut from two years to six months, the executive added.

Robots and AI platforms are also being piloted for cell culture and manipulation, enabling experiments in this area at 100 to 1,000 times the scale of human-only operators on a 24/7 basis and without the need for COVID-19-related staffing measures, he observed.

Decentralized Trials

With the topic of decentralized, or virtual, clinical trials becoming a prominent topic during the pandemic, technologies that can allow remote participation and monitoring of patients – particularly those with diseases that make it difficult to travel to clinical sites – have taken on added significance.

Astellas again stressed the patient-centric aspect of this effort, pointing to the convenience and accuracy of approaches including e-consent, online training and communication with investigators, along with smartphone-based tools for logging symptoms and progress.

But with these often still requiring multiple systems and apps, “we want to develop something that can be integrated into one platform and rolled out globally,” covering the entire clinical study process, Suda told the meeting.

It has already used elements in early US trials for its PPAR modulator Duchenne muscular dystrophy drug bocidelpar (ASP0367), for which smartphone videos and e-diaries were used to

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record daily activity, along with wearable devices.

Taken together, the strategic aim is to enable more convenient participation in studies and reduce the number of trial dropouts.

Enhancing Physician Interactions

Turning to planned and potential changes in the way the company interacts with healthcare professionals, Suda said the aim is to make more use of digital channels to pursue “timely and appropriate” provision of information. Channels include remote sessions with sales reps, chatbots and owned media, the use of which has again been accelerated by the pandemic.

In moving to digital technologies in this space, the emphasis is on determining and then delivering the information that doctors want, “not that which the company wants to communicate,” Suda stressed.

Astellas began an Online MR (medical representative) service in Japan last June which is now providing and collecting information on six products across four therapeutic areas. A Japanese-language chatbot system (dubbed Collabot) was launched in 2020 and has been expanded and modified for use for selected products in several global regions since 2020.

The number of visitors to the Astellas Medical Net product information site for healthcare providers rose by 31% and number of views of pages for on-demand web symposia surged by 117% since April 2021.

With all the broader attention being given to the nascent metaverse (3D virtual reality world) at the moment, Suda also noted that Astellas started work on a pilot program this January, which is looking at approaches including virtual symposia and will move later to allowing virtual interactions between attendees at such events within the metaverse as the requisite tools develop.

Other facets of the corporate digital transformation effort include the use of automation and processes for manufacturing, and the capture, transfer and reporting of pharmacovigilance data to reduce manual data entry, reduce errors and shorten processing. Together in the latter area, these measures are expected to save “several hundred million yen” (several million US dollars) annually when fully operational in five years.

On top of these, other areas touched on included company-wide enterprise business and accounting platforms, cybersecurity and the easier identification via automated document search of employees with certain experience or expertise for specific projects.

But despite all these initiatives, the human element remains essential, at least in Astellas’ view.

“There needs to be an evolution where digital is good and where people are good. We need to capitalize on each of the strengths and that would be the best mix,” Suda concluded.