

Decoding pharma technologies post pandemic

Over 30 Speakers, five panel discussions, scores of delegates and limitless ideas were a part of the Elets Digital Pharma Summit that concluded recently.

What started almost a decade ago in the Indian pharmaceutical sector was only accelerated by the global pandemic. The pace of digital adoption that was ably assisted by the agility showcased by the sector has brought significant transformations in its thought and offerings. Taking the mandate further to discuss and deliberate on the '**Pharma Technologies Post Pandemic**', Elets Digital Pharma Summit saw who's who of the sector joining in to share their enriching insights. **Dr. Ravi Gupta**, CEO & Editor-in-Chief, Elets Technomedia welcomed the dignitaries and shared how the Pharma sector underwent a huge transformation to meet to the evolving demands.



The day-long event saw panel discussions on a multitude of issues including:

'How adoption of digital technologies helped pharma

companies during the pandemic'

was moderated by Nitish Kumar, Digital Business Partner, Strides and had Dr. Anil Pareek, President, Medical affairs & Clinical Research, Ipca Laboratories and Narendra Saini, Chief Digital and Data Officer (CDO), Lupin. Revisiting the initial days of the pandemic and how pharma organizations had to shift gears, the panel shared their insights across a range of questions. These included the various innovative technologies that were adopted to make businesses adapt to the changing requirements; how every aspect of the pharma value chain from manufacturing to sales and marketing had to adapt & digital tech will be pivotal for the pharma industry to function at its best. The experiences in dealing with this seismic shift; challenges and opportunities faced while wading through the initial months of the pandemic and the way ahead for the Pharma sector in terms of an overarching strategy to prepare itself for the future and solve real-world problems using digital tools. Nitish Kumar, Digital Business Partner, Strides shared how remote audits could become possible due to technology. "I think Covid played a key role in making the industry adopt such a model and this has improved regulation in the industry," he added further.

Narendra Saini, Chief Digital and Data Officer (CDO), Lupin was of



the view that till there is a mindset change for digital adoption, it becomes really difficult to convince people. He added that Covid pandemic helped in convincing people to shift to digital. "We have done a complete revision of our existing architecture to shift to digital and optimize our operations with the help of technology tools. I think the topmost priority today is the customer. So what technologies could make the operations more customer-centric are what the industry needs to boom in the coming 2-3 years," he added. He also stated that the second priority is regulation and how it was a bottleneck. But things are getting better, especially with online audits. "We need to look at how we deliver. We need to build a roadmap of the next 3-5 yrs. We need to have better control on the overall delivery. Getting the right talent on-board is also a challenge. Apart from this, we need to drive an innovation culture. Building a roadmap and to be able to look at

business-led innovation are very important. Any initiative that is prioritized has to be looked at from the 'value addition' point of view," averred Narendra Saini. He also emphasized on the need for action. "Just by knowing through data what can be done, things do not happen. Also, revisiting business plan and roadmap to assess growth and work out effective solutions is important."



Dr. Anil Pareek, President, Medical Affairs & Clinical Research, Ipca Laboratories was of the view that automation had been there in the pharma industry for long. "However, the pandemic boosted digitalisation. Also, these days more virtual meetings & collaborations are being held. Doctors also prefer telemedicine these days to prevent human-human interaction due to COVID widespread. Virtual collaboration has also helped in reaching out to more patients/customers," stated Dr. Pareek. He also opined that with the help of data analytics, newer avenues for innovation and research can be discovered. "We need to find a balance and have to have an amalgamation of digital and physical operations. And for digital, I think we've only scratched the surface and there's a big potential that is untapped. However, we can never undermine human mind," averred Dr. Pareek. He elaborated on how digital is here to stay and

pharma companies should set aside a significant share of the budget for updating technology and digitalisation.

The session on '**Pharma CIOs: Creating new business processes by embracing automation**' had **Ganesh Ramachandran**, Global Chief Information Officer (CIO), Alkem Laboratories as Moderator along with **Sanjay Nandavadekar**, Director-IT, Cipla; **Gyan Pandey**, Global and Group Chief Information Officer (CIO) and Aurobindo Pharma; **Dr Avadhut Parab**, Global Chief Information Officer, Wockhardt Ltd.



Setting the tone of the session, moderator **Ganesh Ramachandran**, Global CIO, Alkem Laboratories, averred that the past few years have seen a lot of automation in the industry and how people heading towards a hybrid mode of working. "The focus is no longer to only enhance efficiency but more on the data-driven approach that aids in better decision making," he added. The interactive discussion saw the panelists respond to a number of questions posed by the attending delegates.

Dr Avadhut Parab, Global CIO, Wockhardt Ltd. shared that transparency is another area that is getting addressed with technology tools. "R&D is getting more technology-driven today. We're today working on how we



can leverage IT to optimise our operations, ease transactions and enhance production and delivery." He stressed on up-skilling employees not only on basic training but on measurements, statistics with focus on the right mindset, skill set and people set. "In a pharmaceutical company, validation is a major area. So we need to look at ways to get the validation process online. This will not only save time but will be more efficient, easy and transparent," he added and shared that in the pharma sector, digitization will be witnessed in the operations side as well in the coming times.



Gyan Pandey, Global & Group CIO, Aurobindo Pharma averred that supply chain, manufacturing, drug formulation, doctor-patient collaboration, etc. have evolved and are further evolving with growing technologies. He added, "At leadership level or tactical level, technology brings visibility to challenges and enable better

strategising the course of growth accordingly." He further shared that supply chain, for most pharma companies, is the focus where automation can be leveraged to improve logistics and deliveries. He also shared his thoughts on the data being generated with the usage of technology. "At every step of every process we have tons of data but the majority of it is in unstructured formats or in silos. This is one of the important challenges we need to address," he added.



Sanjay Nandavadekar, Director-IT, Cipla talked about how people were forced to apply automation in different ways during the pandemic situation, challenging everything and making one come up with alternatives for processes that were not there previously in the industry. "During the pandemic, we had to invent processes to allow people to reach out to doctors. That's where telemedicine became a part of life for many in India." He advocated for skilling people to understand the holistic impact of their work on the organisation. "Giving rights to the auditor to access the data online can be the type of audits or regulation in the coming times," he added. He further averred that after the pandemic, people have been focusing on having a work-life balance and how this is one of the areas where hybrid working or digital modes can play an important role.

The session on '**Covid-19 Implications for Pharma R&D: Building for the next normal**' saw discussions between **Dr Rakesh Bhasin**, Vice President and Head-R&D (Formulation), Biocon Pharmaceuticals Ltd, Bangalore; **Dr Jayant B Dave**, President, Indian Pharmaceutical Association, Gujarat State and **Dr Arani Chatterjee**, Senior Vice President, Clinical Research, Aurobindo Pharma Ltd who moderated the talk.



Dr Rakesh Bhasin, Vice President & Head R&D (Formulation), Biocon Pharmaceuticals Ltd said, "Earlier we thought that the COVID will only impact the supply chain. However, it turned into a pandemic and impacted the entire operations of the pharma industry. As per McKinsey survey, during the COVID period, most R&D leaders were spending 40-50% of their time on crisis management." He also spoke on how, despite having limited scope, the pharma industry adopted work from home culture while the country was under a lockdown due to the COVID-19 pandemic.

Dr Jayant B Dave, President, Indian Pharmaceutical Association, Gujarat said, "This pandemic has been an absolutely a unique experience for mankind in terms of learning, innovation, research & development and technology advancement. The pandemic affected the complete healthcare



sector. In all the countries, emergency authorization was implemented which is simply rather than waiting for perfect things we can go for what is good. Apart from telemedicine and real-time virtual monitoring, virtual clinical trials are one of the significant developments that we've seen in the sector after COVID." He added that one of the lessons from the pandemic is to shift from competitiveness to collaboration and developing new drugs & repurposing of the existing drugs are some of the important developments seen during the COVID phase. "Every industry has to work out its roadmap for the way forward. There has to be some government guidelines/policies for biopharmaceutical area so people can initiate things," stated Dr. Dave.



Dr Arani Chatterjee, Senior Vice President, Clinical Research, Aurobindo Pharma Ltd said, "When we see we build for the new normal we need to first look at what was the previous normal and how things are getting changed."

The session on **'Is Pharma Education Future-ready? The Opportunity and Challenges'** saw participation from **Dr Praful Bharadia**, Professor, Department of Pharmaceutics, L.M. College Of Pharmacy; **Dr S Sriram**, Associate Secretary Edu Div. & Professor and Head, Department of Pharmacy Practice, College of Pharmacy, SRIPMS, Coimbatore Indian Pharmaceutical Association; **Dr Mahesh Dattatraya Burande**, Director Institute of Pharmaceutical Education & Research, Pune; Professor, DY Patil University School of Pharmacy Ambi (Moderator) and **Prof. Krishnapriya Mohanraj**, Professor of Pharmaceutical Analysis, Bombay College of Pharmacy.



Dr S Sriram, Associate Secretary, Education Division & Professor & Head, Pharmacy Practice Department, College of Pharmacy, SRIPMS, Coimbatore Indian Pharmaceutical Association said, "We need to have skill-oriented based programmes to make youth competent. Most pharmacists in India are working in communities. And, pharmacists were the only ones to be paid full time during the COVID time." He added that the new education regulation has been passed & Pharmacy Council of India has included critical thinking, communication skills, etc, in the programmes. "The first batch of Pharm D students passed in 2014. We called these

students as new-gen pharmacists because of the transformations they brought in the industry. The million-dollar question is if all the students passing out Pharm D are competent enough or not?"



Prof. Krishnapriya Mohanraj, Professor of Pharmaceutical Analysis, Bombay College of Pharmacy said, "When we talk of courses, it should be a continuous education programme and it should lead to skills." She further stated that in the committees framing syllabus, there is a need to have industry experts to make syllabus useful for students. "We need to look at NEP2020 & focus more on all-round development. People should not be limited to specific subjects but allowed to take up different subjects," added Dr. Mohanraj.



Dr Praful Bharadia, Professor, Dept. of Pharmaceutics, L.M. College Of Pharmacy said, "Our health system and education system should be

geared up to meet the challenges of our country. We have a set of diseases and students should be sensitised about these from the beginning. Students should be involved in real-life issues and asked to come up with solutions. This drives the students to learn and innovate." He added that there's a big technical gap as the equipment used in industries will not be available at the institutions and there is a need to fix these issues. "As we proceed, we need to look at the technical challenges and training of the faculties so they can deliver the best. A lot needs to be done on making students industry-ready," added Dr Bharadia. He shared that the institutions need to gear up to adapt to the technical advancements. "A good ecosystem has to be built in institutions to enable students to innovate. We have a state students' startup policy under which we provide grants to students having potential ideas," averred Dr. Bharadia.



Dr Mahesh Dattatraya Burande, Director Institute of Pharmaceutical Edu. & Research, Pune; Professor, DY Patil University School of Pharmacy said "We've identified 75 skills. We need to see if colleges can provide certification for such skills that'll be welcomed by the industry."

“We are going through a complete disruption in healthcare”

Daara B. Patel, Secretary-General, Indian Drug Manufacturers' Association talked about 'Decoding Pharma Technologies Post Pandemic' at the recently concluded Elets Digital Pharma Summit.

Technology is impacting every aspect of our lives today. The need of the hour is that the Pharma Companies must become ready with the Next Level Pharma Technologies while aiming at engaging the consumer at every step. The agility to adapt to the changing sector requirements across the globe and deliver to meet the ever-increasing demands of the healthcare sector has made pharmaceutical companies respond effectively in pandemic induced times. Digital transformation in the pharmaceutical Industry is essential for improved patient care, cost-effectiveness, greater transparency, improved production and drug development.

We are going through a complete disruption in healthcare. Similarly a lot of acceleration has happened in the pharma industry as well. We are talking of augmented reality, virtual reality, artificial intelligence, predictive analysis and so on are the buzzwords within the industry.

The challenging times during this pandemic has called for technology - induced transformation. Pharmaceutical companies are trying very hard to keep up with the revolution

brought through digital technology - Mobile communications, big data and cloud computing, advanced analytics, digital marketing and the internet of things (IOT) are among the innovations that are beginning to transform the healthcare industry.

Industry 4.0 is the digital transformation of manufacturing/production and related industries and value creation processes. The Fourth Industrial Revolution (4IR or Industry 4.0) is the ongoing automation of traditional manufacturing and industrial practices, using modern smart technology. Large-scale machine to-machine communication (M2M) and the internet of things (IoT) are integrated for increased automation, improved communication and self-monitoring, and production of smart machines that can analyze and diagnose issues without the need for human intervention.

Industry 5.0 refers to people working alongside robots and smart machines. ... As machines in the workplace get smarter and more connected, Industry 5.0 is aimed at merging those cognitive computing capabilities with human intelligence and resourcefulness in



DAARA B PATEL
Secretary-General
Indian Drug Manufacturers'
Association

collaborative operations.

We can assure quality through digitalization. There should be proper integration between IT and technically qualified pharma professionals.

In fact most companies are comfortable with virtual quality audits.

The Indian Pharma Market is valued at approx.. USD 44 billion of which approx. 50% is Exports. The Indian pharmaceuticals market is the third largest in terms of volume and the 13th/14th largest in terms of value. It has established itself

as a global manufacturing and a research hub. A large raw material base and the availability of skilled workforce gives the industry a definite competitive advantage. The domestic pharmaceutical industry includes a network of approx. 3,000 drug companies and approx. over 10,500 manufacturing units and 60K formulations. Digital Technology is going to play a pivotal role in ensuring that the pharma industry continues to function to the best of its abilities providing both Health Care Practitioners (HCPs) and patients with the necessary vital support required.

According to me, the following digital technologies would be required by the pharma companies to remain relevant:

1. Virtualized HCP Marketing: Pharma companies would have to shift away from traditional digital channels towards more engaging platforms such as virtual peer-to-peer sessions, medical hybrid webinars on treatment protocols. This would be an evolution in how business is being done.
2. Remote Patient Support: As healthcare shifts more towards a self-service model, remote monitoring, instructional / advisory content and facilitation of online patient communities are all ways pharma can engage with patients and support HCPs in the process. Tools like data visualization and deeper content personalization will allow pharma companies to communicate insights or share results with patients more intuitively.
3. Data Driven Decision Making: As the impact of Covid-19 on

other conditions / illnesses becomes clearer, the healthcare system as a whole will become more reliant than ever on data and artificial intelligence (AI) to identify emerging patterns and respond accordingly. Firms would need to recruit data science talent to ensure they are equipped to deal with complex consumption patterns certain to emerge in the post covid-19 landscape.

4. Technology powered Trails: Digital strategies considered for Clinical Trails assessments includes telemedicine, remote electronic medical record access and virtual monitoring. Companies who have already become more digitally skillful are examining what more can be done virtually across clinical trials, help improve processes and gain efficiencies in the units, resources and time management.
5. Cloud enabled and start-up inspired collaborations: Pharma has woken up to the potential of the cloud especially in the field of drug development. Cloud facilitates closer collaboration between organizations by making it easier to share data. In turn, this can speed up the process of finding new treatments. In parallel, the covid-19 crisis has drawn a powerful response from dynamic tech start-ups. Digital health entrepreneurs have the ability to respond rapidly to changes in the market, with solutions ranging from Apps and chatbots.

Nowadays there are Webinars, Virtual Meetings, Training Programs, AGMs, Shareholder Meetings, Job

Interviews, Panel Discussions, Television Interviews on virtual platform. Even the Doctor visits/calls are virtual. In fact Doctors prefer Virtual Calls.

Starting from research and development to manufacture and supply chain, marketing and sales, the very best technology expertise are needed across the value chain. The potent openings hence will exist combining pure science with data science and digital technology.

However, the reality is that the industry generally has been quite unwilling to embrace changes. Sometimes the new technology can be adopted slowly, or absolutely not. The COVID pandemic has changed this situation and acted as a facilitator for change.

Virtual meetings are here to stay:

- Webinars, training programs
- Quality Audits are also done virtually and they are very effective. Despite the fact that things are slowly moving to Normal, virtual is still the norm. Companies have given up huge chunks of space & encourage employees to work from home or anywhere, thereby achieving HUGE savings.

Digitalisation will proliferate every kind of activity. India being a fragmented market, everyone can be digitally connected and we have to learn from each other.

Whilst ensuring Digitalisation, we need to remember one thing, do not do digital for the sake of it. Look at digital as a tool to achieve your goals but do not force it into the system. ☺

Digitalization pushing growth of pharma industry

J. Jayaseelan, Vice President, Industrial Pharmacy Division, Indian Pharmaceutical Association gave his insights on how digitization has helped pharma industry in the country evolve at the Elets Digital Pharma Summit. Edited Excerpts

Reiterating that India is the 'pharmacy of the world', Mr. J. Jayaseelan, Vice President, Industrial Pharmacy Division, Indian Pharmaceutical Association added that no other industry from India made this impact of saving lives across countries, going beyond business. He stated that it is not only the vaccine that India produced, but the regular medicines for chronic ailments, medicine for diabetes, hypertension, antibiotics and many more. He added that all these medicines hold their own significance as last two years were gone in dealing primarily and without these regular medicines, how could one ensure security or health safety in the country.

He averred that while people were ready for digitization even five years back, but the pandemic made the digitization impact more severe. "By force or by default, pharma industry whether big or small, was somehow part of digitalization. Otherwise we would not have survived," stated Mr. Jayaseelan. He averred that the industry was forced to learn all digital things & processes and how the pandemic has made digitalization to come into life little earlier.

He further talked about how in pharma, R&D is important and for



J JAYASEELAN
Vice President Industrial
Pharmacy Division
Indian Pharmaceutical
Association

that money and time, both are integral. Before digitalization, it involved a lot of time and money. While in the present times, IoT, Artificial Intelligence (AI) and data blockchain, these digitalization tools has made R&D very viable for Indian pharma companies. He stated that with these digitalization tools, multiple data can be processed and AI & other tools are used very efficiently to pick up the target molecule or target product thereby reducing time and money. "As a result the progress is better in R&D," added Mr. Jayaseelan.

He shared that now even product approvals can be done through

virtual audits using the digital medium. He further elaborated on how digitalization is also refining manufacturing of products with precision. He also talked of how production of goods will also benefit with robotics, bringing down operational costs and also enable & strengthen the logistics and supply chain. He also emphasized on the role of digital tools to store patient data and how it enabled patient consultation to treat basic ailments during the peak of the pandemic when clinics & hospitals were shut. Doctors started using whatever media was available with them to advise patients. He averred this is how pharma companies were also pushed towards using the virtual medium to market their products. This further led to proliferation of the digital platforms with webinars and meetings being done virtually. He also stated on the role of pharmacist, patient data management and the multiple options available to feed patient prescriptions and do its audit through digital empowerment.

"We understood digital is part and parcel of our industry and hence we are all learning and are updating ourselves to take this as opportunity and use for our business & also for the patients welfare," concurred Mr. Mr. Jayaseelan. ©

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Conversational messaging for effective healthcare delivery



RAVI SUNDARARAJAN
Chief Operating Officer
Gupshup

Talking about "Transforming Patient Engagement in Healthcare with Conversational Messaging," Ravi Sundararajan, COO, Gupshup gave an insightful presentation. He initiated his talk with a brief on how Gupshup, a cloud messaging tool, can be a beneficial tool for businesses in keeping up with their clients and customers. He shared how along with other key sectors, healthcare has been a priority focus area for them where pharma companies and hospital chains have been using their product for creating conversational engagement tools with their patients.

He talked about the prominence patient engagement has taken over the last 1.5 years as the pandemic, mass smartphone adoption

and digital innovations have accelerated online healthcare. He further added that in the last two years there's been a significant rise in remote monitoring of patients, telemedicine and digital therapeutics. However, he stated that digital experiences are still broken and how an emerging trend might be the answer to creating a seamless healthcare experience through messaging apps.

Sundararajan elaborated on the critical role played by the chatbots during the COVID period. "Gupshup is one such cloud-based app being used by thousands of companies. We give people the option to send specific types of messages through apps like whatsapp, etc." He averred that conversations are the core of great healthcare experiences and messaging apps provide an easy-to-access digital medium to take these conversations online. He added that Gupshup's smart messaging platform enables engaging conversations seamlessly across 30+ messaging channels

In the last two years there's been a significant rise in remote monitoring of patients, telemedicine and digital therapeutics.

using a single API.

"For tier 2 & tier 3 cities where people prefer their own language than English, app-based networking where buttons & icons can bridge the communication gap and can help in engaging healthcare providers in such cities," said Mr. Sundararajan adding that the entire treatment lifecycle can be made more engaging and personalised through a messaging app. He talked about the various segments of marketing, operations and services where the messaging app plays a critical role and provides multitude of services.

He also detailed on how with the help of digital records and frequent chats with the patients through chatbots or personal messaging, customer satisfaction can be enhanced and also costs of serving so many customers be reduced. He shared that one can re-imagine their healthcare brand as a counselor to millions using smart messaging platforms. "In the future, pharmaceutical companies & healthcare providers will have everything targetted, tailored and every step will be personalised for patients with the help of digital tools and cloud messaging platform like Gupshup," stated Mr. Sundararajan. He also shared case studies of Pharameasy & Apollo Hospitals and deliberated how Gupshup helped them to have better customer communication/patient communication. 📞

Conversational AI for effective healthcare experience

In an engaging roundtable discussion, industry thought leaders convened at the Elets Digital Pharma Summit to delve in-depth about the impact and future of conversational AI in healthcare. Edited excerpt



The global pandemic has transformed human lives. And its effect is also visible in the way patient engagement is being undertaken in the ever-evolving and altered healthcare industry that is undergoing a revolutionary digital transformation. Artificial Intelligence (AI) and AI solutions like Conversational AI have been pushed to the forefront, assisting large healthcare systems to re-imagine patient experience. Industries that are process-heavy and resource-constrained, like the healthcare sector, stand to benefit most and healthcare may be the biggest beneficiary of conversational AI. Chatbots that are

AI-driven and other applications are helping to usher in the next phase of the digital revolution in the healthcare industry.

To discuss further on the topic **"Conversational AI – Transcending Barriers for effective healthcare experience"**, Elets Digital Pharma summit saw the presence of eminent thought leaders from the pharmaceutical sphere. These included **Ninad Takpere**, VP Sales, Gupshup; **Gaurav Bhatia**, General Manager-Supply Chain, Reliance - Retail Pharma; **Vicky Kothari**, Co-Founder, Stratmed; **Vivek Mahendra**, Chief Information Officer, Stratmed; **Rajesh Neve**, VP

Logistics, Zuventus, Healthcare Ltd and **Dr Arani Chatterjee**, Sr. Vice President, Clinical Research, Aurobindo Pharma Ltd.

The discussions revolved around a number of pertinent queries around the subject including how Covid-19 forced healthcare to virtualize, and conversational AI is becoming a part of the experience. What are the channels of communication being leveraged by the healthcare industry? The experts also elaborated on the benefits and specific examples of conversational AI in the healthcare industry and how Conversational AI evolved over the years and assisted the

healthcare industry to save costs. The group of experts also talked at length about whether OmniChannel conversational AI is a reality and the future roadmap of conversational AI. There were also discussions around how for conversational AI to be successful at scale, it is pertinent to have access to training data & how is the healthcare industry gearing up for this need.

Setting the context of the discussion, the panel of experts talked in brief about how covid-19 forced the healthcare sector to virtualise itself to sustain and evolve. **Rajesh Neve**, VP Logistics, Zuventus, Healthcare Ltd shared how the challenges of counterfeit management, getting in touch with the stock points at a rapid pace and the visibility of the goods from manufacturing to consumption point were addressed by the pharma sector. Pandemic has given lot of inputs in expediting digital transformation, averred **Ninad Takpore**, VP Sales, Gupshup. He shared how companies approached Gupshup to create solutions specifically dealing with Covid and how the pandemic has changed the entire dynamics of healthcare industry more than others. He averred that healthcare and pharma companies were quick to adapt to this change and also looked progressively at integrating AI & ML solutions in their working and offerings. **Dr. Vicky Kothari**, Co-Founder, Stratmed elaborated about the pandemic showcasing how fractured the supply chain systems are globally. He shared that the biggest challenge hospitals faced was not just skyrocketing prices of critical supplies, but lack of their stocks during the time of need. He stated that this issue

Healthcare and pharma companies were quick to adapt to this change and also looked progressively at integrating AI & ML solutions in their working and offerings.

can be sorted out at the industry level by using a lot of technology. **Gaurav Bhatia**, GM-Supply Chain, Reliance - Retail Pharma stated that Covid-19 was a black swan event where no prediction could be made either on the demand or the supply side, with the entire value chain getting disrupted. However it catalysed the process of adoption of technology across industries. **Dr Arani Chatterjee**, Sr. Vice President, Clinical Research, Aurobindo Pharma Ltd, said that Covid has seen us embracing technology in a big way and in drug discovery particularly, regulatory meetings and other meetings are happening virtually over the past two years. He added that clinical trials have become progressively virtual. Reaffirming Dr Chatterjee's views, **Vivek Mahendra**, CIO, Stratmed said, "We are ready to accept that the drug formulation and release can be completed within 5-6 months." He added that although manufacturing under controlled environment with the ability for regulator to check and approve faster still has to be streamlined. "However, a lot of work that was slow-paced pre-COVID has been accelerated after the pandemic."



Ninad also shared how during pre-COVID times, people used to take appointments for doctor visits and how today most of this communication has been automated through chatbots or simple online check in. "More consumers are preferring to engage with healthcare companies through channels that are faster and provide instant gratification. Therefore, the scope of messaging apps has grown significantly in the industry," shared Ninad. He further added that most healthcare companies are moving towards low-cost and easy communication tools like messaging apps that also help to communicate with patients easily in the language they understand. "The chatbots or virtual assistants are playing a key role in understanding patients' queries. This gives a personalised experience to the patients. Also, it sends reminders for medicines, tests, etc. and with the help of AI's sophisticated pattern analysis, tailored or personalised therapies and treatment can be devised for patients based on their lifestyle." He also averred that while there did exist multiple touchpoints for a patient for healthcare, there is a need for having a consolidated view. He stated that Gupshup opens up a platform to have a consolidated view of the customer through multiple communication channels.



Gaurav Bhatia was of the view that all the teams in an organization including operations, supply chain, logistics, etc. should be brought to one platform and may not work in silos & emphasized on integrated business planning. He added that technology has helped and played a crucial role to achieve this "Besides conversational AI, clubbing AI and ML can be used for demand sensing. As per my experience, it has been very helpful especially in optimising supply chain." He further stated that a patient is looking for convenience while getting the required treatment. "For this, omnichannel plays a major role. So a consumer can place an online order & get it home delivered or order online and pick it up from the store on his way back home."

Vivek Mahendra averred that, "We're now seeing the emergence of digital twins. This has posed a primary way of testing the act/ product before it actually happens or is implemented in real-life." He further added that "For us to assimilate a complete report of all the departments for regulators becomes a humongous task even today. So, I believe we need to address this and unless such issues



are taken care of it will become difficult to shift to industry 5.0."



Dr. Vicky Kothari emphasized and advocated for giving visibility of the inventory to the customer to avoid any kind of struggle. He stressed that technology can play a pivotal role in addressing this issue. He also detailed about integrated supply chain including forecasting and demand planning.



Rajesh Neve stated that, "We need to integrate data that presently

exist in silos. This will impact the supply chain in improving the overall logistics. Today, even a small chemist has its barcode & serial number. We need to integrate this serialisation to make supply chains and the overall logistics efficient and transparent." He also averred that if serialisation can be placed in a blockchain system, then a consumer can put the serial number and will not need any middle person to take this task and can become an integral part of AI.



Dr Arani Chatterjee detailed about leveraging use of conversational AI, mobility and wearables specifically in the drug discovery and clinical trials beginning from history taking. "There are sites put up for clinical trials and they invite subjects to participate. So, AI can play a crucial role in screening eligible subjects for the trials by asking questions beyond binary." He also added that AI can also simplify the trial consent criterion of inclusion or exclusion. "For most trials, self-assessment includes safety assessment of pre-defined events for which the patient has to provide info on a daily basis for a week. Conversational AI can help in streamlining this process," shared Dr. Chatterjee also pointing out towards use of AI in adverse event tracking.

Digital solutions for effective patient engagement in post-covid world

It was an engaging and enriching conversation amongst industry thought leaders as they delved into a discussion on '**Trends in Technology, Customer Experience and Patient Engagement**' at the **Elets Digital Pharma Summit**. Edited Excerpts.



and patient engagement and the steps need to be undertaken to participate in the evolving healthcare ecosystem along with the skills required to be relevant in the changing sector dynamics.

Ninad Takpere, VP Sales, Gupshup, while moderating the discussion, shared that COVID has transformed human life and has stimulated a rapid digital transformation in the pharma industry across the globe. "Communication has been the core of overall healthcare. AI-driven chatbots are a reality today that enables the companies & doctors in understanding the set of ailments patients are coming up with & the trend of those ailments among people," averred Ninad.

COVID has transformed human life and has stimulated a rapid digital transformation in the pharma industry across the globe.

As the world continues its battle against Covid-19 and its various mutations, the digital transformation experienced and adapted by the pharma sector is an enabling reality. As the pharma companies and healthcare service providers devise their present and future strategies driven by digitization, **Ninad Takpere**, VP Sales, Gupshup got a panel of industry thought leaders to share their insights on 'Trends in Technology, Customer Experience and Patient Engagement'.

The panel shared thoughts



around the challenges faced while interacting with different stakeholders in the pharma chain; the new technology tools that are driving customer experience



Taking the discussion forward, Dr **Subhash C Mandal**, VP & Chairman, Regulatory Affairs Division, Indian Pharmaceutical Association, said that it is required to engage patients and empower them to improve their health outcome and technology is posing an effective tool to assist for the same. "Patients are paying for their own treatment but their opinions are hardly been taken. They're not given the leverage to choose a cost-effective treatment." He added that adoption of AI & cloud, etc. is a growing trend in the industry today. "Another major aspect is that the industry is moving towards being more patient-oriented. Companies are adopting various digital measures to enhance patient engagement," elaborated Dr. Mandal adding that India has started on a path to be an innovation hub as it is developing indigenous vaccines that are being used worldwide.



Delving deeper into the thoughts being discussed, **Sumeet Chandra**, Head-Digital Transformation, Commercial Innovation & Strategic, Cipla shared that the healthcare and pharma industry has not been enough customer-centric for a long time and there was a need to address this. He shared that a lot of strategic management needs to happen and there is still a long way to go in the adoption of digital in the pharma sector. He also shared about their still ongoing initiative on rural digital marketing considering the reverse migration of people during the COVID time. "Beyond teleconsultation, there's a push and pull mode to which the industry has moved. One of the pull we have been championing at CIPLA is videos on industry advancement that we present on a video platform." He further stated that in the coming times, the industry would be doing a redesign where the centre of gravity will shift from doctors to patient. "The diagnosis part of the funnel will go up as people are more aware and will be able to see their health and prevent issues," averred Sumeet.



Advocating the usage and adoption of technology that adds value to healthcare, **Dr Vishal Rajgarhia**, Director & CEO, Finecure Pharmaceuticals Ltd. shared, "Post-COVID technology adoption was imperative and companies went through digital transformation on a rapid pace." He added that after COVID, pharma companies used digital modes to increase reach and avoid human interaction. "We could use AI & ML to improve our R&D and enhance productivity of our workforce. Technology can also be used on the production side to keep the prices affordable, making India a competitive market always," shared Dr. Rajgarhia.

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Anil Gidwani, Director, Dana Pharmaceuticals averred how technology was adopted in a big way in education and healthcare. "Telemedicine is one big example that has changed the traditional doctor-patient interaction." He further elaborated on how people have become more health-conscious and aware & even have oxymeters, blood pressure monitoring equipment at home. "Today, people have started accepting everything online. Most people are using UPI and other such apps to make payments. The pandemic forced everyone to shift to digital and the good part is we

all accepted the change & evolved." He added that people have turned more preventive and pharma companies also are moving towards promoting nutrition rather than treatment. With huge amounts of data being generated, he reiterated that up-skilling in the industry will be more on data analytics part. "The entire patient's data is being recorded and the patients will be automatically sent health advice from the pharma companies," further adding that drone delivery of medicines can be a reality in a year or so and how robot doctors can be the future of the healthcare industry which will be used to address most of the generic diseases.

Detailing his insights, **Kaushal Shetty**, Global Director, Digital & Technology, Pfizer Inc. elaborated on how pharma sector was not well-known for being at the forefront in terms of technology and how adapting to the new normal was challenging for everyone.



"However, after COVID things have changed. Now pharma companies are looking beyond products and moving towards offering services. The pharma industry has moved from push to push and pulls mechanism," and how organizations are striving hard to meet this demand. He added that on the doctors' side analytics have been built so as they communicate with patients, data can be recorded. A more personalised experience can be given as the doctors are aware of patients' medical history." He further stated that patient's centricity is needed when services/ products and deliveries are designed.

