

# Diagnostics leveraging the tech wave

Diagnostics are the mainstay of the detection, diagnosis, and assessment of any disease & also the backbone of the healthcare industry. Over 70 percent of the medical decisions regarding disease treatment, management, and prevention are based on diagnostics. They are a crucial tool in preventive healthcare as discussed and stated by industry thought leaders at the **4th Elets Diagnostics Leadership Summit**

In an attempt to decode the futuristic diagnostics sector, over 62 speakers shared their views and insights during 11 interactive sessions and through 4 industry presentations at the fourth edition of the Diagnostic Leadership Summit. The 4th edition was organized after the successful execution of the first three editions of the Elets Diagnostics Leadership Summit, which witnessed 1500+ Delegates, 120+ speakers, and 30 thought-provoking sessions & panel discussions.

Industry experts and thought leaders shared their opinions on topics including 'Improving Customer Experience With Connected Data', 'Are Humans & Machines at War?'- Risk-Based Lab Perspective', 'Rapid Diagnostic Kits Market - Scope, Challenges & Opportunities', 'Infectious Disease Pandemic - A growing threat to mankind', 'How digitization can optimize inventory and supply chain management to reduce the cost in the diagnostic industry', 'Leveraging Clinical LC-MS for Advanced Diagnostics', 'Synergising Laboratory automation for efficacious diagnostics operations', 'Pandemic Inducing

Lab Accreditation for Enhanced Diagnostics', 'Pandemic Inducing Lab Accreditation for Enhanced Diagnostics', 'Digitization accelerating the pace of Innovation in futuristic Diagnostic sector', 'Diagnostics Roadmap 2022: CEO's Perspective' and 'Future of digitization of supply chain in the diagnostics industry.



**Dr Simi Bhatia, Director- Goregaon Reference Lab, Technical Director- South, West, Central & International Labs, SRL Diagnostics** stated that automation is making patients comfortable and less anxious. They can book the preferred time of the test and some labs also share the phlebotomist who will come along with their contact number. The patients can track their samples and know when the report will be

ready. They are fully aware and that is reducing their anxiety. **Dr Dinkar Desai, President, The Pathologists Association & Association of Practicing Pathologists - India** -shared, "ICMR allowed NABL accredited labs to pitch in for conducting RT-PCR tests for COVID as the cases were surging rapidly. This helped in better management of the pandemic."



**Dr Maithili Kavathekar, Director of Laboratory Services at Sahyadri Speciality Hospital** expressed, "Molecular methods have brought a different dimension to microbiology labs. These help in identifying antimicrobial resistance and have fast-paced testing and improved quality." **Dr Aruna Poojary, Head of Department, Pathology &**

**Microbiology Breach Candy Hospital** shared there's a need for some kind of refresher training program for people in microbiology and pharmacology. Also, we need to rope in more microbiology labs for surveillance to enhance quality reporting.



**Dr Shahzad Mirza, Associate Professor, (Microbiology), Hospital Infection Control Officer, Dr. D. Y. Patil Medical College, Hospital and Research Centre, Pune** communicated major key areas of research would be to optimize the use of antimicrobial vaccines. Secondly, we need to develop new drugs. Also, we don't have an ambassador for AMR, why shouldn't we work on that. **Anindya Chowdhury, COO, Aster Labs, India & GCC** stated it may not be the survival of the fittest, but the survival of the widest which means that the diagnostics centers which have the widest reach in reaching out to patients & clinicians will be extremely important going forward. Patients are used to the convenience factor and the labs that can cater to that will be able to prosper.

In a discussion on 'Diagnostics Roadmap 2022: CEO's Perspective', **Arjun Dang, CEO, Dr Dangs Lab** shared, "Diagnostics needs to be democratized with digitization & efficient delivery moving forward with our combined focus on giving



our best to the patients." **Dr Sanjay Arora, Managing Director and Founder, Suburban Diagnostics** expressed that the focus the diagnostic sector has gotten in the last two years is unprecedented. "The agility shown by NABL in remotely bringing accreditation to any lab that wanted to get into covid testing is a big learning for all of us. If that is a possibility during a covid when we were pushed to the wall, how can we make the standard of operations for every lab today? That will bring about a change in the right direction. If all the criteria for accreditation are adopted by every lab for all the right reasons, not as a roadblock but more as a facilitator, it will overall raise the standards of testing across the industry."



**Dr Pankaj Shah, CEO, Aspira Diagnostics**, averred, "Expectations of patients are more from pathologists now. They want faster TAT, digitization & growing

preference for home visits. When we started in the '80s, digitization was never in our thoughts. But due to Covid, everybody has gone into digitization. Leveraging AI to better integrate and analyze healthcare is what I have learned. Covid has made people more health conscious and has made us also realize how to sharpen our knowledge." Sharing his views in the discussion, **Mohit Lalchandani, Director and Chief Executive Officer, Dr Lalchandani Labs** said, "It takes a lot of effort to bring about any change but the pandemic helped all the organizations to change things. It brought about a lot of volume to every lab, manpower was reduced and technology was a necessity during those times. Post the pandemic, the importance of insurance has also increased and pushed forward the need to have it."

The session on 'Digitization accelerating the pace of Innovation in the futuristic Diagnostic sector' saw **Amit Aggarwal, General Manager Procurement, Spice Healthcare Pvt. Ltd** stating, "IoT connects multiple devices in different laboratories, generating data and it also enhances the quality of analysis, further reforming healthcare." **Dr Rahul Bhargava, Hematologist - Principal Director, Fortis Healthcare** expressed, "India is beyond the metro cities and there are large hinterlands that are devoid of pathologists. The digitization allowed us to scan a large number of slides and give accurate results for the right diagnosis. Digitalization is helping in bringing accessibility to patients. It is here to say." **Dr Namita Jaggi, Chairperson Labs, and Infection Control Chief Education and Research, Artemis Hospital** said, "AMR is a multifactorial problem and thus the solution has to be multi-faceted." ©

# Decoding Futuristic Diagnostic Sector

Commencing the **4th Elets Diagnostics Leadership Summit**, a galaxy of industry experts and thought leaders shared their pointed insights on the theme of the summit, '**Decoding Futuristic Diagnostics Sector**'.

Edited excerpts from the session.

The diagnostic methodology is a complex and collaborative activity involving clinical reasoning and information gathering to determine a patient's health problem. It requires collaboration and widespread commitment to change among healthcare professionals, healthcare organizations, patients, families, researchers, and policymakers, which will be a very concentrated and collaborative drive, and that's what we have seen in the covid time, stated **Dr Ravi Gaur, Principal Advisor, Spice Health (Spice Jet Promoters Venture), Founder, Dr G Path Labs, Co-Chair CII Delhi Chapter Health Committee.**



He added that in recent times, major outbreaks of various diseases have been witnessed in human beings and the ultimate conclusion was that traditional diagnostic tools and techniques are not up to the mark, particularly for the faster,

final and rapid diagnosis. He further said, "There is a need for dynamic techniques with the wide spectrum application which can probably cover early diagnosis and characterization. That's the technology we will be looking into."

He averred that the futuristic point of view of genomics has arrived and is going to be there. He called for working on a predictive kind of pathology testing and to keep up with innovations. "We're in an era of the emergence of new diseases and re-emergence of other diseases, probably because of the ecological imbalance. Therefore, diagnostics have to step up and adoption of technology can help in coping with changing times," added Dr Gaur.



**Abhimanyu Bhosale, Chief Executive Officer, CreliaHealth** shared that as a company they have always considered building products that ultimately improve the lives of

diagnosticians and labs on a day-to-day basis. Covid played a major turning point in human lives and impacted diagnostics in a big way. "The diagnostic sector has actually caught up to the full demand of a country as large as India. As we go forward we've seen that technology has played a good companion in growing quality at a large scale and also improving turnaround times across the business of labs. It even plays a vital role in personalizing healthcare, which is one of the main areas that technology can do at scale and is very difficult to do on ground," he added.

He further stated that technology can contribute towards the future by personalizing patients' experiences for all of us and making sure that the lab or the hospital is able to actually connect and personalize their health care services to those patients. "We are determined to contribute to technology innovation and adoption in the diagnostic sector," added Abhimanyu Bhosale.

**Atul Mohan Kochhar, Chief Executive Officer, NABH** averred that 'Decoding Futuristic Diagnostic Sector' is a very thematic topic. He stated that diagnostics has always been the backbone of any medical decision-making. "We've learned to realize the fundamental value of quality management systems in



real-time. We also discovered that we need to scale up at such short notice and the only way we can do it is by incorporating technology. We cannot get away by forming islands of excellence. We need to create quality and till we devise the quality we are not going to make a real tangible difference so ultimately, we must have this concept of herd quality. The quality must be taken to the grassroots and bridge the gaps by incorporating technology," stated Atul Mohan Kochhar.

He added that India has always been at the forefront of technology in the world. There are many other countries that demonstrate our effectiveness in handling vaccines or by aadhaar card so every system is now in place and this is the time to start transforming.

He stated, "India has been at the forefront of technology in handling the pandemic and vaccine element. The Prime Minister also launched the Ayushman Bharat Digital Mission. So the most important trend that we need is digital health and diagnostics is very well poised to be the pioneer in that. Our huge population is covered under the Ayushman Bharat Digital Mission and this framework is going to be very holistic," he averred.

**Pankaj Johri, Director - Medical, NABL** stated that the last two



years of the pandemic were challenging for the nation. Various challenges were faced by every industry, especially the healthcare industry. "The manufacturers of the medical devices, suppliers, doctors, laboratory persons, and lab technicians all joined hands and came together. They stood up against the Covid challenges and provided resources in full support. Diagnostics will be the leading field in the healthcare industry with accurate and precise data," he stated.

He further added that every stage in the supply chain management of the diagnostic sector should be quality conscious and should be driven by the principle that eventually leads to the benefit of the people at large. "In fact, the medical labs also need to secure their vendors and suppliers must also have a well-led quality management system in their premises and in their systems everywhere. AI-driven, machine learning, big data, and all automation is going to have the most crucial and very important roles in the labs. Everything is software-driven because those who are validating the software also must have some kind of quality principles in their labs," said Pankaj Johri.

**Prasad Nikam, Supply Chain-Product Manager, CreliaHealth** shared that there are two-three parts of the supply chain that need to be



addressed in order to make sure that the quality is maintained along with managing the supply chain at a very optimized level. "There needs to be a collaboration between the vendors and manufacturers to make sure that the best service is provided to the patients at the same time the quality is maintained. And including all these things we have to make sure that the cost and optimization is there," he added.

He also shared that The medical industries are talking about AI and all the stakeholders comprehend the importance of predictive analytics. "It is transforming the industry altogether and everybody believes that it's inevitable. It's a matter of a few years or maybe a few decades that this is going to happen," he averred. He stated that there is a need to start the transformation and the first step is to transform the whole industry whether it's supply management, patient communication, or patient experience, the optimization of the whole chain is going to be digitization.

He presented a product demonstration of the supply chain management system of medical equipment & products for companies operating in the space. He showed how the dashboard helps in tracking orders, mapping inventories, and improving the management of the supply chain.®



# Improving Customer Experience With Connected Data

**Khushal Bhansali, Country Manager, TigerGraph** shared his views on 'Improving Customer Experience With Connected Data' at the **4th Elets Diagnostic Leadership Summit**. Edited excerpts:

Connecting data can assist us in bettering customer experience by using graph technology, stated Khushal Bhansali, Country Manager, TigerGraph, which is a California-based graph analytics software company that specializes in connecting data assets to deliver enterprise-level knowledge and insights.

Articulating about graph technology, he conveyed that it helps organizations get insights from their data with three key capabilities- Connect, Analyze and Learn. He detailed connecting all internal and external datasets and pipelines with a distributed Graph database; analyzing connected data with advanced analytics, and learning from connected data with In-database machine learning. He added that the technology is used for our benefit and then passed on to the customer for a better experience.

Sharing that "The world is a graph, and everything is connected.", he further added that graph analytics is a set of analytic techniques that shows how entities such as people, places, and things are related to each

other. At the most abstract level, graph analytics is applied to forecast behavior and prescribe actions for dynamic groups.

He added that this technique is essential because business is growing and the market is becoming more challenging. Digitization has happened, and covid has changed all the parameters. He added, "By 2025, graph technologies will be used in 80% of data and analytics innovations, up from 10% in 2021, facilitating rapid decision making across the enterprise."

He further averred that when we combine graphs and Artificial intelligence, it delivers more value and offers better results. It furnishes richer and smarter data, deeper, smarter questions, more computational options, and explainable results. He shared, "Graphs are suited for environments where the connection between data points are just as important as the data points themselves." He further added that we are 40 to 300 times faster than other technologies while looking at connecting data and getting insights.



**KHUSHAL BHANSALI**  
Country Manager  
TigerGraph

Concluding the presentation he said, there are some typical customer-related challenges that we face in Customer Acquisition, which could be B2B or B2C, Customer Experience-Communication/Offer, Sample Collection, Result Delivery, Reference/Repeat Business, Service Locations, Lab Maintenance/Audit, Supply Chain Optimization. We can improve customer experience and improve operational efficiency with the help of graph functionality and can get outcomes. 🙌

# “Are Humans & Machines at War?”- Risk-Based Lab Perspective

**Dr Mukesh Agrawal, MD Pathology and IFCAP, Director- Lab Services, Vijaya Diagnostic Centre** shared his in-depth insights on “Are Humans & Machines at War?” Risk-Based Lab Perspective at the **4th Elets Diagnostic Leadership Summit**. Edited excerpts:

**S**tating that there is always a tussle where humans feel very powerful when they have ammunition in the form of a machine with them, **Dr Mukesh Agrawal, MD Pathology and IFCAP, Director- Lab Services, Vijaya Diagnostic Centre** averred that “We should leverage technology, automation, machines, but there is a need to have human supervision always to ensure that technology produces desired quality of results.”

Dr Mukesh Agrawal said, “There are many risks involved and there are some methods of identifying them. It could be documenting methods, systematic approach, reasoning techniques, and Delphi methodology. These could be used for laboratory perspectives.

He conveyed, “To err is human.” He shared that humans shift their blame to other individuals and if some error comes out from machines, they accuse it of the same. He shared a few points about improving and incorporating machines into our lives. “In a subtle manner, we’re incorporating machines in every aspect of lab operations be it pre-analytical, analytical or post-analytical process,” he added.

Conversing about pre-analytical he

talked about Patient Instruction/ DOS, Order of Draw/ Closed Collection Devices, Controlled Temp Logistics, Pneumatic system Vs. Sample Ferrying/ Drone Transportation Vs. Manual Transport for analytical he shared- Sample Sorters; Track Systems; QC protocols; Calibration reminders, Asset Management; Temperature Monitoring, Monitoring of Xylene/ Formalin; Better & Safe Working atmosphere; Ergonomic Design and for post-analytical - sample Archival & retrieval; DMS.

He talked about how humans have modulated into machines through tiny baby steps of having the mitigation measures into the process and making it more effective. He added that there is a huge movement on human capital resource requirements and how earlier the hiring was on seniority but now we see there is an inclusive training program and feedback mechanism which has built-in where humans are playing a very important role to control machines.

He mentioned that there are machines to do work but we still want humans to indulge in the process. There are certain activities that humans can do. They can lead, emphasize, create and judge but



**DR MUKESH AGRAWAL**  
MD Pathology and IFCAP,  
Director- Lab Services, Vijaya  
Diagnostic Centre

machines can transact, predict, and adapt.

In concluding his presentation he said that computers can do the computational task, humans can do recognition tasks satisfactorily but when it comes to reasoning, it requires a large amount of knowledge and humans are far better than computers. He also stressed the need to have risk mitigation in place while adopting lab automation with all the risks and benefits being evaluated and avoiding the usage of shortcuts for speeding things up that can put patient safety in danger. 🍷

# Rapid Diagnostics Kits Market- Scopes, Challenges and Opportunities

The market for self-testing kits is on the rise owing to an increase in the level of health awareness and the need for quality preventive healthcare. The session explored the trends, challenges, and opportunities of the Rapid Diagnostics Kits Market at the **4th Elets Diagnostic Leadership Summit**. Edited excerpts:



**Dr Hari Om Sharma, Laboratory Director, Laboratory Services, Sir T Hospital** moderated the session and communicated, "The current market of rapid diagnostic kits is somewhere around \$45 million, which is going to double in the coming years, shows this segment has a very big prospect in terms of business. It is proceeding to make a big discrepancy in the rapid response though reliable and result in a kind of approach not only to the hospital near the bedside for patient care but to many individuals staying in rural areas as well. They can get the similar quality of diagnostic services as their counterparts in the cities and metros."

It is the diagnosis of Covid-19 that made it possible due to rapid diagnostics kits. These kits helped people in getting rapid COVID tests done and also added value to the overall diagnostic industry.

He added, laboratories are the front liners and they are as good and influential as the clinicians in the healthcare delivery system and the management. The flawless rapid diagnostic point of care test used in resource-limited settings shall fulfill the criteria by permitting a quick clinical decision that can be used by healthcare workers and also by non-professionals and in terms of finance it must be effective and cost-efficient.

These kits helped people in getting rapid COVID tests done and also added value to the overall diagnostic industry.



**Dr. Manoj Chugh, Vice President - R&D (Reagents), Transasia Bio-Medicals Ltd** stated that "The rapid diagnostic testing market is at a nascent stage and needs certain policy interventions to propel the growth of this sector. The government needs to devise a strong monitoring mechanism to control the mushrooming of small manufacturers who do not maintain quality standards. Indian manufacturers need to be incentivized to increase indigenous production. Importantly, the approval process needs to be accelerated to ensure timely availability of these kits,".



**Dr. Varsha Vadera, Head - Laboratory Medicine & Advanced Diagnostics, Kokilaben Dhirubhai Ambani Hospital** stated, "The value of rapid testing kits were seen during the COVID pandemic when thousands of people used these for preliminary testing. Also, with a growing population, the need for such tests have further increased."

She added that the aging population is increasing in our country. Medical health care wants to use rapid diagnostic tests as preliminary screening tests so that the patient gets treatment immediately and they do not waste time on doing various other tests. The health care clinics, as well as hospitals, are expanding in number and they use these tests for various reasons but we have just enumerated and as a result there is an opportunity for growth. There is an aging population, therefore, there are lots of chronic diseases and also there's an increase in infections. She also said that rural areas do not have enough facilities but they'll also be addressed with rapid diagnostic kits.

Digitization is there but we lack in creating awareness about the data.



**Dr. Nita Munshi, Consultant & Advisor, Laboratory & Quality Assurance, Ruby Hall Hospital** communicated, "As COVID is reducing and not many people are taking rapid testing for COVID now, other rapid tests will still be significant in the market. The scope of growth is where quick diagnosis through rapid testing kits is offered to the people residing in rural areas, thus, connecting the citizens at the grassroots level with quality diagnostic services."

She added that, "We don't know what other viruses and diseases will be coming our way and that will promote the industry to come out with newer rapid diagnostic kits."



**Dr. Shaloo Kapoor, Chief Pathologist & Sr. DGM, SRL, Fortis Escorts Heart Institute, Delhi** conveyed, "The fastest-growing segment in the coming years would be Molecular Diagnosis. Smartphone-based testing and use of smart wearables will see huge growth in the times to come as the use of technology is growing in the field of diagnostics."

Technologies and the research which is going on in the lab will be the driving force as multiple parameters that can be observed and tested on the same chip. While in normal technologies there will be innovations and mobile technology will be one of the driving forces for point-of-care testing.

The challenges are basically not technological but challenges are inherent within the healthcare system as such and these challenges can be divided at the level of the device, the level of patients, the level of healthcare providers as well as at the level of the healthcare system. She added that digitization is there but awareness about data is lacking because of attrition of the nursing staff.





**Dr Monika Shashank, AVP Operations and Lab Director, Vimta Laboratories Ltd** averred that multi-diagnostic will take place in faster diagnosis together with AI and machine learning as these are the two tools which were rapidly being used in Covid-19 testing and the people have come up to the experience and wisdom how it can be helpful in defining the algorithm-based testing. "Diagnostics have evolved dramatically in the COVID times when the turnout time was brought down from 6 hrs to less than an hour. Research is ongoing on using oral fluids like saliva or urine for most screening tests to make it convenient for people & prevent extraction of samples like blood or other internal body fluids." She added that decentralization definitely not only lessens the turnaround time it declines the initial default rates, it improves communication and it requires a lesser reliance on logistics as well. She further stated that diagnostics is evolving and we are having molecular testing evolving to give various tests in less than an hour's time. Also, centralized laboratories are also working towards giving a better turnaround time maintaining the accuracy of reporting.



**Dr Rohit Chawla, Professor, Department of Microbiology, Maulana Azad Medical College & Associated Hospitals** stressed on the need for improving the quality of rapid tests. He averred that multiplexing is an area of infectious diseases syndromes that need to be examined, especially by the manufacturers. He stated that there are numerous pathogens that can cause a similar kind of disease manifestation which can detect a specific pathogen causing that particular disease. Post detection, one can narrow down as far as the treatment is concerned and the

Multi-diagnostic will take place in faster diagnosis together with AI and machine learning

antibiotic stewardship would be helped by this particular approach and unnecessary treatment and development of antimicrobial resistance can also be avoided.

He further added that there is a need to have both internal quality control measures as well as external quality assessments. "We ought to have a robust system wherein the external quality assessment for a lab is performed as POCT and that would have one more layer of quality attached to it," shared Dr Chawla. ☺



# Digitization for optimising inventory and supply chain management

The role of technology in the supply chain offers significant advantages. Minor hiccups in the inventory life cycle can delay research results or critical diagnostic information. The session on **'How digitisation can optimise inventory and supply chain management to reduce the cost in the diagnostic industry'** explored the key role of technology for reducing costs at the **4th Elets Diagnostic Leadership Summit**.



**Dr Ravi Gaur, Principal Advisor Spice Health (Spice Jet Promoters Venture), Founder Dr. G Path Labs, Co-Chair CII Delhi Chapter Health Committee** moderated the session and expressed that during Covid, the labs were working and there was continuous pressure from the government to diminish prices that kept us all going. Though many people were locked down at home working, healthcare-guided diagnostics were working more than 24 hours a day to make sure systems are up. He added that digitization can optimize inventory and supply chain management and reduce the cost of diagnostics.

He added that new-age labs are automating the supply chain to relieve staff frustration because the maintenance of documents manually is a big challenge. He stated that supply chains have acquired greater clinical integration than in the past. There's more room for advancement and value & automation of supply chain processes is key to mitigating that frustration and improving data collection processes.

He averred that human error is one of the biggest causes of stock issues and automation technology does not make mistakes. Having the right automation can deliver the right results, save money, space, and resources.

**Mayank Madan, Partner, and Executive Director, Prognosis Laboratories** conveyed, "Automation does help you save time, money, and effort, but only if they are at a premium. Not only knowledge but accessible knowledge plays power supreme. Automation is a very luring idea as the results are



right out there. But with this luring idea, you stop realizing that you are in a diagnostic business and not automating diagnostics."

He further added that automation now is inherent and is being widely acknowledged across the globe, not just in diagnostics but in every sector. He stated that they started automating the supply chain and inventory when they realized knowledge is no longer supreme power. They moved to an excel model-based platform which started evaluating the inventories and the supply chains across the labs. They even developed in-house

procurement and receiving modules and tried their best to eliminate any kind of error.

"The areas of improvement are covered by Supply Chain 4.0 including to make the supply chain faster, accurate, efficient and granular," averred Mayank Madan. He further added that they are looking for automating the various aspects of supply chain and inventory management.



**Dr. Pankaj Shah, Chief Executive Officer, Aspira Diagnostics** said, "Procurement starts from pre-analytical, analytical and post-analytical and digitization has reduced the costs in the post analytical stage. In expansion of labs, supply chain, inventory/stock has to be maintained and procurement became a challenge. For any lab, one needs to know their workload to procure machines and reagents." He stated that digitization has assisted in avoiding the paperwork and automation helps them with auto consumption based on material.

**Dhananjaysingh Rajput, Head of Procurement, Aster Clinical Labs LLP** expressed, "As a procurer, one must look into each lab its top 20 and bottom 10 test parameters, and the relevant cost." He added that this must also consider the reagent cost. There is a huge scope of analytics because it's not just about whether



the commitments are being met every month or not but the key role analytics can bring in that. He stated automation has a huge scope in bringing down the operational cost. He further added, "More on the vendor to vendor side, integration is happening, data is helping on the platform to platform, it enables us to give a best suitable platform for workload and also it suggests us the scale of the lab, types of computer machines one should have so that automation can help to analyze wastage."



**Chetan Kohli, Chief Operating Officer, Genestrings Diagnostic Centre Pvt Ltd** commented, "We covered the entire decades of journey in a couple of months when the pandemic happened. We initiated from a paper to automation in those couple of months. A robust & strong inventory and supply chain management come into play in the molecular space. The management has to focus on having the supply

chain at the forefront."

He said when robust strong inventory management and supply chain management comes into action, it becomes challenging for medium and small-sized organizations because they do not have enough support. He further added that the challenges are the same both in molecular and pathology, it's just that the cost of growth is slightly higher.



**Abhinav Kalra, Director - Supply Chain / Procurement, SRL Diagnostics** expressed that inventory and supply management play a crucial role across the entire length of an organization. He averred that it is driving organizational strategy and there are tremendous opportunities available there. "If we look at inventory and its supply management it cuts across all the three phases of a diagnostic which are pre-analytical analytical and post-analytical," he added. He also talked about the importance of transportation and logistics is beneficial as it impacts the financial aspects of the organization, impacts the data, balance sheet which touches the cash flow and it drives the revenue cycle. He shared that the organization where he works has shifted from a relatively smaller scale to a larger scale with the onset of time and they have invested in system-wise ERP software. 📧



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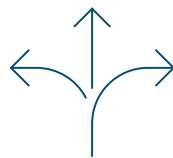


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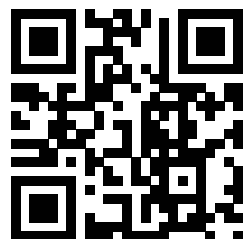


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# Future of digitization of the supply chain in the diagnostics industry

The digitization of the supply chain enables companies to address the new requirements of the customers, the challenges on the supply side as well as the remaining expectations for efficiency improvement.

Exploring the thought further, a panel discussion was held on the **'Future of digitization of the supply chain in the diagnostics industry'** at the **4th Elets Diagnostic Leadership Summit**. Edited excerpts:



**Prasad Nikam, Supply Chain-Product Manager, CreliaHealth** moderated the session and expressed that industry leaders, across the diagnostics industry, are planning significant advancements in sync with digitization and to match the expectations. So, solution providers need to up their game.

**Bhaskar Ghoshal, Chief Commercial Officer, Neuberg Diagnostics** stated, "We started our journey two decades ago. At that time everything was done manually across the diagnostic industry and there were a lot of challenges. In the last 24 years, we could overcome some of the challenges and Covid too helped in accelerating a lot of advancement. Certain challenges couldn't be addressed till now and those are infrastructure, manpower,



training, and automation".

He further added that diagnostics is the backbone of any healthcare industry. It needs a shift from analytical to pre-analytical and to post-analytical. He shared that while the Government of India is taking a lot of initiatives that are helping boost digitization, there is still a long way to go keeping the current challenges in mind.

He stated that digitalization enhances the role of laboratories by preserving the data as it is challenging to track the data at multiple locations. He added that they are doing things manually and digitally both but there is a need for robust software which can integrate and synchronize the demand and supply chain management.



**Shyamakant Giri, Chief Executive Officer, Rivaara Lab** communicated, "The only way forward in diagnostics is digitalization as the supply change needs to be faster and streamlined." He shared that some megatrends are influencing supply chain management. There is continuous growth in rural areas worldwide including India. He said the wealth is moving to the areas where we have never served before and at the same time the customer expectations are growing. He further communicated that the wealth is shifting to the areas where we have never served before and at the same time the customer expectations are growing. Diagnostic is the digitization of the supply chain that needs to become faster, granular, and much more precise.

"There are many challenges such as infrastructure, manpower, and many more. But witnessing from a diagnostic perspective, the first and foremost challenge is old data capturing. The second challenge that we see is a whole process optimization and the third challenge is of physical process," he stated.

He added that digitization is not hiring an IT company, rather we need to take a step forward in knowing where we are lacking and how we can enhance it.



**Berly C Nelluvelil, Director, Medivision Scan and Diagnostic Research Centre (P) Ltd** said to make the digitization process in the sample transportation effective it needs to be precisely managed and must be manually implemented. It is impossible to frame a digital architecture and arrive at a framework. He conveyed that multiple centers and many geographic areas sample collection is being accomplished by diverse methods but the question arises of how it can be optimized via digitization. "And this is probably the time when AI is needed in the systems so that it can suggest if there is any mass method to do the task and less human effort is required. There is resistance to adapting to any new technology

and like humans, systems can also make mistakes. So starting from the micros would be the solution the same," he added.

He further added that while managing at multiple centers, it is difficult to maintain the stock at different laboratories and digitization recreates an essential role in maintaining the data in laboratories and our systems. It improves efficiency, so digitization needs to come into place for various aspects.



**VVS Muralidhar, General Manager and Head of Commercial & Stores, Vimta Labs** shared that the diagnostics industry needs a robust system and there has to be an intent to implement it effortlessly. "Initially, there will be resistance from the users, we will have to overcome it by educating them and they will slowly adapt to the changes," he added.

He conveyed that anybody who is operating the warehouse should know about what material he is managing. Diagnostics is a different thing because there is a lot of temperature control, such as expiry dates, that have to be taken care of. The user must be aware of who is managing the instruments and the kits which are present with them,

their expiry so that they use those kits on a priority basis. He added that it is important to train warehouse people to manage the material as per its storage essentials. He further communicated that we need software that can track the expiry and other details of the instruments or medicines and notify the manager two months prior to its expiry.



**Anurag Sodani, Chief Commercial Officer, Sampura Sodani Diagnostic Clinic**, voiced that there is an acute need to make processes easy in diagnostics. For a healthcare technician or a doctor, the priority is to help the patient not to manage the inventory. He said that there are no systems that can give insights from the data directly. "We can't ask our technicians or doctors to record the data manually as their priority is to serve the patients not to manage the inventory," he averred.

He added that we shall make certain protocol systems that spread across multiple organizations. He stated that digitization must be adopted by every individual as it is much needed in today's management system. Initially, it will be difficult but eventually, they will realize its benefits. 📧

# Infectious Disease Pandemic - A growing threat to the mankind

History has revealed that nothing has killed more human beings than infectious disease and Covid-19 shows the vulnerability of the human population. Covid-19 has reminded us that infectious diseases haven't vanished and the new ones keep getting added to the list year after year. A session on '**Infectious Disease Pandemic - A growing threat to mankind**' was conducted at the **4th Elets virtual Diagnostic Leadership Summit** that revolved around understanding the present and future perspectives to tide this colossal wave. Edited Excerpts:



Moderating the session, **Dr Aarti Gupta, Zonal Head, Lab Operations, SRL Limited, Fortis Memorial Research Institute** stated, "Owing to the interplay of human and environmental factors, infectious diseases outspread faster than ever before. A lot of deliberations are mandated for identification and treatment of these emerging pathogens". She added, "The spectrum of human pathogens and infectious diseases are continuously spreading because of evolution and environmental factors. There's a lot of international travel happening. Initially, things were at the local level, then they became continental intercontinental and now it is globalization that is causing infectious diseases to spread at a rapid pace."



**Dr Abhay Chowdhary, Prof & Head of Microbiology, DY PATIL University, School of Medicine, Hospital & Research Center, Navi Mumbai** said, "It is important to know, understand the drivers of infectious disease and also know how they are changing over a while & causing the pandemics. There is already a list of infectious diseases that are likely to come up & change with geographic locations."

He expressed that Covid made us realize that some uncertainties are beyond everybody's control but we can be prepared. "Preparing is the key. It makes us comprehend the emerging and re-emerging infectious diseases for over three to four decades now and it is found that almost 70 to 75 percent of these

infectious diseases are of zoonotic origin and have a viral etiology. So there is a strong relationship with these ideological factors, particularly the urbanization, deforestation, climate change, unhealthy lifestyles substance, abuse, and so many other things which are coming up in the way," stated Dr Abhay Chowdhary.



**Dr Manisha Singh, HOD - Microbiology & Serology, Vijaya Diagnostic Centre** articulated, "We are seeing emerging and re-emerging of diseases. Human factors like urbanization, and global travel are playing a huge role in the spread of infectious diseases. Unplanned migrations in war or disasters, reforestation, food habits, multi-drug resistance are also



some of the key factors for the rise of infectious diseases."

She further added, Covid has been a good learning subject for all of us and we have also seen some new variants and this is either because of mutation re-assortment or recombination in the viruses. She said information communication and education are three crucial aspects. There is a need to spread awareness and added that social media can be used in spreading the correct information about infectious diseases. "Prevention is better than cure. We should have immunization for all the available infections. Information, education, and communication are important for mitigating the pandemic." stated Dr Manisha Singh.



**Dr Neha Rathor, Consultant Microbiologist, Senior Quality Manager Chairman HICC, QRG Medicare** conveyed, "Preparing for any pandemic is a huge challenge. The most important preparation is to strengthen the core infrastructure & health infrastructure. Also, there is a need to work with a lot of agility to mitigate a disaster by communicating well. We can also provide rapid vaccinations and also focus on routine vaccinations. The capacity building for diagnosis can also help to contain the epidemic or the pandemic."

She averred that when a pandemic starts, we are required to work with a lot of agility. "So we must extinguish the sparks and prevent it from further spreading. And that requires a lot of public messaging and coordinated efforts from all the agencies. Quick communication will help in reducing infectious diseases," she added. "Arogya Setu app is a very good example of usage of technology for providing solutions and predictions. Usage of wearable devices also rose after the pandemic and helped in predicting & preventing pandemics," commented Dr Neha Rathor.



**Dr Disha Bhatia, National Head, Microbiology and Serology, CORE Diagnostics** averred, "All of us have launched technology-intensive solutions owing to covid. Right from the testing platform to reporting, we have been rapidly moving towards automation. However, AI-powered solutions that look at the entire supply chain scenario holistically are needed for better access to a broader population. She expressed that there is a need to adopt AI-powered solutions that take a holistic look at the entire supply chain situation. "The time lag between collection of data and dissemination of information that can guide the public health measures needs to be improved." sounded Dr Disha Bhatia.

urbanization, and global travel are playing a huge role in the spread of infectious diseases



**Sukrut Jobanputra, Director, Advanced Genomics Institute and Laboratory Medicine, (LABASSURE)** said, "Using genomic technology, we can study pathogens at a molecular level that forms the basis of research. However, genomics needs to be used in integration with other technologies. We will see an improvement in the genomic capability infrastructure in the coming times." He further expressed that predicting the future is always very risky. There has to be a continuous strengthening of our technical capabilities. After the pandemic is over, healthcare doesn't get the attention it deserves. "We also need to have improved dialogue and interaction between different stakeholders. There also has to be a more free & fair exchange of information between various stakeholders in formal or informal forums. Also, the pricing of tests requires much more dialogue and discussions," shared Sukrut Jobanputra. @