

Volume III, 2020

# mindfocus

Healthcare technology for a better tomorrow

**Corporate Strategy:**

COVID-19 diaries:  
Story of grit and glory

**Lab transformation:**

Mindray transforms  
Neuberg Supratech's  
high volume lab  
in Ahmedabad

**Interview:**

Dr Barnali Das  
Consultant in Laboratory division  
of Kokilaben Dhirubhai  
Ambani Hospital &  
Medical Research Institute

**e-Learning:**

Mindray develops an academic  
ecosystem

## Collaboration that drives transformation

**Dr. Prashanth Rajagopalan**  
Director, MGM Healthcare

talks about MGM's journey during the COVID -19  
crisis and how Mindray India helped them succeed

**mindray**  
healthcare within reach



# BeneFusion **n** Series

Infusion System

*Smart touch, Safe medication*



InfusionView™

Central Data Management

Color-coding System

SmartAIR™

Full-touch Experience



# C O N T E N T



- 06 **Cover Story**  
A collaboration that exuberates excellence during a crisis
- 10 **COVID-19 diaries**  
An inspiring story of grit and glory
- 14 **A bond of leadership and trust**  
Dr Minnie Bodhanwala
- 16 **Mindray transforms Neuberg Supratech's high volume lab in Ahmedabad**  
Dr Sandip Shah
- 20 **Hitech Medical College and Hospital**  
Pioneering Medical Education in East India
- 22 **BS-430 : The New Game changer in Clinical Chemistry**  
Rudra Prasad Chakraborty
- 24 **TE7**  
More confidence with Mindray 's POC Ultrasound System
- 26 **Sarkar Diagnostics**  
Truly making a difference
- 30 **COVID-19 warriors : Engineers play a crucial role during pandemic**  
Santosh Verma
- 32 **Harmonisation and Standardisation of laboratory testing is the need of the hour**  
Interview : Dr Barnali Das
- 36 **Commitment to build an academic ecosystem**
- 38 **BeneFusion n Series**  
Set to transform infusion therapy
- 40 **Mindray India operation team commit to the nation during COVID-19 times**  
Asis Bandopadhyay



“  
*New developments at Mindray, indicate winds of positive change. Mindray India has been assigned as the first region with the leading investment and resource allocations.*  
”





## Building resilience is the key to success

Dear Friends,

The COVID-19 crisis has brought innumerable setbacks to our day-to-day activities. Many of our functions came to a standstill. Many healthcare organisations had to completely change their business models to survive in this crisis situation. Manufacturers of medical equipment and supplies had to struggle to deliver products and services to customers as supply chain and logistics were completely disrupted. Amidst this chaos, many of us had to try to manage a team that had suddenly gone virtual. While this came with a lot of stress, it also gave a great opportunity to take a step back and see how our organisations can come out of this crisis stronger, more resilient.

Science and collaboration are both necessary to combat COVID-19 and we at Mindray truly stood by it. Mindray India, as a medical device provider was prepared to manage complex projects dealing with diverse ecosystems remotely. Drawing from the expertise and methodologies applied over years of association with healthcare providers from across the globe, we were able to successfully tide over the storm.

Our main focus during the pandemic was to work round-the-clock to support healthcare professionals, keeping patients at the heart of all things. I am truly moved by the dedication of my team and more importantly, the dedication of our customers. I appreciate the efforts taken by healthcare providers to rebuild the strength of the nation.

I would like to mention some of the efforts taken by our sales and channel management team to guarantee that devices were delivered to our customers on time. They have been working tirelessly in these difficult times. Our engineers from the service team perfectly completed their tasks of device installations and adjusted despite the various roadblocks and challenges that came along.

What is more moving is Mindray India's dedication towards "learning and knowledge exchange". To provide valuable knowledge to end-users, our marketing and communications team created an academic knowledge exchange platform through a series of online webinars, conferences and training programmes.

We also realise the rapidly changing nature of the situation and are fully ready to accommodate your needs if and when they evolve. It's genuinely amazing to see how healthcare providers are adapting and incredibly inspiring to see the frontlines heed the call.

New developments at Mindray, indicate winds of positive change. Mindray India has been assigned as the first-in their region with the leading investment and resource allocations. In the following years, the company will increase investment in areas of deep market scanning and customer segmentation, the establishment of a matrix organisation, build region regional offices, strengthen channel management, set up key customer accounts, strengthen the supply chain and establish various functional platforms. We see new opportunities in the Indian market and it is time we seize these opportunities with a concerted effort.

In future, Mindray will focus on customer breakthroughs, innovations and new frontiers that will revolutionise healthcare across the globe.



**Dean Zhang**  
Managing Director  
Mindray Medical India Pvt. Ltd



A collaboration that  
exuberates excellence  
during a crisis

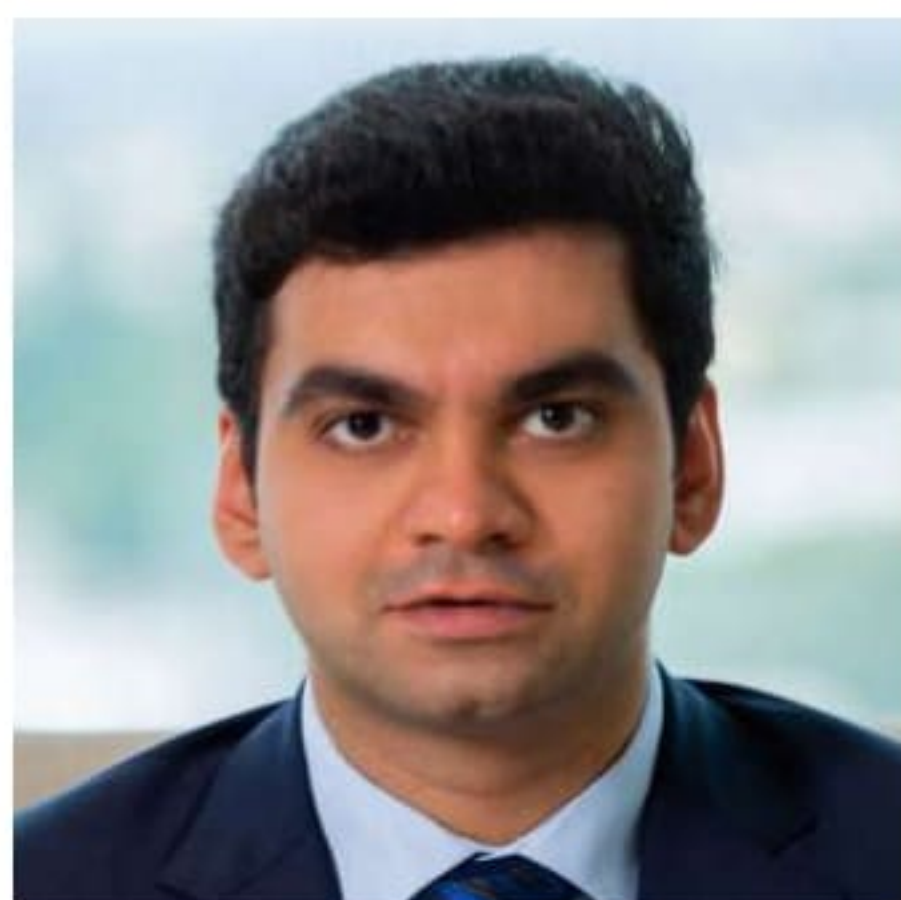




It's noteworthy to mention that MGM Healthcare boasts of India's largest Heart & Lung transplant programme and some of the major milestones over the last year include South Asia's first biventricular artificial heart implant — Berlin Heart — and is the third centre in the world to have performed a bilateral lung transplant on an individual with COVID-induced damaged lungs. The hospital is also the first USGBC LEED Platinum-certified hospital in India with the highest green rating in Asia.

MGM Healthcare is one of the most technologically advanced healthcare institutions set up in the recent past. The hospital boasts several first-of-its-kind medical equipment in India as well as in Asia — including a wide bore 3 Tesla MRI with in-bore experience and a biplane cath lab for neuro-vascular and cardiac interventions. MGM also runs one of the largest and busiest ECMO centres in the country and today, serves as a national referral centre for managing patients on ECMO.

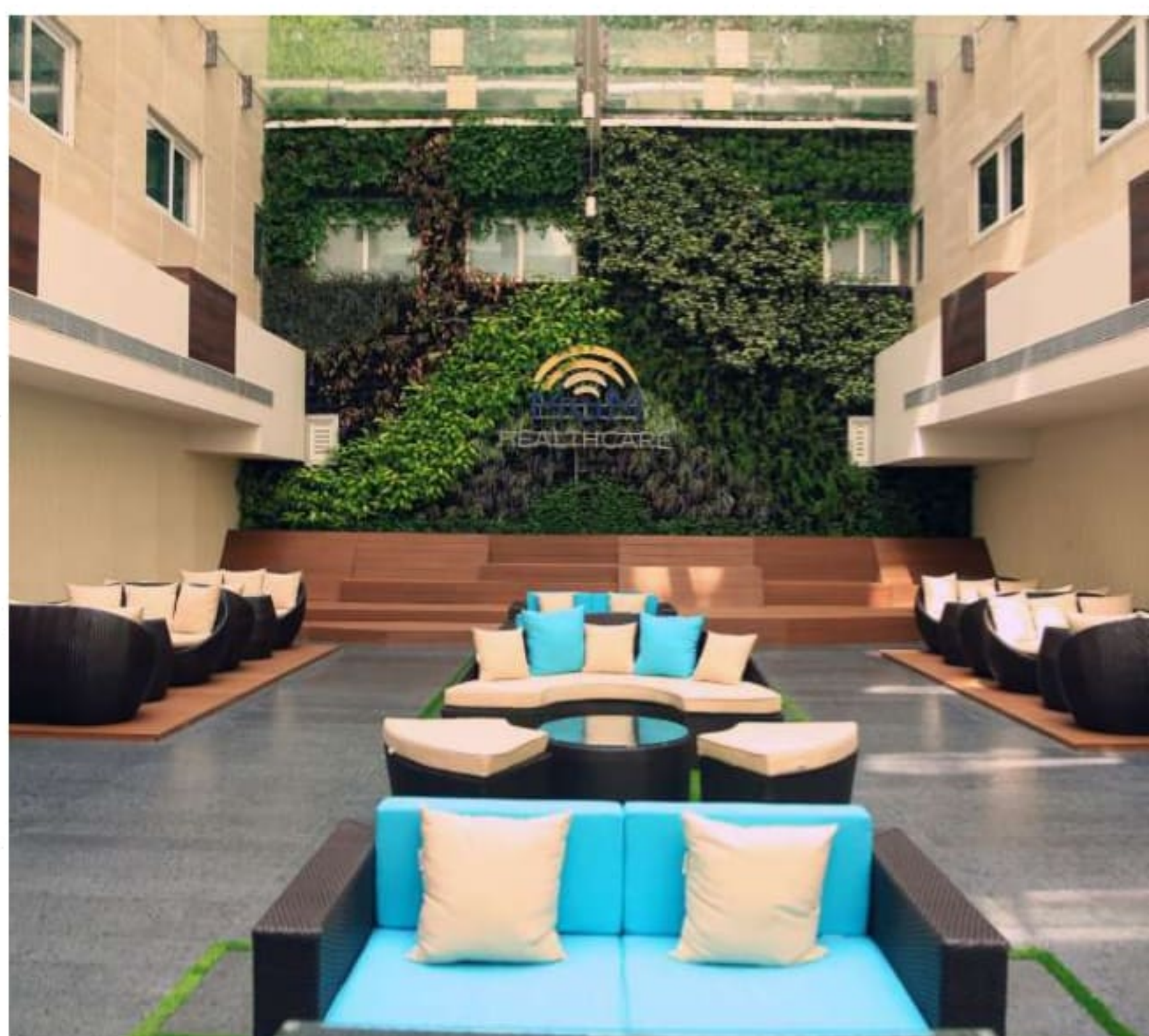
Dr Prashanth Rajagopalan is the Founding Director of MGM Healthcare. A doctor by education, Prashanth went on to pursue a Master's in Public Health Leadership and Management at Johns Hopkins University, USA, besides also being the youngest Harvard Macy fellow. Prashanth's interests are in the intersection of healthcare, education and technology in healthcare.



**Dr Prashanth Rajagopalan**  
Director - MGM Healthcare

## About MGM Healthcare

MGM Healthcare is a state-of-the-art 400-bed quaternary care hospital in the heart of Chennai, India. Inaugurated by the Hon. Vice-President of India in July 2019, in a considerably short span of time, MGM Healthcare has established itself as a leader and a national referral centre in some of the flagship clinical programmes of the hospital. The hospital has over 100 critical care beds, 12 operating theatres and has over 250 doctors serving in over 30 departments and 12 Centres of Excellence. Neurosciences, Orthopaedics, Multi-organ Transplantation (Heart, Lung, Liver, Kidney), Cardiac Sciences, Gastro Sciences, Renal Sciences, Obstetrics and Gynecology, Paediatrics and Neonatology, Emergency Medicine, Anaesthesiology and ICU, Radiology and Oncology are the 12 Centres of Excellence.





**Q. CAN YOU ELABORATE ON THE BOTTLENECKS, CHALLENGES THAT YOUR ORGANISATION FACED DURING THE PANDEMIC AND HOW HAVE YOU OVERCOME IT?**

When faced with a pandemic, the most pertinent step is to prepare your team to tackle the pandemic. And it all starts with instilling confidence and standing by their side. This is then followed by rigorous manpower planning, resource planning and planning of the workflows as patient safety as well as that of our staff comes first. It is important to come up with solid plans to manage our regular in-city patients as well as figure out ways to overcome travel restrictions imposed on our international and domestic patients. Logistic management is also primary as vendor management and managing drugs and consumables supplies is key amidst the lockdown.

The key to running a hospital with the highest level of safety in place is to monitor every person who walks in and out of the premises. We set up a fever clinic and performed rigorous triaging of patients; we take COVID tests before elective and non-emergency procedures and take the best safety measures during emergencies. We have divided ourselves into three teams — Clinical, Nursing, Administration — and follow a strict rota system. All our COVID-treating doctors and nurses have been provided with a separate accommodation to protect their families and the community. We have set-up a rigorous workflow management to prevent cross-contamination. Mostly importantly, and this is something that most people don't consider, we provide our staff with health insurance and free medical treatment.

**Q. WHAT WERE THE INFRASTRUCTURE, TECHNOLOGICAL CHANGES THAT YOU IMPLEMENTED AT YOUR HOSPITAL TO FIGHT THE WAR AGAINST COVID?**

MGM Healthcare is a relatively new state-of-the-art 400-bed hospital with over 100 critical care beds. Most of our in-patient rooms are private rooms — you see, isolation is key! Most of our private patients rooms are equipped to be stepped up into ICU-level rooms, as needed. You see, more than 'changes', we mainly harnessed the full potential of some of our ahead-of-its-times technology. Our voice-enabled nurse assistant and Alexa-based concierge service

provide round-the-clock patient attention. Our IoT-based digital ICU solution allows for workflow automation and 24x7 remote monitoring of patients with data driven predictive intelligence alerts. We have the country's largest and busiest ECMO unit with over 12 ECMOs running at any point of time. We also have over 30 ventilators deployed at the peak of the pandemic, some that were sourced in record time. We installed a robot on our patient floors that helped us automate the UV sterilisation process.

**Q. WHAT ROLE HAS TECHNOLOGY AND SUPPORT OF PARTNERS SUCH AS MINDRAY PLAYED IN ORDER TO HELP YOU PROVIDE STEADFAST AND HIGH-QUALITY CARE TO YOUR PATIENTS DURING THIS CRISIS?**

High-quality care is something we provide to all our patients, day in and day out. Patient safety and exceptional outcomes combined with stellar patient experience are a part of our ethos. While we have made considerable

achievements in the last two years of our existence, some of our major achievements that have brought us national and international

recognition have been during the pandemic. We became the first hospital in South Asia to perform a biventricular artificial heart implant called the Berlin heart on a 3 year old child, an achievement that garnered us international laurels. But our most defining moment was when we became only the third centre in the world and first in Asia (outside of China) to have performed a bilateral lung transplant on a person who had suffered severe lung damage post-COVID.

The four pillars of any hospital are Patients, Public, Physicians and Partners. Partners including vendors and suppliers, like Mindray, are usually overlooked





in their contributions. But truth be told, they have worked hand-in-hand with us to fight against this pandemic. They have kept the system running and have come to the rescue of public and private institutions, helping them face this pandemic with full strength. Our biggest supporter, Mindray, provided quality ventilators and monitors and other life support equipment at a reasonable price and also ensured on time delivery of the products. I was impressed by their excellent local support team, which is available 24x7 for any service call. It is companies like this one that will stand out.

**Q. WHAT ARE THE SAFETY MEASURES ADOPTED TO AVOID CROSS INFECTIONS AND CONTAMINATION WITHIN THE HOSPITAL?**

As mentioned previously, our first line of defense was the fever clinic we set up to perform rigorous screening before allowing people to enter the hospital, including staff. Thermal cameras have been fitted



to detect change in temperature of our staff, doctors and patients. We also automated our UV sterilisation process with a robot. We use separate clinical, nursing,

admin and support staff for COVID and non-COVID floors and separate workflows have been set for them so that there are no chances of cross-contamination. There are separate entry and exit points and a whole floor with isolated AHUs for COVID patients.

Of course, hand sanitisers are placed at every major point in the hospital and masks are compulsory for everyone. PPEs and N95 masks are provided for all staff and doctors working in high risk areas. We encourage our staff and doctors to do the responsible thing and self-declare fever and other symptoms.

We run the country's largest Heart & Lung Transplant

and ECMO programme. We are the only hospital in India to have performed all major solid organ transplants within a year of inauguration. During the lockdown alone we have done over ten successful heart, lung and liver transplants and our outcomes have been on par with the best centres in the world. All this has been possible only because of our greater emphasis on infection control within the hospital from the get-go.

**Q. WHAT KIND OF TECHNOLOGY WAS INTRODUCED AT YOUR HOSPITAL TO COMBAT THE PANDEMIC CRISIS?**

We invested well in thermal sensors and thermal cameras in high-risk areas and other key areas to monitor our staff, doctors and patients. To keep our patients safe and allow them continued access to their doctors, we set up virtual consultations. In a short time, we doubled the number of ventilators and high flow oxygen devices to cater to more patients. We automated the UV sterilisation process, aside from the regular cleaning done by our house-keeping staff. The rest was only about harnessing all the top-class technology we already had in place as part of our endeavour to provide exceptional healthcare to all. We endeavour to promote a positive patient experience while also achieving outstanding outcomes.

**Q. HOW DO YOU THINK COLLABORATIONS & GOOD RELATIONSHIPS WITH PARTNERS SUCH AS MINDRAY CAN HELP IN BRINGING IN THE DESIRED INNOVATIONS AND HOW WILL IT RESULT IN BETTER MEDICAL OUTCOMES?**

In any industry, people depend on partners and suppliers to provide the best for a competitive price and within a tight timeline. Suppliers like Mindray always surprise us with their portfolio. They have quite an enriching portfolio and I believe companies like these can bring a lot of great value addition to the table with their technology. I look forward to more partnerships that offer affordable prices on high-end technology. At MGM Healthcare, we firmly stand by exceptional and affordable healthcare to the community with empathy, expertise and excellence.



# COVID-19 diaries: An inspiring story of grit and glory



**A** crisis is the best time to identify whether or not a business organisation is built on strong values such as integrity, accountability, quality, innovation-driven, adaptability and more. It reveals what an organisation will compromise if they have to and what they will protect at all costs.

Well, the coronavirus pandemic has revealed the character of many business organisations across the world in their response to this health and economic crisis.





Mindray India as a leading medical device manufacturer and solutions provider has evolved tremendously during this crisis. The company has been an early actor in a time of extraordinary uncertainty and constant change. Through a concentrated and coordinated effort, the team at Mindray has been spearheading solutions globally and have been supporting healthcare providers in their combat against COVID-19.

Mindray India has demonstrated its commitment to making healthcare accessible for everyone and worked towards a safer and healthier nation.

As a responsible corporate entity, Mindray India has also donated to the Prime Minister's national relief fund to help fight the pandemic.

---

The company's unfailing spirit and resilience have facilitated the organisation to build strong resources and forge strategic collaborations which contribute to their long-term growth objective and future success.

---

Here is what we can learn from Mindray's amazing story during the COVID-19 litmus test in India.

### Responding rightly to the pandemic

On March 11, the World Health Organization declared COVID-19 a global pandemic, prompting the shutdown of much of civilised life. This fast-progressing pandemic guaranteed several challenges for businesses worldwide. Businesses had to fire up their crisis management and contingency plans. However, the crisis had its degree of severity, velocity and uncertainty which transcended many of the scenarios that were previously envisaged. For some sectors, the challenges were literally about survival, for others they meant maintaining operational continuity, and for still others, it involves responding to sudden huge increases in demand.

For medical device manufacturers, it was extremely difficult to gauge how the disruption would unfold and how it will hit a company's medical device segment. But at Mindray it was paramount to ride out the disruption and ensure that the COVID-19 warriors are well supported.





---

## Mindray India, under all circumstances, continues to provide better healthcare to Indian people, striving to be a trusted partner for healthier Bharat

---

Mindray India, under all circumstances, continues to provide better healthcare to Indian people, striving to be a trusted partner for healthier Bharat. The company continues to help their customers in all possible ways in these unprecedented times and at the same time ensure the safety of all their employees at work. During the pandemic, their service team was at the frontline for installations and training of the life-saving devices, helping medical heroes in the fight against COVID-19, informs the management team in India.

Their contributions to the medical fraternity have been huge in the country. As the pandemic progressed, hospitals were changing their purchasing strategies to meet demand, and Mindray India has been adapting to change deftly. Mindray, as the leading medical device manufacturer also faced many challenges. While these challenges created a lot of stress amongst the workforce, it also gave them a great opportunity to take a step back and see how the organisation could come out of this crisis stronger, more resilient. The company believes in taking a holistic and customer-centric approach to resolve any issue and they did so, in this circumstance too. They also believe in the significance of healthy collaborations within the organisation to build a united front to overcome problems. With this effective approach, they ensured that healthcare providers got all the support they needed to tackle this crisis. This immensely motivated the





team at Mindray India to move ahead nimbly and with confidence.

### Outcomes that matter

Mindray India has provided several healthcare facilities with ICU grade ventilators, which were scarce in quantity and the demand was huge.

As a trusted partner for healthier Bharat, Mindray India has gone beyond boundaries and supplied ventilators to various prestigious organisations like HLL Lifecare Limited, Tata Trusts, BMSICL, AIIMS Rishikesh and various other private as well as government hospitals which are treating COVID-19 patients.

Interestingly, Mindray India has continued to be the highest quantity supplier of ventilators among imported ICU ventilator players, which is a strong reflection of their commitment and humble efforts to provide high-quality medical equipment in a timely manner.

Narrates Suryanarayanan, National Sales Manager - Strategic Key Accounts & Business Head – North, Mindray India **“Mindray India has swiftly adjusted to the changing market conditions and formalised an effective supply mandate to meet our customers’ needs. A plan can only be as strong as the team behind it, and Mindray India has demonstrated stability in these unstable times. The sales, marketing, service, engineering, customer care, and logistics teams have all been part of this journey. Moreover, our channel partners and distributors have also shown tremendous strength, working in unison to serve customers in this time of need.”**

**“To guarantee that devices are delivered to our customers on time, our sales and channel management team have been working tirelessly. Engineers from the service team perfectly completed their task of device installation and adjustment despite difficulties. Till now, there are more than thousands of life-saving devices installed in key hospitals across India during COVID-19, helping front-line medical heroes to combat the virus”,** he further adds

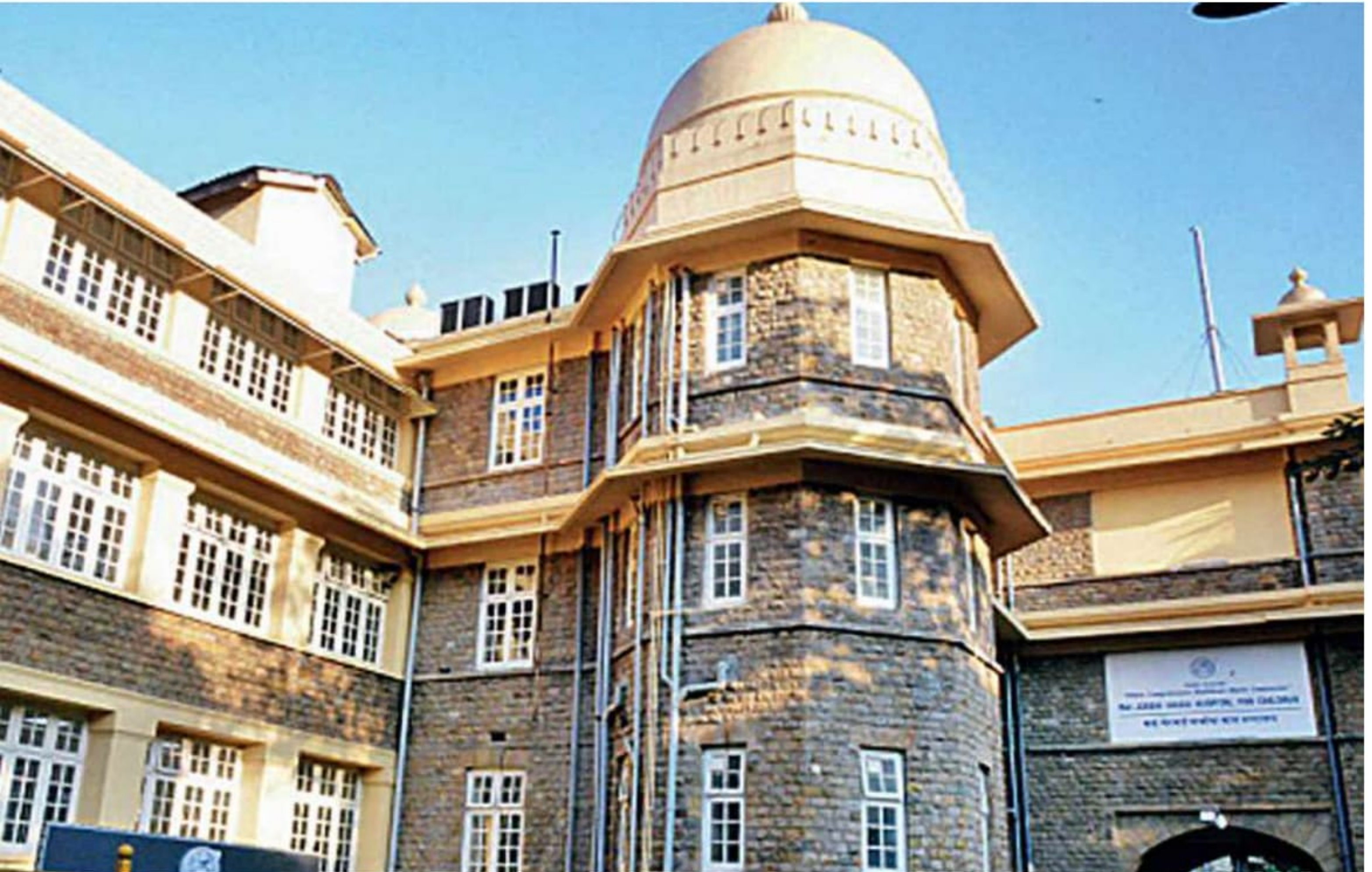
### The future course of action

Now is the time for leadership excellence. This unique situation necessitates critical thinking and an effective strategy for problem-solving. A resurgence of the disease is entirely possible, so we must learn to think accordingly. In a post-COVID world, we will need new ways of thinking and Mindray is all set to bring in new innovations keeping the patients and healthcare providers at the heart of all things. The coronavirus is not solely responsible for the current global economic crisis. It points to a lack of global economic resilience, revealing fundamental systemic problems. Mindray India, under all circumstances, will continue to provide better healthcare to people in India, striving to be a trusted partner for healthier Bharat.





# A bond of leadership and trust



**Dr Minnie Bodhanwala**  
CEO  
Bai Jerbai Wadia Hospital for Children &  
Nowrosjee Wadia Maternity Hospital

Dr Minnie Bodhanwala, a well-known healthcare expert has contributed 30+ years towards India's Health and Education industry and is the CEO of two charitable semi-government Hospitals in Mumbai i.e. Bai Jerbai Wadia Hospital for Children (525 Beds) estd., 1926 and Nowrosjee Wadia Maternity Hospital (305 Beds) estd., 1929. She is also the advisor to the Chairman of Wadia Group for CSR activities, advisor to Impact India foundation by UNDP, UNICEF, and WHO and advisor to the Modern Education society which operates 7 colleges in Mumbai and Pune.



Apart from this, Dr Bodhanwala is also an advisor to the Britannia Nutrition Foundation and advisor to Sir Ness Wadia Foundation.

She is highly knowledgeable and is revered among peers for adopting and maintaining high-quality standards. Her core areas of expertise are in service delivery, identifying control enhancement modules; escalating significant issues identified and proposing resolutions. She is experienced in successfully managing diverse groups of people as well as handling union committees. A visionary and ethical enterprise originator, she nurtures and executes new ideas, engages in multiple projects, recreates branding for organisations, business verticals and is confident in taking the organisation to the next level.

She has been instrumental in the upgradation of Bai Jerbai Wadia Hospital for Children. "Our Children's hospital is the first dedicated Paediatric hospital established in the country and the largest as well. Today, the hospital provides more than 35 super speciality services under one roof in our paediatric center itself. In the process of upgradation, the most critical challenge was to cope with the increased footfall in the NICU department which has 125 beds and to maintain the same efficiency of work, and hence we decided to automate some of our critical workflows which helped us to improve our efficiencies with great results", Dr Bodhanwala says.

Under the leadership of Dr Bodhanwala, the hospital has evolved as a centre of excellence backed by technology that has helped them to serve the nation even during the unprecedented times of COVID-19.

---

## Mindray India has been Wadia Hospital's trusted partner helping them to provide best quality care to their patients since many years now

---

She gives all the credit to her qualified clinical team and professional technology providers such as Mindray India, who have enabled them to provide quality patient care. "Mindray has provided some of the latest technologies such as Ventilators, Patient Monitors, Infusion pumps, Anaesthesia Workstation, OT Table and lights. These life saving devices by Mindray are being used in our NICU, PICU, OT, Wards and Casualty Departments for best possible patient care. They have also installed their high-end Hematology and Biochemistry workstations in our laboratory to automate our daily workload management and ensured reduction in our turnaround time. These state-of-the-art instrumentation and timely upgradations by company has ensured we continuously improve our medical services to patients. Such advancements in hospital has led our medical team to improve their clinical expertise and ensure patient satisfaction. Mindray has been our trusted partner and their technologies have enabled us to evolve our services and provide best quality care to our patients", Dr Bodhanwala sums up.







# Mindray India

transforms

## Neuberg Supratech's

high volume lab in Ahmedabad



**Dr Sandip Shah**

Founder and Chief Operating Officer  
Supratech Micropath Laboratory and Research  
Institute, Ahmedabad






---

## Neuberg Supratech becomes a perfect example of how technology helps diagnostics businesses to thrive even in critical conditions

---

**H**ow does one measure the success of a diagnostic lab?

By the number of test samples processed at the lab? Or by quality indicators (preanalytical, analytical, and post-analytical), accreditation? Reduced operation cost? Customer satisfaction backed up good turn-around time or any other parameter?

Well, most of us will agree that it's all of these parameters and more. But have we ever realised the role of technology that helps us achieve such success in our diagnostics business?

Neuberg Supratech becomes a perfect example of how technology helps diagnostics businesses to thrive even in critical conditions. Neuberg Supratech's strategy has been simple yet very effective.

They have installed Mindray's CAL 6000 that defines a new generation of the cellular analysis line. The automated system which combines Hematology Testing and Slide Smear Preparation, Staining and Drying has led them to minimise manual interventions, achieve faster and reliable reporting, improve productivity and ensure happy customers.

### Thriving on technology

Neuberg Diagnostics chain which has labs across India, UAE & South Africa has always thrived on the latest technology and techniques within the reach of developing countries. Backed by high-end technological support, Neuberg Supratech has evolved itself as one of the best and quality efficient laboratories in India. Its reference laboratory based in Ahmedabad is a unit of Neuberg Diagnostics.

Neuberg Supratech's huge setup has a capability to perform over 5000 varieties of pathological investigations and has promoted prevention and early diagnosis, focused wellness programmes and structured disease management programme for rare diseases using the most advanced technologies assisted by Data science and AI tools. However, a lab with such massive workload had to face its own set of challenges such as overburdened staff, lower efficiency, a high failure rate of old system etc. Having studied the laboratory's challenges, Mindray came up with a haematology automation solution.

"Being a technocrat we were looking for solutions in automation for Hematology, Biochemistry, Immunology etc. The dreams were big but like every laboratory, we also faced challenges like shorter TAT, reliable results, reduce manual intervention and providing better clinical values for patient benefit. During these difficult times of fatal vector-borne diseases and unavoidable clinical conditions that are either genetically acquired or may be due to some clinical conditions, it is mandatory for a setup like ours to help patients with a correct clinical co-relation, additional clinical information like appropriate flagging, clinically significant newer reportable parameters and research parameters for a perfect and reliable diagnosis. We recently upgraded to the all-new Haematology Automation System from Mindray i.e. CAL 6000 which was the perfect solution to all the challenges we faced", informs Dr Shah.



## The automation advantage

To automate its workflow and improve productivity as well as overall efficiency, Mindray proposed replacing the old system with the CAL 6000 Hematology system. Now, CAL 6000 offers a throughput of up to 220 tests per hour for CBC+Diff and 120 slides per hour which indeed is a good outcome. The patented “two-way loading” technology of the track enables the smart distribution of workload and enhanced efficiency and productivity. The state-of-the-art track automation systems mentioned earlier combines Slide Smear Preparation, Staining and Drying which has led to minimal manual intervention and faster, reliable reporting. It also has a feature of Multirule and Reflex testing which facilitates the user to decide whether further clinically relevant tests are necessary or not for a better and perfect clinical diagnosis of the patient.

“Automation is the need of the hour and especially when you work with a huge number of patient samples, turn-around-time is the major factor. Diagnostics today is a service industry and clinicians expect for a quick TAT. If I speak of today’s scenario Dengue is the major issue wherein Platelet transfusion becomes a major constraint. CAL 6000 has helped us not only with the TAT but also a reliable Platelet count wherein unnecessary transfusions also were avoided. And this provides better patient care.

Overall the NLR parameter has also proved to be a better prognosis marker in case of COVID-19 testing. Also, the newer parameters like IG, Ret-He, etc. have helped us in accurate diagnosis and prognosis of various diseases”, says Dr Bhavani Shah.

## Reliable system enhances efficiency

Higher stability and reliability of the CAL 6000 system have also brought significant benefits for Neuberg Supratech in terms of enhanced efficiency and faster TAT. **“One of the important improvements in our haematology practice has been brought about by this track system. The sample results are triggered by a criterion wherein we enter the sample rack and it automatically steps back for a ‘rerun’ or ‘reflex’ check. For example, if we have set criteria for reticulocyte done for every patient having haemoglobin less than 6, so we need to run the same sample again. The instruments perform a rerun as per the rules we have assigned. The re-exam criteria on CAL 6000 can be defined by many conditions, such as time, patient’s age, gender, department, etc. This helps minimise the number of blood smears we prepare in our laboratory. We have of late starting reporting Neutrophil-to-lymphocyte ratio (NLR) parameter reported by Mindray CAL 6000 which is used as a marker of subclinical inflammation. According, to clinical studies, NLR can be used as a prognostic factor of severe illness in COVID-19 patients”,** Dr Sandip Shah states.







# CAL 6000



"Smarter workstation,  
simpler work flow"

[www.mindrayindia.com](http://www.mindrayindia.com)

Mindray India Toll Free No : 0008-00-85-22-009

Email : [callcenter@mindray.com](mailto:callcenter@mindray.com)

**mindray**  
healthcare within reach



# Hitech Medical College & Hospital

## Pioneering Medical Education in East India



---

The first private medical college of Eastern India and Odisha, HMCHR has been truly a medical college par excellence, drawing faculty and students from all over the country

---

**A** teaching institute has a much bigger responsibility when it comes to creating the right environment and infrastructure for learning. For years together, Hi-Tech Medical College & Hospital, Rourkela has been synonymous with high-quality medical care and education in the state of Odisha. A reputation they built on the basis of their sheer dedication to caregiving and medical education. It is the first private medical college of Eastern India and Odisha. Since its inception, it has been truly a medical college par excellence, drawing faculty and students from all over the country.

### Excellent infrastructure and equipment

The institute was established with the pioneering efforts of illustrious doctors of national repute. According to the hospital team, the footprints of their mentors can still be found in the lecture theatres, laboratories, library and corridors of the college. The hospital and college complex has been raised on an area of 20 acres under Vigyan Bharati Charitable Trust. It is provided with the state-of-the-art infrastructure in terms of its block of buildings, which includes cosy, comfortable and well-furnished departments, laboratories, classrooms for students, separate quarters for staff and nurses, besides equipment of



latest technological quality. Hi-Tech Medical College, Bhubaneswar (HMCH, BBSR) is a multi-disciplinary institute which offers a plethora of services for patient diagnosis and care and currently, the best medical education is offered in the capital of Odisha, Bhubaneswar. HMCH, BBSR is synonymous with high standard clinical care, cutting edge research and quality training, all offered at one place.

The institute has 500 bedded tertiary teaching hospital and 100 MBBS annual seat intake, recognised by the Medical Council of India. The college also offers Post Graduate courses in various

disciplines like paediatrics, obstetrics & gynaecology, orthopaedics, ENT, ophthalmology, community medicine and many more.

All the teaching departments are equipped with state-of-the-art modern laboratories, instruments and teaching aids along with air-conditioned lecture theatres with audio-visual facilities.

Free medical services are given to the poor and needy patients. Separate rural and urban health training centres have been established so as to impart field-practice training to medical students and helping the needy people coming from remote areas.

### Unique teaching mechanisms

The teaching methods at HMCHR are conventional and radical at the same time. Classroom teaching, seminars, hands-on experience, museum visits, workshops, guest lectures; all form an essential part of the learning experience at HMCHR. Tastefully equipped library along with Internet facility is the source for additional information on varied subjects. While there is a dearth of qualified and trained nurses all over the globe, HMCHR have them in bountiful. It has its own school of nursing, providing residential facilities for the students pursuing studies in various disciplines.

### Technological support

At HMCHR they believe that the excellent service that they provide is backed up the strong support they have received from their technology and equipment partners such as, Mindray India.



**Dr Sarat Kumar Behera, ICU In Charge and Professor, Hi-Tech Medical College & Hospital** says that their partner's support has been crucial especially in times of the COVID-19 pandemic. He is very happy with the performance of the ventilators and patient monitors provided by Mindray India. Speaking specifically of Mindray's Benevision T8 series, Dr Behera goes on to say that the quality and patient reporting accuracy that they received with the help of their latest high-end instrumentation is beyond compare.



**M. Ramarao Chief Bio Medical Engineer Hi Tech Medical College** informs that Mindray's excellent service support and quality of instruments are unique. SpO2 algorithm provides accurate measurement even when the patient is mobile in Patient Monitors. Ventilators are having all required basic to advance modes; Weaning indicators; Lung recruitment tools; Intuitive and ease-of-use user interface for the better patient outcome. Hospital staff is highly benefited with the sturdy product quality and integration of various devices for better and real time monitoring.

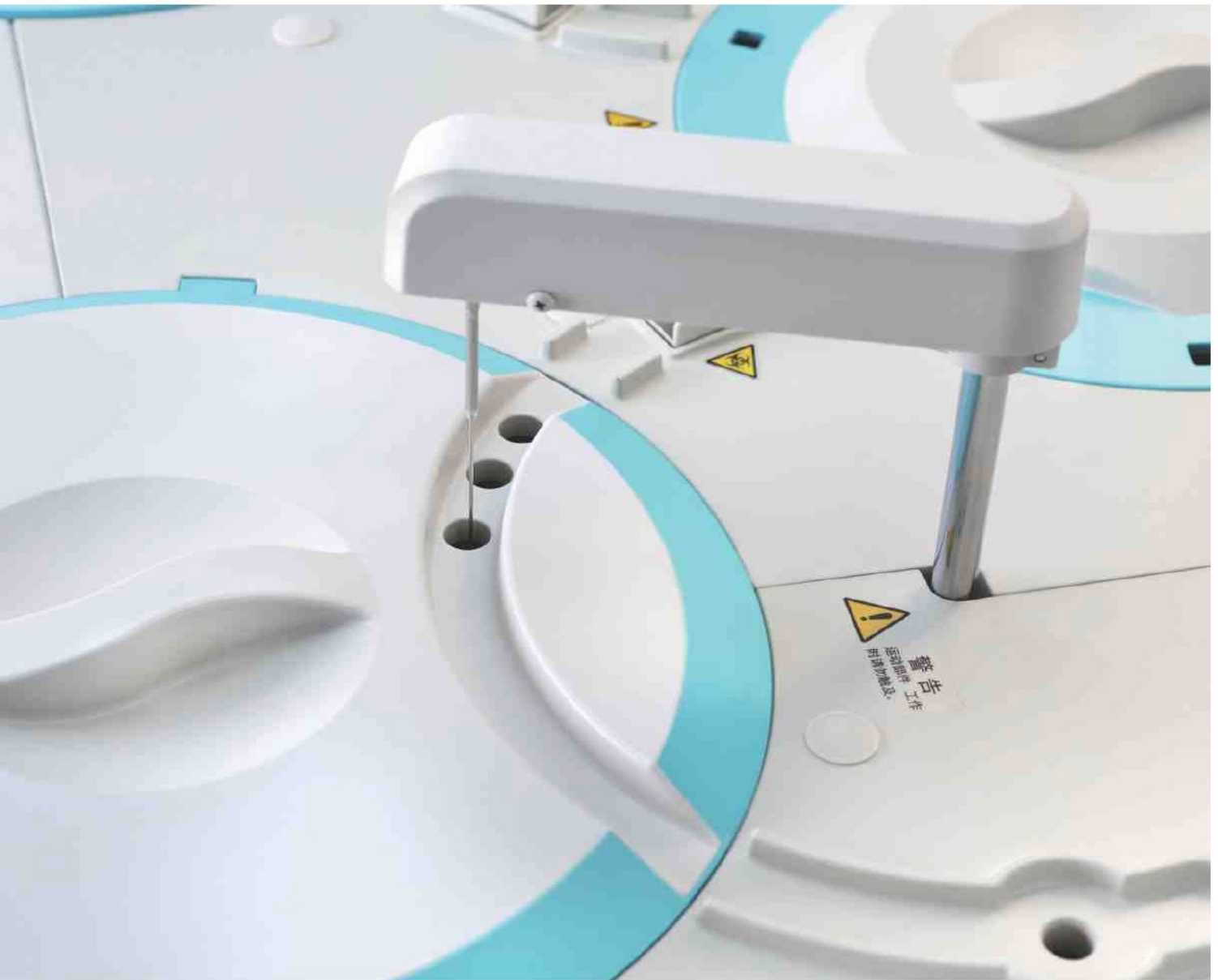


**Dr Tirupati Panigrahi, Founder and Chairman of Hi-Tech Group of Institutions in India** shares that Mindray provides very good service support to our institute. In patient monitoring, Mindray's multi-lead ECG algorithm greatly improves the accuracy of measurement and reduces false alarms. NIBP quick-measurement also helps us to reduce the discomfort caused by cuff inflation, especially for patients suffering from hypertension or hypotension.



# BS-430

## The New Game Changer in Clinical Chemistry



---

BS-430 is a perfect choice for the middle to high workload laboratories looking for a one-stop solution for routine chemistries and also COVID-19 related parameters

---





**Rudra Prasad Chakraborty**  
Product Manager - Biochemistry  
Mindray Medical India Pvt. Ltd.

**C**linical chemistry is one of the maximum test performing segments in a multi-disciplinary laboratory and is the heart of a tertiary care hospital. From emergency treatment to planned operations everything depends on the clinical chemistry test reports. The value this segment of diagnostics provides even in treating OPD patients or any clinical condition is indispensable.

Clinical Labs not only provide support to physician decision-making but also provides key insights in identifying patient condition and illness stage.

In this COVID-19 pandemic, chemistry tests are crucial in patient management and recovery; to name some tests: CRP, D-Dimer, Ferritin etc., are of utmost importance.

In line with Mindray's vision and mission, 'Better Healthcare for all' and 'Advanced medical technologies to make healthcare more accessible' respectively, the organisation has introduced a new fully automated biochemical analyzer in India this year.

### Smart features of BS-430

With this cost-saving equipment, users can benefit by its minimal reaction volume feature and hence, less reagent consumption and less patient-sample requirement. Also, as per the user's requirement, a hardware module can be attached to the system for electrolyte tests. The instrument is associated with a number of safety features such as sample probe clog detection, horizontal and vertical probe movement collision protection, effective interior and exterior probe washing with a waterfall wash station design. This state-of-the-art instrument in its segment is

equipped with 'Smart Sampling' technique, which allows users to run direct HbA1c (excellent diabetic monitor marker) tests without manual intervention as this instrument is capable of pipetting the packed cells from the bottom layer of centrifuged whole blood anti-coagulant added tubes. This makes the instrument a true walk-away system and at the same time maintaining the integrity of the test results.

BS-430 instrument has grating-based photometer with 12 wavelengths and a durable tungsten-halogen lamp. It has built-in bar code reader and bi-directional LIS connection capability to fit it in the medium to high workload segment laboratory requirements for today's needs. The software has quality control values monitoring features with automatic L-J graph plotting system; it is very useful to our users for maintaining instrument performance records for any accreditation/documentation purpose.

### Excellent calibration mechanism and traceability

Last but not the least, BS-430 is supported with Mindray original reagent system packs and calibrators. Calibrators are associated with value assignment traceability resulting accuracy and world-class quality of test results.

To conclude BS-430 is a perfect choice for the middle to high workload laboratories looking for a one-stop solution for routine chemistries and

also COVID-19 related parameters, special parameters like D-Dimer, Ferritin, CRP, HS-CRP, direct enzymatic HbA1c, RA, ASO, IgA, IgG, IgM, IgE, Apo-lipo proteins, Micro-albumin and many more on a single work desk.







More confidence  
with

Mindray's

# TE7 POC Ultrasound System

Mindray's TE7 series is a boon to all anaesthesia, critical care and emergency applications

**S**triving for better patient care, and seeking out the best solution for rapid decision is essential for clinicians. With smart fluid management tools, safe needling features, a complete disinfection solution, and superior quality imaging, Mindray's TE7 series is designed to suit all anaesthesia, critical care and emergency applications. Ready for care anytime and easy to learn and use, TE7 can help clinicians to face all challenges of high-quality medical services with confidence. What's more interesting is that for the first time, an ultrasound can be connected seamlessly to a clinical network with other equipment together. Some of the striking attributes are mentioned



below:

### Safe to Puncture

eSpacial Navi, guides you to better visualise the needle adaptively during either In-Plane or Out-of-Plane procedures. The position of the tip and the alignment of the needle are simply identified, allowing you to plan the needle trajectory before puncturing and guiding you to the target safer and easier.

### Smart Fluid Management

TE7's advanced tools Smart IVC, Smart VTI and Smart B-line provide more diagnostic information for fluid management accurately and efficiently, ensuring clinicians with more confidence to focus on patient care.

### Smart IVC

The Smart IVC automatically traces the IVC diameter change and calculates the CI (Collapsibility Index) or DI (Distensibility Index) and IVC Variation, helps for volume status assessment.

### Smart VTI

The Smart VTI automatically calculates the VTI (Velocity Time Integral), CO (Cardiac Output) and SW (Stroke Volume Variation). The trending graph helps with efficient recording and guides for fluid therapy.

### Smart B-line

The Smart B-line automatically calculates B-lines number, percentage, and distance. It provides unique visual scores map for intuitive overall lung water evaluation, guiding the fluid infusion and preventing pulmonary edema.

---

TE7's advanced tools Smart IVC, Smart VTI and Smart B-line provide more diagnostic information for fluid management accurately and efficiently, ensuring clinicians with more confidence to focus on patient care

---

### All-in-one Transducer for Needle Guided Procedure

The L12-3VNs with 3 programmable buttons combines eSpacial Navi and remote control into one. It ensures safe, simple, and convenient needle guidance without touching the system .

### Innovative Voice Command

Based on advanced voice recognition technology, iVocal allows you to remotely control the system by simple yet extensive voice commands through a wireless microphone .

### Superior Data Connection

Mindray's connectivity solution eGateway incorporates a patient's clinical data collected from both ultrasound equipment and patient monitor for wiser clinical decision making. Patients are easily admitted and exam information, images and reports can be transferred to the EMR system.

### Gesture Control for Ease of Use

State-of-the-art fingertip operation: drag to adjust Depth or Gain, pinch to zoom in or out and swipe helps in expanding the imaging area, even with your gloves on - providing simple control at the touch of a finger.





# Sarkar Diagnostics

Truly making a difference





---

Dr Sarkar has been at the forefront to adapt the latest ultrasound technologies for his centres. Amidst this ongoing pandemic, he installed Mindray's DC-80 X-Insight, designed to manage daily output with higher efficiency.

---

*Dr Sarkar has been at the forefront to adapt the latest Ultrasound technologies for his centres. Amidst this ongoing pandemic, he recently installed Mindray's DC-80 Xinsight Ultrasound System*

"The purpose of life is not to be happy. It is to be useful, to be honourable, to be compassionate, to have it make some difference that you have lived and lived well": Ralph Waldo Emerson.

This adage suits well to the vision of Dr Sabya Sachi Sarkar, Founder Chairman, Managing Director and Chief Radiologist of Sarkar Diagnostics who single-handedly founded one of the largest singular medical diagnostic centre in India, based at Lucknow in 1989. From humble beginnings to making a mark across the nation, Sarkar diagnostics has always kept abreast with the latest technologies in healthcare. Mindray has been fortunate to be a partner in their journey to success. With Mindray's excellent technologies, Sarkar Diagnostics has been able to truly make a difference in the state of UP.

### **The path to success**

In 1989, Dr Sarkar started his first diagnostics centre using a portion of his residence and continued there for the next twenty years bringing in latest modalities at quick intervals. As time passed by, he began to witness the growth and ran into a shortage of space. Hence, the move to a state-of-art three-storey Diagnostic centre in the heart of the city of Lucknow with all latest amenities.



Since then, there's no turning back. The new Centre evolved as one of the largest diagnostic centres of India and has established new benchmarks.

As Dr Sarkar's business grew, he never forgot his vision to serve the poor and needy of the nation. So, he went on to establish the **SARKAR WELFARE FOUNDATION** ten years ago to fulfil his desire for serving the poor and the needy. The foundation has been providing diagnostic services at affordable rates to the poor on the First and Third Sundays of every month which has become a huge success. Subsequently, he also went on to begin the Paediatric Cardiology Clinic especially for children with Congenital Cardiac Defects. This clinic is set up with the help of Qualified Paediatric Cardiologists and Surgeons on the Fourth Sunday of every month.

Recognising his contributions to the nation and the field of radiology and philanthropy Dr Sarkar was awarded the Padma Shri award by the then President of India on April 12, 2016.

Dr. Sarkar is also the recipient of the Best Post Graduate Student for two consecutive years of 1986 and 1987 with accompanying scholarships. He was also awarded Membership of Academy of Medical Specialists. He is also a member of Radiological Society Of North America (RSNA), Chicago, USA.

### Thriving on technologies that matter

We are all aware of the role medical technology plays in achieving clinical excellence. Especially in the field of radiology, Ultrasound technology plays a vital role in clinical diagnosis. Dr Sarkar has been at the forefront to adapt the latest Ultrasound technologies for his centres. He further explains his experience of how his centres have thrived and the struggles he has faced to keep himself updated with the latest advancements in the field.

"Since it is one of the biggest diagnostic centres in UP we had to struggle a lot to get our first Ultrasound installed, but after a lot of follow-ups and demonstration we were able to install our first DC-70 at this centre. In January 2017 and at the same time, we were able to install another three units of the same model in Lucknow at different centres. And with the excellent service backup given by Mindray India and Alpha Medicare Systems Lucknow, we got another success in July 2020 wherein we installed our **DC-80 Xinsight.**" says Dr Sarkar.

It is indeed admirable that even in this pandemic situation Dr Sarkar and his team has been able to introduce the latest technology at his centre such as DC-80 X-Insight.

Besides Dr Sarkar the other radiologist working at this centre is Dr Simran Singh who draws a lot of inspiration from Dr Sarkar's vision. Dr. Singh is also highly impressed by the drive of Mindray team to bring latest technologies to serve the nation. Both Dr Sarkar and Dr Singh are extremely happy with Mindray's excellent after-sale support. Dr Sarkar has recently ordered for a DC-70 Expert as well.







# **DC-80** with X-Insight

Insight, Intelligence  
and more



[www.mindrayindia.com](http://www.mindrayindia.com)

Mindray India Toll Free No : 0008-00-85-22-009

Email : [callcenter@mindray.com](mailto:callcenter@mindray.com)

**mindray**  
healthcare within reach





# COVID-19 warriors

Engineers play a crucial role  
during pandemic

Mindray India and its channel partners  
stood shoulder to shoulder with  
front-line caregivers during COVID-19





**Santosh Verma**

National Service Manager - Channel  
Mindray Medical India Pvt. Ltd.

**A**s the COVID-19 pandemic brought great distress in the country, Mindray India and its channel engineers did not hesitate to take responsibility when customers needed them. Our engineers had been in the field during lockdown to install and service lifesaving instruments to support healthcare warriors in their fight against COVID-19.

### **A commitment it was....**

Mindray's India's vast network of channel partners comprising qualified and skilled on-ground engineers have continuously assisted corona warriors in healthcare systems such as physicians, biomedical engineers, paramedical workers throughout India. Our channel engineers have carried out and responded to a considerable number of service operations and installed new instruments in significant numbers in the last 6 months of lockdown. Mindray India HO has ensured that all our engineers in the field take the required precautionary measures to protect from cross-contamination, provide the required inter-district transport assistance so that our team remains secure and can continue to assist healthcare heroes in these testing times.

### **Performing the duty was the foremost priority**

When the nation was stranded, our channel engineers took the onus and ensured that life-saving medical equipment like ventilators reached our customers and that there wasn't a shortage of crucial equipment. They were out there in the high risks zone to install essential devices like patient monitors, ventilators, infusion pumps, laboratory and ultrasound instruments. We were amongst the very few medical devices manufacturers in the

country which continued preventive maintenance of existing life-saving instruments as per schedule so that healthcare heroes don't face any breakdown or shortage of active medical equipment and can save maximum lives.

### **Safety of COVID warriors**

Our service team paid special attention to train our customers on how to disinfect Mindray equipments like patient monitors, ventilators, anaesthesia workstations, ultrasound systems and laboratory equipments, so that healthcare warriors remain safe. End-users of these life-saving devices continue to play a vital role in this pandemic and their safety is our top-priority. Hence a series of online as well as physical training were organised to detail protocol for sanitisation and disinfection of these devices used in COVID-19 isolation wards.

### **Digital engagement and training of COVID warriors**

Our engineers went all out in providing necessary refresher training to COVID-19 warriors via digital means. This was an initiative undertaken by Mindray India's service team during lockdown utilising digital technology to fully equip frontline workers to use clinical information from our instruments for better patient care.

As a trusted partner for healthier Bharat, Mindray team is focused to help its customers in all possible ways in these unprecedented times and will also ensure all protective and safety measures for our engineers at work. Our service and application team will continue to be at the frontline for installing and training of the life-saving devices as well as helping healthcare heroes in their fight against COVID-19.





# 'Harmonisation and Standardisation of laboratory testing is the need of the hour'



**Dr Barnali Das**  
MBBS, MD, DNB & PGDHHM

Consultant in Laboratory division of Kokilaben Dhirubhai Ambani Hospital & Medical Research Institute, Mumbai, Executive Member, Scientific Division, International Federation of Clinical Chemistry & Laboratory Medicine (IFCC), Chair of American Association of Clinical Chemistry (AACC) India Section and College of American Pathologist (CAP) Inspector & NABL Assessor shares insights on the key aspects of laboratory medicine in today's times and talks about her experiences in this field.

**D**r Das is a multifaceted talent and prominent professional on National and International Platforms in the realm of laboratory medicine. She is a recipient of two oration awards and four international and seven national awards from American Association of Clinical Chemistry (AACC Outstanding Speaker Award), International Federation of Clinical Chemistry & Laboratory Medicine (IFCC Development of Quality Competence in Medical Laboratories- DQMCL Award), College of American Pathologist (CAP Inspector Excellence Honour), Asia Pacific Federation of Clinical Biochemistry (APFCB Young Scientist Scholar-

ship), Reliance Group Corporate Social Responsibility (The Woman of Substance Award), Association of Clinical Biochemists of India (Dr T N Pattabhiraman Oration Award, Pitabus Jamuna Burma Memorial Award and Dr C Sita Devi Award) and Association of Medical Biochemists of India (Dr Ajit Singh Saini Oration Award and also Brig Ramesh Sinha Memorial Certificate & Gold Medal). She is a recipient of 2019 "Diagnostic Leadership Award in Achiever Category" from Indian Express Group, MT India 2019 "Healthcare Leader in Quality & Management" in Voice of Healthcare and 2019 Zee Business National Healthcare Leadership



Award in 'Woman Leadership Category'.

Dr Das is quite aspirational about the future. "If you put passion and dedication in your work, it will give meaning to your life," she philosophises.

She has recently been honoured as "Best Docs Mumbai 2020" in the General Pathology field in the magazine 'Outlook' issue of the year and "Top Doctors Mumbai" in the 'India Today' September issue.

She has many publications in high impact factor international and national journals (recent ones are Clinical Chemistry, European Thyroid Journal, Clinical Biochemistry, Indian Heart Journal, Indian Journal of Medical Biochemistry, Indian Journal of Clinical Biochemistry etc.).

She has also delivered more than a hundred invited talks and plenary lectures at both national and international forums.

Her biography has been featured in a book (2018) named "And So Can You", which contains stories of 17 renowned doctors in India.

**Q. AS A PROMINENT PROFESSIONAL IN LABORATORY MEDICINE, WHAT ACCORDING TO YOU ARE THE MAJOR CHALLENGES IN THE FIELD OF CLINICAL CHEMISTRY AND IMMUNOASSAY?**

Clinical chemistry and immunoassay tests form a very important set of tests in a pathology laboratory—a tool that clinicians and patients alike depend on, to pin down the symptoms for treatment and relief.

However, it is this very set of tests that have come in question. First, what is the normal and acceptable range (upper & lower limits)

of different clinical chemistry and immunoassay biomarkers in a particular population, has been debated in different scientific fora. This is because, the level of markers can change in relation to other biochemicals, biomolecules and hormones, which themselves vary considerably with race, gender, age, different physiological conditions (like pregnancy, new-born) and other illnesses and interfering substances. This variation can be to such an extent that, each individual may seem to have their own set-point of these hormones, as an example, for that of thyroid-stimulating hormone (TSH).

Therefore, harmonisation of procedures is the need of the hour. The clinicians and diagnosticians have to grapple with is the variability of test-results; even a broadly similar

---

**"If you put passion and dedication in your work, it will give meaning to your life"**

---

set of instruments and methods can provide different results, even as much as 40% more or less, for example, in case of TSH values. It is then a real challenge to the physician to decide whether the patient is suffering from a disease or is it something else, since other factors can also cause changes in test levels.

Due to the lack of proper reference intervals and sometimes due to standardised measurement procedures, standardisation and harmonisation of clinical chemistry and immunoassay testing still remains a formidable challenge

**Q. HAVE YOU DONE ANYTHING TO ESTABLISH A REFERENCE INTERVAL TO ADDRESS THE ABOVE CHALLENGES?**

Ethnicity-specific cut off of TSH is important for accurate test reports. I am also the corresponding member, IFCC Committee for Reference Interval & Decision Limit (IFCC C-RIDL) and was associated with IFCC Committee on standardisation and harmonisation of Thyroid Functions Tests (C-STFT). In India, we started by organising thyroid camps and every year around 1000 TSH screenings were done during World Thyroid Day. We have established reference interval for TSH and FT4 in the Indian population.

The reference interval (90 per cent confidence interval) for TSH by the non-parametric procedure (bootstrap) is 0.48-4.52 micro IU/ml, and by parametric one (after transformation of the data), it is 0.45-4.27 micro IU/ml for the adult population, which is little different from the manufacturer's guidelines.

Secondly, the availability of high-sensitivity cardiac troponin assays (hs-cTnl or T) in the setting of Acute Coronary Syndrome (ACS) has allowed for rapid risk assessment of an ongoing myocardial infarction. However, there were concerns raised about the use of the single, universal cut-off value of hsTroponin I for both men and women, as there is a potential risk of under-diagnosis in women since they have a lower threshold value of troponin. We conducted a study for six months on 2804 patients and observed that around 14 per cent of women were under-diagnosed with an acute coronary syndrome, if we use gender-specific cut off (Male: 32.3 pg/ml and Female: 14.6 pg/ml for the



Indian population) with high sensitive troponin I assay, near the 99th percentile of a reference control population. However, implementation of gender-specific diagnostic threshold helped in identifying more women at increased risk of ACS or death, than a generic threshold.

**Q. YOU ARE A PART OF THE EXECUTIVE COMMITTEE OF IFCC SCIENTIFIC DIVISION WORLDWIDE AND ALSO CHAIR OF AACC INDIA SECTION. HOW DO YOU MANAGE THESE ADDITIONAL RESPONSIBILITIES ALONG WITH HEADING BIOCHEMISTRY AND IMMUNOLOGY LAB OF ONE OF THE TOPMOST CORPORATE HOSPITALS OF INDIA?**

My mantra in life is 'playing to my strengths and working with hundred per cent dedication in whatever I do.' I very much enjoy my work at Kokilaben Dhirubhai Ambani Hospital and try to put my full strengths in work with empathy, team spirit and dedication. I try to celebrate different views, embrace change and respect innovation.

Being an Executive Committee Member of the IFCC (International Federation of Clinical Chemistry and Laboratory Medicine) Scientific division and Chair of AACC (American Association for Clinical Chemistry) India section, I feel that I have a bigger role to play, so as to incorporate quality competence in healthcare, implementation of standardisation and harmonisation of laboratory testing, bridging the gap between diagnosticians and clinicians & also to connect with the professionals in clinical chemistry, pathology, molecular diagnostics and IVD industry.

Different Committees and Working Groups under the Scientific Division of International Federation of Clinical Chemistry & Laboratory Medicine (IFCC) has been formed to address the issues of standardisation and harmonisation of laboratory testing. Being a part of the Executive Member of IFCC Scientific Division, we have been entrusted with the responsibility on the need and methods of standardization and harmonization all around the globe. IFCC is encouraging a lot of awareness-channels - organizing events, research publications and news articles. The committee is discussing with Lab community, Clinicians, Clinical societies, IVD industry, Regulatory bodies and EQA providers to formulate guidelines for assisting in correct measurement, diagnosis and management of diseases.

**Q. CAN YOU PLEASE ELABORATE THE ABOVE POINTS WITH EXAMPLES?**

Here are a few examples and technical solutions to address laboratory challenges and to take it forward from both Clinical Chemistry as well as Immunoassay platforms.

There has been a continuous challenge within global healthcare systems such as the US, Europe and other countries to standardise and harmonise the HbA1c reporting. the decision on what to report in NGSP ( per cent) and/or IFCC (mmol/mol) units along with eAG (in either mmol/L or mg/dL). This globalisation places a responsibility on laboratory medicine specialists to work together to reduce the current variability in patient results, which arise from differences between units, methods and laboratory practices in different countries.

The IFCC method is in place and opens up the perspective of a global standardisation (with worldwide uniform clinical guidelines), with HbA1c reflecting the true estimated average glucose.

Due to the standardisation efforts of IFCC, NGSP and other national organisations, and also due to ongoing efforts of manufacturers and laboratories, the quality of HbA1c reporting has increased dramatically. It is so much so that, there has been a paradigm shift. HbA1c is now considered the gold standard, not only for monitoring but also for diagnosis of diabetes.

Similar standardisation and harmonisation efforts are ongoing on the other fields, like: Traceability in Laboratory Medicine (C-TLM), Reference Intervals and Decision Limits (C-RIDL), Harmonization of Autoimmune Tests (C-HAT) and Standardization of Thyroid Function Tests (C-STFT), Pregnancy Associated Plasma Protein A (WG-PAPPA), Growth Hormone (WG-GH), Bone Metabolism (C-BM), Molecular Diagnostics (C-MD), & Troponin I (WG-TNI) to name a few.

**Q. YOU HAVE PUBLISHED SEVERAL PAPERS IN SCIENTIFIC JOURNALS AND NEWSPAPERS ON ROUTINE LABORATORY'S ROLE IN COVID-19. CAN YOU PLEASE SHARE YOUR EXPERIENCE IN KOKILABEN DHIRUBHAI AMBANI HOSPITAL & MEDICAL RESEARCH INSTITUTE?**

The critical role of laboratory medicine in this pandemic extends far more than an etiological diagnosis of COVID-19, by reverse transcriptase polymerase chain reaction (rRT-PCR). Routine laboratory monitoring of COVID-19 patients through testing is critical,



for assessing disease severity and progression, as well as monitoring therapeutic intervention. In addition to more common laboratory tests like LFT, KFT, Blood Gas, CBC, CRP etc. patients with severe COVID-19 could be at risk of macrophage activation syndrome (MAS) or cytokine storm. Therefore, routine biomarkers play an essential role in patient admission protocol, assessment of staging of disease according to severity, prognostication, patient monitoring and therapeutic guide.

We have analysed routine laboratory markers to test significance in Kokilaben Dhirubhai Ambani Hospital & Medical Research Institute. A total of 528 subjects were considered for the study which included 370 male (70 per cent) and 158 female (30 per cent) subjects. These subjects fall in the age group of 12 years to 93 years (median age 61 years). 40 healthy adults without any history and clinical evidence suggestive of COVID-19 and without any comorbidities, like diabetes, hypertension chronic lung disease, cardiac disease, cancer and immunocompromised individuals were considered as a control group for the study. The routine laboratory findings supported the diagnosis with elevated levels of Interleukin-6 (IL-6), C Reactive Protein (CRP), Procalcitonin, High Sensitive Troponin I (hsTnI), AST, ALT, Direct Bilirubin, D Dimer, Ferritin, LDH, Creatinine, Blood Urea Nitrogen (BUN), Neutrophil count, WBC Count, Lactate, NT Pro BNP and decreased levels of Albumin, SO<sub>2</sub> per cent and Lymphocyte count.

### Q. WHAT IS YOUR FINAL MESSAGE TO HEALTHCARE PROVIDERS?

The road map for laboratory medicine, therefore, will involve strategies for harmonising, communicating and integrating with all stakeholders; like clinicians, diagnosticians and IVD industry, in order to formulate guidelines for assisting in correct measurement, diagnosis and management of diseases.

of lab professionals is very much valuable for all of us, for hospitals, for this country.

### Q. WHAT IS YOUR MESSAGE TO THE YOUNGER GENERATION?

We all struggle on our way to failure or success and each one of us deal with life in our unique ways. Passion, perseverance, resilience hold the key. Never give up on enthusiasm. Never compare yourself with others. Never bother about success or failure, just keep giving your best and keep improving



### Q. ANY MESSAGE TO LABORATORY PROFESSIONALS DURING THIS PANDEMIC TIME?

The role of the Laboratory Professionals has been redefined in the race against COVID-19. Hats off to laboratory professionals who are the frontline warriors in this pandemic, ready for any duty, filling our life with a positive attitude. This COVID-19 Pandemic is showing us the reality of life. I am proud of our unsung heroes. Moreover, the untiring service

yourself. Success, according to her, is relative and not absolute. Also, each one has their own definition of success. But one thing is sure, whatever success is, it is not something to be chased



# COMMITMENT TO BUILD AN **ACADEMIC ECOSYSTEM**



So far, Mindray India has conducted around 75 plus webinars, virtual conferences and other digital knowledge-sharing initiatives between April and September 2020 and has received a phenomenal response





## e-Learning

These initiatives have received a phenomenal response and were highly acclaimed amongst healthcare leaders, decision-makers as well as on social media. Most of these learning initiatives have had an exceptional response on social media platforms such as Youtube, LinkedIn and Facebook. Some of the initiatives have had a reach of more than 4 lakh views on Youtube and more than 1300 views on LinkedIn with a lot of noteworthy comments from participants.

One of the most applauded virtual events has been the next-generation Virtual Haematology Conclave CUBE 2020 which was hosted via digital medium and received an overwhelming response. Aimed at revisiting the fascinating world of virtual microscopy and looking beyond just numbers in a Complete Blood Count (CBC), CUBE 2020 haematology online symposium was organised by Mindray India in collaboration with Academic Affairs, Research and Continuing Education (AARCE) wing of BLK Hospital, New Delhi. as an activity of professional development on the science of cell analysis by haematology analyzers. The focus was on looking at the plethora of information available on the new age cell counters in terms of numerical data, trend analysis, graphical patterns and the overall clinical application.

With recent advances in hematology analyzers, there are now possibilities to do more with less. Haematology analyzers have always been essential instruments in a routine clinical laboratory for disease diagnosis, prognosis and treatment monitoring. However, the utility of newer parameters is clinically important to prevent information obtained from the Scatterplots for White Blood Cells, Red Blood Cells and Platelets to go unnoticed. Programmes like 'Cytomorphometry Unveiling Blood Evaluation" – CUBE, has enabled a platform for knowledge sharing and empowered the real user of hematology analyzers.

This online event was truly a value add for the 2600 plus global participants who attended the conference as there was high-quality scientific content, presentations, case studies and discussions exchanged at the conclave. More than 50 haematology experts across India and around the globe unveiled the role of cytomorphometry in diagnosis, progression and prognosis of various diseases during this two-day online event. Karnataka Medical Council (KMC) granted two CME Credit hours to delegates of CUBE 2020.

**T**he digital era has enhanced the accomplishment of new and complementary competencies eliminating borders between people and knowledge through the proliferation of e-learning worldwide. During the COVID-19 pandemic, we have already witnessed the wonders of digital learning and Mindray with an aim to improve diagnostic prowess for empowering modern medicine has expanded its e-learning capacity for the healthcare community.

At Mindray, it is believed that the e-learning system could and is bound to become one of the most efficient and accessible methods for acquiring knowledge, a resource that has become the company's focus regardless of the acknowledgement or investment in this important asset.

Mindray, so far has conducted around 75+ webinars, virtual conferences and other digital knowledge-sharing initiatives between April and Sept 2020. The topics covered in these webinars include lab diagnostics mainly focusing on haematology, pathological interventions, ultrasound imaging, clinical engineering, cancer diagnostics, nurturing start-ups in healthcare, ways to fight the COVID-19 pandemic and many more.



# BeneFusion n Series

set to transform infusion therapy

With deep insights into patient safety, operational simplicity, interoperability and data synergy, the BeneFusion n Series sets a new standard in infusion therapy.







clinical efficiency with the colour-coding drug library and the parameter auto-filling function. The innovative SmartAIR™ with dual sensors can detect air bubbles in tubing with greater precision to minimise the risk of air embolism and elevate patient safety. It can also automatically trigger an 'empty' alarm when the infusion container is depleted.

### Efficiency in drug delivery

To ensure on-time drug delivery, the BeneFusion n Series incorporates SmartRapid™, which revolutionises efficiency by allowing systems to power on in just 2 seconds, complete syringe loading in 4 seconds and deliver the first drop of drugs in 3 seconds. Powered by the advanced Dynamic Pressure System (DPS), the BeneFusion n Series can detect and monitor the occlusion situation more accurately and precisely. The real-time pressure in the line is shown in an intuitive speedometer-style graphic, with clear pre-alert and alarm displayed when occlusion is occurring.

### Integrational properties

In this digital age, medical devices cannot work independently, which is why the BeneFusion n Series is designed to integrate with other clinical data systems to facilitate clinical decision-making. At the bedside, Infusion-View™ of the infusion system enables medical staff to view the infusion data on the patient monitor — through seamless data integration and synergy, it offers a comprehensive picture of infusion data and physiological parameters for fast, accurate clinical decision-making and reasonable prescriptions. In addition, the BeneFusion n Series is also able to connect to the hospital's HIS and CIS to offer centralised data management. With infusion and alarm information accessible anywhere and anytime, caregivers can keep monitoring patients constantly for optimal patient care, while greatly improving clinical efficiency.

**M**indray India has recently released its new generation infusion system, BeneFusion n Series. The system comes with a range of high throughput features that sets the system apart from its competitors.

### Higher precision and ease-of-use

With a large 7-inch full-touch capacitive screen and an intuitive interface, the BeneFusion n Series ensures a refreshing user experience with superior ease-of-use for greater precision and higher work efficiency. The system's versatile docking portfolio also provides a comprehensive solution for a variety of infusion scenarios, with a flexible docking solution ranging between 2 to 24 slots.

### Elimination of medical errors

15-25 per cent of medication errors result from confusion with drug names. The SafeDose™ drug management system of the BeneFusion n Series would effectively eliminate such errors to improve patient safety and improve



# Mindray India

## operation team commit to the nation during COVID-19 times

Here is an account of this story...



**Asis Bandyopadhyay**  
Head of Operations  
Mindray Medical India Pvt. Ltd.

### **T**he pandemic and its impact

India's first COVID-19 case was reported early this year and there on there has been a steep rise in the number of cases. Today, we have more than 77 lacs\* cases across the country.

To contain this pandemic, the Government of India (GOI) has initiated many measures to curb the transmission and spread, increase healthcare infrastructure and ensure availability of healthcare services. One of the most effective measures has been the imposition of country-wide lockdown. The lockdown was initiated with the Janata Curfew on March 22, 2020, and thereafter the lockdown has been imposed on a back to back basis in a phased manner.

The COVID-19 pandemic brought about a lot of disruption in supply chain and logistic, however, Mindray's logistic team outperformed the crisis and ensured that COVID-19 warriors were provided with life-saving devices in a timely manner. In spite of great difficulties, Mindray being a trusted partner for a healthier Bharat was committed to equipping COVID-19 warriors with required medical solutions to save as many lives as possible.



\*as on 27th October 2020





The first and second phase of lockdown, which went up to May 3, 2020, brought the entire country to a complete halt. However, the third phase of lockdown, which started from May 4, 2020, saw a little relaxation. And when we were in the fourth phase of lockdown things were much better in logistics movements though with some difficulty.

Industries, markets and businesses all the world have been turned upside down by COVID-19 and this impact has been greatly felt by the medical device sector as well. The phased relaxation of the

lockdown created a lot of confusion among industry and people. For instance, on one hand, medical devices distribution was permitted to operate, but there were no LSPs available to support the supply chain.

On the international scenario, all the international passenger flights (except cargo flights) were suspended which caused serious challenges on the import side of the supply chain which in turn severely impact very badly effected (in regard to cost, time & capacity) the fulfilment of assignments.

### **Mindray India Operation committed to the cause**

Nevertheless, with a strong will to stand strong for the nation and its people, Mindray India Operation Team strengthened its supply chain capacity to fulfil the expectation of the organisation and the nation. To make this happen, we obtained necessary permissions from the GOI to continue to work from the warehouse, while maintaining the necessary norms for safety and security.

Between March 25 to April 17, 2020, there was a complete closure of domestic logistics



movement. No LSPs were open to work. Neither any pick up was possible nor delivery was happening anywhere in the country which was a huge set back to us as we were having life-saving equipment in our inventory. But during the crisis hour, as a trusted partner for healthier Bharat, we were fighting to deliver the goods to our customers. Post-April 17, 2020 a few carriers have appeared in the field with minimal destination service but with a huge incremental cost.



To handle this situation, we had a brainstorming session within the operation team and unanimously decided to take the charge of Logistics directly in our hand. We called our logistic vendor and shared our plan with him on despatching the long haul big trucks from two of our warehouses, 'i.e. Delhi & Mumbai to different locations of the country and en route, we clubbed as much as destination possible and the result was magnificent.

Having said that, operations are still far from normal as International flights are still suspended and domestic flights are operating only at 30 per cent capacity.

But still, life has to go on and we all have to learn to live in the new normal. A lot of changes will happen in the supply chain ecosystem in the coming times. Operationally, we are adapting to these changes swiftly and all challenges will be dealt with accordingly as we move forward.

### Exceptional outcomes

Benefits that have been derived out of this logic are as below.

**Productivity:** We have saved a good amount of freight in this process.

**Speed:** As the trucks were moving from point to point, therefore, delivery TAT was very much impressive.

**Predictability:** All the trucks were fitted with Geo Tagging (GPS) hence, the movement was very much predictable.

**Wide coverage:** As these are direct trucks, even earlier non-serviceable areas were also got covered.

### Key learnings

Operationally, in order to stay relevant and afloat, we have learnt, unlearnt and relearnt many things during this period, few of which are below.

- Logistically, we've turned this crisis into opportunity
- The positive part of this logistics break through should be adopted on a regular basis.
- Easy approaching to different ministerial and regulatory level and developed good contacts
- Emotional team bonding, which is crucial to excelling in a crisis situation.
- A focused approach to get the work done when the resource is limited.
- Innovation is necessary to ease out the problem statement





# BS-430

Clinical Chemistry Analyzer

A reliable choice for  
the emerging lab



[www.mindrayindia.com](http://www.mindrayindia.com)

Mindray India Toll Free No : 0008-00-85-22-009

Email : [callcenter@mindray.com](mailto:callcenter@mindray.com)

**mindray**  
healthcare within reach





## Trusted partner for Healthier Bharat

Mindray Medical India Pvt. Ltd.

### **Mumbai (Registered Office)**

Unit no. 1061,  
Solitaire Park, Andheri - Kurla Rd,  
Chakala, Andheri East,  
Mumbai, Maharashtra 400093  
Ph: 022 4020 0000

### **Gurugram (Corporate Office)**

16th Floor, Building 9B,  
DLF Cyber City,  
DLF Phase III, Gurgaon,  
Haryana 122002  
Ph: 0124 4632488

### **Chennai**

No 32, Palani Centre,  
Venkatnarayana Road,  
T. Nagar,  
Chennai 600017  
Ph: 044 42691301

### **Kolkata**

Room/Flat No. Block EP & GP,  
Salt Lake Electronic Complex,  
Kolkata 700091  
Ph: 033 40732558

[www.mindrayindia.com](http://www.mindrayindia.com)

Mindray India Toll Free No : 0008-00-85-22-009

Email : [callcenter@mindray.com](mailto:callcenter@mindray.com)



@mindrayindia

To subscribe  
MINDFOCUS Magazine  
Scan the QR code

