

# VALUING LIFE



Annual Report 2015-2016

Apollo Hospitals’ Mission is “to bring healthcare of international standards within the reach of every individual. We are committed to the achievement and maintenance of excellence in education, research, and healthcare for the benefit of humanity.”

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\* Business Responsibility Report is a separate enclosure and forms a part of this Annual Report.

Note: Patient names have been withheld from all case studies and patient testimonials in this report in order to protect patient privacy.

The Attendance Slip/Proxy Form and AGM Notice are being sent by registered post/email separately.

**VALUING LIFE** has a very special meaning for us at Apollo. The Value we place on the lives of our patients and their well being underscores the core of our strategy and actions, our attitude and behavior. We believe that the human body is Priceless. And human life, invaluable. This belief makes us extra sensitive and responsive to any patient that walks through our doors. We believe that every such patient has a non-negotiable right to a healthy life. And we believe we have a responsibility towards ensuring that. We strongly believe that prevention is better than cure; but when something cannot be prevented, we will do what it takes to cure it and we will not give up without a fight. This is our promise. We therefore strive every day to provide our patients the highest quality comprehensive healthcare—the most advanced treatments possible. We would not want to give them any less because we know they deserve the best.

Our dedicated Centres of Excellence are unique. They offer several key specialties and super specialties which cater to all health needs. These state-of-the-art facilities are spread across our hospital locations. Putting patient wellness at the core of our operations, we use expert unsurpassed diagnostics and robust treatment plans to give them the most appropriate care. Our quality standards are stringent with enhanced infection and safety protocols, comparable to leading hospitals worldwide.

We commit to providing this kind of care simply because we Value Life and because we want to put a smile on our patient’s face. To us life is Priceless. And we will do all that we can to protect and sustain it. No short-cuts. No compromises. But the best differentiated care a hospital can possibly give its valued patient. We are Apollo and we are proud that we Value Life.



# CHAIRMAN'S MESSAGE



Dear Shareholders,

The mission to nurture health and protect priceless lives was at the core of our genesis in 1983; it is the reason we exist today. I told you earlier that the human body is Priceless; it is exactly for this reason that we at Apollo Hospitals, Value Life. Patients from over 120 countries visit our Hospitals every year and our Group has touched over 45 million lives in the last 33 years. This incredible journey has taught us we should stop at nothing to do what we can to protect our patient's health and well being. We believe that we have a responsibility to help them fight the pain of disease and to give them the most appropriate treatment to put them on the road to recovery.

For over three decades we have been inspired by the dream of a healthy India. We have taken several transformative steps towards this goal. Our drive is powered by our deep respect for the power of good health and the miracle of the human body. Without good health, we know that life stands on a brittle foundation. We therefore seek to educate people on the importance of Preventive Health to protect them from a potentially uncontrollable disease burden.

Our commitment to health and our philosophy of valuing life—our defining legacy—is epitomized by our every day practices and performance. Our Hospitals have led landmark changes in the Indian Healthcare ecosystem, through differentiated offerings, be it initiatives which benchmark our clinical excellence, our Preventive Health programme, our clinical protocols and pathways with best in class outcomes, or patient centric care giving.

In the early eighties, world-class medical treatment meant access to exorbitantly high priced healthcare in the western world. The wheel has turned a full circle; today, we offer healthcare in India that is as good as any in the world, at a fraction of the price. Patients from western countries regularly come to our hospitals for complex medical procedures.

At Apollo, we have always believed the pursuit of excellence to be a relentless series of short races. To excel continuously means we have to win consistently. Today, Apollo Hospitals is one of the largest and most trusted integrated healthcare providers in Asia. At the core of this achievement is our patient-centric approach and our strong commitment to the highest standards of ethics. Every initiative of the Apollo Group is measured by the value we are adding to patient experience. This focus inspired us to launch The Apollo Standards of Clinical Care (TASCC) which embodies the highest standards of clinical care and patient safety. Apollo Hospitals is a pioneer of Tender Loving Care—a revolution in caregiving, to make our hospitals warm and friendly for the patients and their families.

Globally, the healthcare sector is getting disrupted through emerging digital trends and India is no exception to this. We are rolling out a well thought out strategy to leverage technology towards enhancing customer experience and loyalty, analytics, patient outreach and access, tele-medicine and e-consults.

Technology also affords us a new way of thinking—it brings with it the power of collaboration and

enhances our efforts to fight the scourge of Non Communicable Diseases (NCDs) in India. One important initiative in this regard, is the concept of Preventive Healthcare. Apollo pioneered the concept of a Preventive Health Check more than 3 decades ago. That experience helped us to launch the Apollo Personalised Health Check—a comprehensive personalized diagnostic solution based on the fact that each person's health is as distinctive as his DNA.

Our focus on integrated healthcare aims at providing patients a common, easily accessible platform for all their healthcare needs. Our incisive thrust on super-specialization is to enable cutting-edge treatment for our patients. The Apollo Institutes of Robotic Surgery have successfully performed complex robotic surgeries on over 3,000 adults and 80 children so far using the da Vinci Robotic system—the world's most cutting edge solution in clinical robotics. Apollo Hospitals is now poised to be the first provider of the revolutionary Proton Beam Therapy in India. This milestone is one of the many 'firsts' that Apollo Hospitals has brought to the Indian healthcare ecosystem.

I am happy to inform you that Apollo Hospitals, Chennai performed an extraordinary medical feat, when the team harvested 23 valuable organs from five brain dead donors in 2015. Thereafter, five liver transplants, one heart transplant and four kidney transplants were conducted at our hospitals and the rest of the organs were transported to needy recipients in other hospitals. The entire event was managed smoothly and efficiently.

Building a healthy India is a long journey full of challenges at every step. At Apollo Hospitals, our approach to healthcare is shaped by one powerful truth- Life is precious, life is Priceless. The value we have for the miracle of human life inspires us to stretch our boundaries to the maximum possible. It provides us the moral compass to do things as best as we can in the best way possible for the patient. The mission to touch lives deserves nothing less.

In line with our stated objective of enhancing healthcare access, we have added eleven hospitals and created additional capacity of over 1,700 beds in the last 36 months. We also acquired a running profitable 210 bed hospital in Guwahati during the year to consolidate our presence in the North Eastern region where we already have strong brand equity. Further in the coming three years, we will be adding another 1,000 beds across three new hospitals.

During the recent unprecedented flooding in Chennai, our doctors and support staff worked round the clock at all our hospitals to ensure that quality care was provided without interruption to all our patients.

We have had another good financial year with consolidated annual revenues growing 18% to ₹ 60.86 billion and consolidated net profits of ₹ 3.3 billion. Consolidated EPS for the year stood at ₹ 23.79. We declared a 120% interim dividend of ₹ 6.00 per share for the fiscal year 2016.

The Standalone Pharmacy business witnessed a 31% growth in revenues while the EBITDA margins have expanded to 3.6% in FY 16. We now have a total of 2,326 stores and the Hetero acquisition is fully integrated. Our success on this front has been as a result of a combination of various factors including the maturity of the store network, rationalization of loss making stores and a gradual increase in the proportion of private labels in the product mix.

Before concluding, I would like to welcome opportunities to collaborate with the Government on initiatives which would further the objectives of ensuring universal health access for India's citizens.

I wish you and your families all the very best of health and thank each and every stakeholder for their continued support, belief and trust.

With warm personal regards,

**Dr. Prathap C Reddy**  
Executive Chairman  
Apollo Hospitals Group

# VALUING TRUST

Every time a patient voluntarily walks into a hospital or seeks medical counsel, it demonstrates an extraordinary act of trust. We value the trust. It is for this reason that we take pride in bringing the best of caregiving to our patients, be it in diagnostics, clinical protocols, pathways, quality standards, nursing care or infrastructure. We will go the extra mile to do what it takes to ensure their well being.

At Apollo Hospitals, the call for conscientious medicine is one that we respond to with unparalleled zeal. For every doctor and consultant associated with our organisation, the responsibility and ownership they take for another person's well-being is the difference between seeing medicine as a profession and a calling. Every day, our eight thousand-strong battalion of clinicians, doctors, surgeons and medical staff are kept on their toes providing every patient with the luxury of medical experience and expertise, and the confidence of a long history of service.

For many a generation, Apollo Hospitals represents a one-stop shop for all medical needs. We are the community's family doctors with access to international resources and technology. To provide each patient with the best, and treat them as one of our own, Apollo Hospitals has also gone beyond the call of clinical expertise to provide the complete gamut of healthcare services including specialised nursing, physiotherapy, rehabilitation and dietetics. For every patient walking through the doors of an Apollo Hospital, we endeavour to provide the perfect balance between historic success and present expertise, going the extra mile to ensure them that they are in safe hands.


It is this balance that resonates loud and clear in the stories that have emerged from across the board at Apollo Hospitals in FY16. While one team of doctors worked for ninety-six hours through the torrential December floods in Chennai to successfully deliver seventeen babies, another performed for the first time in Asia a complex en-bloc combined heart and liver transplant considered technically demanding and physically strenuous. A boy from Delhi received a bone marrow transplant and a man from Jharkhand had his shattered pelvic bone restructured in just a day. As a nod of acceptance of medical expertise, Indian Institute of Technology Bangalore announced a collaboration with Apollo Hospitals in the city to conduct a year-long certificate program in healthcare management. Not the least of recent successes, Apollo Hospitals was nominated along with AIIMS to connect with doctors in Bishkek, Kyrgyzstan, to explore teleconsultation opportunities as a part of the Central Asian E-network which looks to channel India's IT expertise towards greater global healthcare provision.

It is undoubtedly evident, therefore, that every consultation, procedure and interaction with a patient at Apollo Hospitals is the cumulative result of years of experience, a rich history of excellence, a dynamic set of specialists and the value the organisation places on a person's life. Apollo Hospitals is firmly rooted with one step in the past, taking strength from a deep heritage and position of trust, and the other in the innovations of the present, learning to grow and adapt to the changing face of patient needs today. For the patient, there is no better place to be than in the shadows of such giant strides.

Accreditations is a validation of the quality standards of clinical protocols and practices. Its a seal of approval given by private, independent groups. In our commitment to meet the best international and national standards, we seek accreditation wherever we can.



## TRUST OF 45 MILLION PATIENTS BUILT OVER 33 YEARS OF CAREGIVING

 The Week-Nielsen Best Hospitals Survey 2015 ranks Apollo Hospitals, Chennai as the Best Multi-Specialty Private Hospital in India



15+ million

Preventive Health Checks

Patients from  
120+ Countries

60,000

Dedicated Caregivers

69	Over 9500	Over 7000	Over 55
Hospitals	Beds	Clinicians	Specialties



# VALUING CLINICAL SUPERIORITY

Fifty-five specialties, cross-pollination of ideas, state-of-the-art technology, and an organisational structure conducive to collaboration —Apollo Hospitals provides the perfect setting to the harmony of experience with innovation. Coupled with the unparalleled commitment to patient safety and safe outcomes, the healthcare experience at Apollo Hospitals consistently echoes our fundamental belief that our body is priceless and life invaluable. Here, patients have access to the best minds, enviable confidence and superlative resources, forever positioning them at the cutting-edge of medicine, with experience providing the safety net and innovation pushing the boundaries. At Apollo Hospitals, we strive to equip ourselves, our knowledge bases, our labs and our clinics to provide only the very best to every patient walking through our doors.

370,000+  
Admissions  
FY 16

3,300,000+  
Outpatients  
FY 16

**EXCELLENCE.**  
**EMPATHY. EXPERTISE.**

Any organisation's commitment to excellence is best judged by a close look at its internal policies, procedures and protocols, and at Apollo Hospitals, what happens behind the scenes forms the backbone of the complex machinery that makes up the organisation. Committed to providing the best care to all patients through every step of the healthcare experience, the company has drawn up a plethora of checks and balances to ensure clinical excellence and utmost accountability. It comes as no surprise that Apollo Hospitals was the first corporate hospital group to start benchmarking and monitoring clinical outcomes as early as 2005. All branches of Apollo Hospitals fall strictly under the aegis of The Apollo Standards of Clinical Care (TASCC), comprising of six independent checking mechanisms that dictate and monitor a profusion of safety procedures and standardisation needs. The Apollo Clinical Excellence I and II incorporate various quality parameters to monitor clinical outcomes, including complication rates,

mortality rates, and one-year survival rates. The Apollo Mortality Review aims to prevent recurrence of triggers and is reviewed through a peer-review checklist. The Safe Surgery and ICU checklists ensure patient safety and deter omissions and errors of memory in high pressure situations. The Apollo Quality Plan spans parameters including clinical handovers, international patient safety goals and surgical care improvement. The Apollo Incident Reporting System helps track and follow-up factors that affect health of patients, families as well as staff. Finally, the Apollo Critical Policies, Plans and Procedures is a set of twenty-five protocols to improve quality care and ensure patient safety.

While patients often never come face-to-face with the specifics of most of these policies and procedures, their impact is unquestionable. Having such a rigid means of ensuring checks and balances leads to a culture of safety that permeates the entire corporate structure, promoting an ecosystem conducive to innovation,

CLINICAL  
EXCELLENCE  
Our Proudest Legacy

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The Apollo Standards of Clinical Care (TASCC) embodies the highest standards which Apollo aims to establish for all its hospitals. The average scores of TASCC (which include Apollo Clinical Excellence dashboards ACE 1 and ACE 2, Apollo Quality Program, Apollo Mortality Review, Apollo Incident Reporting System and Apollo Critical Policies, Plans and Procedures), are on an upward trajectory, indicating increasing standardisation of processes and relentless pursuit of excellence across the Apollo Group Hospitals. ACE@25 was renamed and upgraded to ACE 1, during the course of the continuous improvement journey.

collaborative learning and the augmentation of knowledge. This was perhaps best showcased in a historical event in Chennai, where twenty-three different organs were harvested from five different patients on a single evening, soon followed by ten different transplantation procedures the same day. Such complex simultaneous procedures speak volumes of the coordination and control that extends between and amongst teams at the hospital. At Apollo Hospitals, strict safety requirements have enabled an atmosphere of co-sharing expertise, allowing people to grow and support each other. It is this growth, support and excellence that has led to the immense confidence that is often associated with the Apollo name. For patients, the group promises not merely rigorous safety checks and evidence-based quality care, but an environment that is favourable to collaboration and has resulted in many medical watershed moments. Just in the area of transplantation, Apollo Hospitals can boast of multiple firsts, including the first paediatric

liver transplant, adult cadaveric transplant, liver kidney transplant and simultaneous liver-kidney-pancreas transplant.

Such clinical expertise is best portrayed in the numerous Centres of Excellence hosted across the hospitals, in specialties including orthopaedics, nephrology and urology, cardiology, bariatric surgery, cancer/ oncology, transplants, emergency care, and preventive health care. The testimonials for the Oncology Centre for Excellence span far and wide, ranging from Australia, Bangladesh and Oman to Uganda, Tanzania and Kenya. At the Cardiology Centre, over 99.6% of all cardiac bypass surgeries are beating-heart procedures, ensuring quicker and easier post-operative recovery. The Bariatric Surgery Centre is no different, with accolades pouring in from far and wide.

Internally as well, there is a significant drive towards pushing boundaries, calling upon doctors and consultants to innovate with a view to rendering the patient the best

possible treatment. The group publishes 'New in Medicine,' a periodical dedicated to the latest in the areas of drugs, clinical research, medical devices, and treatment guidelines and the Clinical Innovation Report. An annual awards function felicitates innovation and quality internally, across the Apollo Hospitals family.

Over the year 2015 alone, the organisation has showcased its clinical excellence in multiple cases from around the country, the most interesting of which was the one-year-old Kenyan child who underwent a successful liver transplant in Delhi.

The Apollo Hospitals Group was the first corporate hospital group in India to start benchmarking and monitoring clinical outcomes in 2005. The Apollo Hospitals Group was also the first corporate hospital group to start publishing data pertaining to

clinical performance in 2009 in the annual Apollo Excellence Report.

ACE@25, comprising of 25 indicators benchmarked against the best-published outcomes in various specialties, is a clinical balanced scorecard focusing on clinical outcomes, incorporating parameters, which are mission critical for the clinical milieu of our organisation. This balanced scorecard focuses on providing evidence-based quality care and a safe environment to our patients. It has, in addition, strengthened the functional efficiency of our hospitals, stimulating quality improvement while reducing variations. ACE@25 incorporates outcome measures involving complication rates, mortality rates, one year survival rates and average length of stay after major procedures like liver and renal transplant, CABG, TKR, THR, endoscopy, large bowel resection and MRM covering all major specialties.

## Patient Testimonial

"I am a 65-year-old Scottish gentleman with morbid obesity and life threatening co-morbidities like hypertension, diabetes and high cholesterol, and was on medication for the same for six years. I also used C-PAP machines for ten years to combat my sleep apnoea. When I wanted to travel to Chennai, I went on Google search and found that Apollo Hospitals was the best tertiary care hospital in the region. I found out about Dr. Rajkumar Palaniappan and learnt that the Apollo Bariatric Institute had introduced Robotic surgery in India. My surgery happened to be the first Robotic Gastric bypass in India and am so happy that I could get it done under one of the most well equipped tertiary care set-ups. One year since my surgery, I can't believe I lost 66 kgs and am now not on any support for my C-PAP, no medication for diabetes, hypertension and high cholesterol"



## Important outcome measures

Indicator	Benchmark	Benchmarked against
CABG mortality rate	0.60%	A Leading US Hospital*
Complication rate post coronary intervention	2%	A Leading US Hospital*
ALOS post angioplasty	2.5	US National Average
ALOS post total hip replacement surgery	5.2 days	Agency for Healthcare Research & Quality US
ALOS post total knee replacement surgery	4 days	Agency for Healthcare Research & Quality US
Complication rate total knee replacement surgery	0.83%	A Leading US Hospital*
Door to CT or MRI time in stroke in ER	60 minutes	Internal Apollo
Catheter related blood stream infection (CR – BSI)	1	National Healthcare Safety Network
Ventilator Associated Pneumonia (VAP)	0.9	National Healthcare Safety Network
Catheter related urinary tract infection (CR – UTI)	2	National Healthcare Safety Network

\* Name protected to ensure privacy



## OUR COMMITMENT TO PATIENT SAFETY

Patient safety is a top priority at all our hospitals. Many of our hospitals have an increasing number of people with complex and acute problems and multiple comorbidities. Early identification and intervention for such in-patients who are at risk of significant physical deterioration, is extremely important. Attending nurses should have the ability to recognise early signs and symptoms of deterioration in a patient's condition and respond quickly to prevent a cardiac arrest. Quick Response Teams (QRT) have therefore been created. Groups of five nurses have been given intensive training to deliver critical care in response to grave clinical deterioration of a patient located outside a critical care unit. These teams can be assembled quickly and are available 24/7.

*Ensuring patient safety in the lab through the use of barcodes*

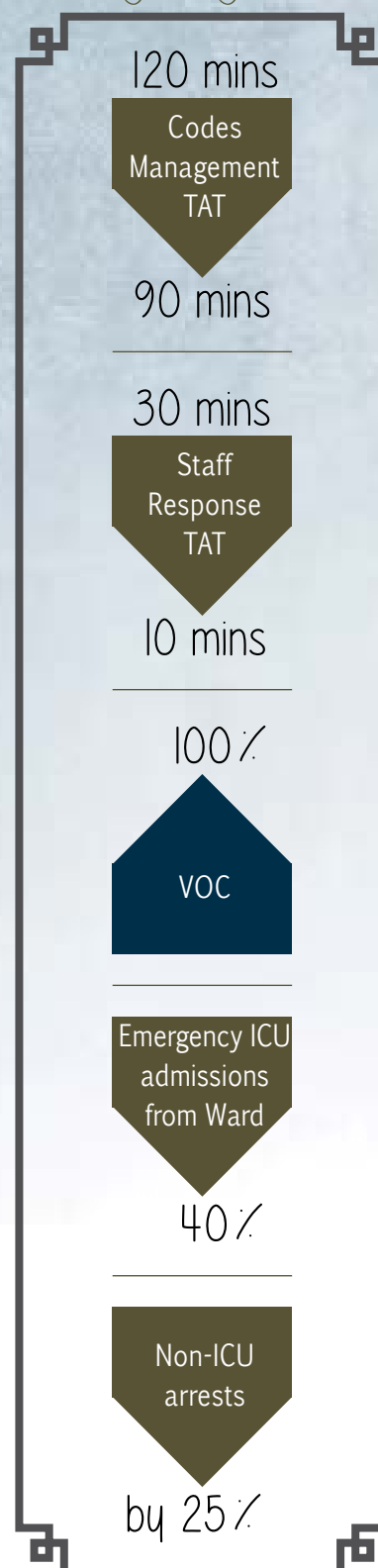
In an effort to ensure patient safety and privacy in the diagnostic lab, we have developed barcode labelling for patient samples. This closes the loop on our commitment to ensure utmost safety for our patients' data, samples, and test results. The paperless barcode system enables efficient handling of lab samples with near zero manual intervention and decreases turn around time.

## Risk Reduction in Anaesthesia and Sedation

Sedation and anaesthesia are commonly viewed as a continuum from minimal sedation to full anaesthesia. Procedural sedation is often performed in many areas of the hospital outside of the operating theatre. During sedation a patient's protective airway reflexes are at risk.

Sedation and anaesthesia use are complex processes and must be integrated into patient care planning; they require comprehensive patient assessment, continued patient monitoring, and objective recovery criteria. The process has to be standardised across the hospital. Committed to continuous improvement, an initiative was rolled in Kolkata to ensure zero adverse events in anaesthesia and sedation. Post implementation, the overall Hazard Score improved dramatically by nearly 90% over four quarters.

## Benefits of QRT



## APOLLO LEVERAGES TECHNOLOGY PURPOSEFULLY FOR BEST IN CLASS PATIENT SAFETY PRACTICE

### OUTSTANDING ICT INNOVATION AWARD

### HIMSS-ELSEVIER DIGITAL HEALTHCARE AWARD



## CLINICAL ANALYTICS FOR INFECTION CONTROL

This in-house developed solution has been recognised as the most innovative, creative and "out-of-the-box" ICT solution that can be used to improve patient care and safety.

Infection control and timely information on Infection control patterns, is key to ensuring higher levels of clinical outcomes.

Collection, timely feedback of process, and outcome surveillance are some of the challenges faced by the Infection Prevention and Control team.

This innovation ensures timely communication of surveillance information to both clinical and non-clinical teams using analytics and related tools to mine Big Data. Earlier infection control surveillance was carried out manually with data extracted from lab reports. The award winning project automates the extraction and analysis processes enabling easy processing of huge laboratory data quickly and efficiently.



### CLINICAL AND OPERATIONAL BENEFITS

The tool analyses the antibiotic susceptibility of different organisms to different antibiotics—an extremely important aspect of infection control practices as it indicates which antibiotics can be used in the hospital, which ones to avoid, and which ones to preserve for future use. Microbiologists are alerted when there is a multidrug resistance superbug isolated in the hospital and the infection control team springs into action to take necessary steps to prevent its spread to other patients. The tool can pinpoint where the organism is located—the ward, doctor, patient—helping direct infection control action where needed. It can also analyse the emergence of new organisms. As new pathogens emerge often, especially in immuno-compromised patients, it can help in the early detection of a resistant bug. This automated analytical process helps enormously in better patient care management.

# HEART INSTITUTES

Our Apollo Heart Institutes perform a multitude of treatments and procedures in cardiology and cardiothoracic surgery. Our team of cardiologists and cardiothoracic surgeons are trained at the top institutes in India and abroad and are dedicated to the prevention and treatment of cardiac disease. Our pioneering work in these areas have produced better outcomes and improved quality of life for thousands of cardiac patients who visit us each year with complex heart problems. Our infrastructure is best in class and supports the complex nature of the cardiac care provided. Third generation Cath Labs, Cardiac Critical Care Units and Intensive Care Units support our experienced cardiologists and post-operative care teams, making us one of the best heart hospitals in the world.



HEART INSTITUTES

10,000+  
Cardiac Surgeries  
FY 16

Success rates  
comparable to  
international  
benchmarks

**PIONEERING.**  
**PROGRESSIVE. PRECISE.**

We offer a range of cardiac diagnostics, treatments, and surgeries for children, adults, and geriatrics. Our subspecialty disciplines differentiate themselves through the calibre and experience of our doctors who are trained in cutting edge trends and technologies and can cater to the unique needs of any patient demographic, be it the most complicated coronary artery bypass surgery, heart surgery for children, or surgery for all types of valvular heart diseases. Over 99.6% of cardiac bypass surgeries are Beating Heart surgeries, ensuring quicker and easier post-operative recovery. We are pioneers in Coronary Artery Stenting and Laser Angioplasty and experts in advanced techniques such as Percutaneous Transluminal Septal Myocardial Ablation.

## Sub-Specialties

- Interventional Cardiology
- Electrophysiology
- Cardiothoracic Surgery
- Advanced Heart Failure Clinic
- Blood Clotting Disorders & Vascular Surgery
- Minimally Invasive Bypass Surgery
- Robotic Cardiac bypass Surgeries
- Marfan Syndrome: Bentall Procedures
- Valve Clinics
- TAVR
- Cardiac Rehabilitation





## Case Study 1

### A first of its kind in India. 11 day old baby suffering from Ebstein's Anomaly successfully treated

The Paediatric Cardiology team in Hyderabad successfully performed a complex and rare cardiac surgery on a prematurely born tiny baby suffering from Ebstein's Anomaly - a critical congenital heart ailment.

The baby's right side heart valve was abnormal and leaking profusely. Blood was not flowing to his lung for oxygenation. This life threatening abnormality was detected by the doctors through a fetal echocardiography when the baby was still in the womb.

The baby was born prematurely at 34 weeks with growth retardation. The natural connection between his aorta and the artery to the lungs was closing and it was imperative that surgery be performed on a war footing. This was a challenging task because of his deteriorating condition, tiny size, small size of the heart (no bigger than an adult thumb) and organs.

The 11 day old baby, weighing a mere 1.2 kg at birth, was placed on Cardiopulmonary bypass with specially designed circuitry in preparation to working inside the heart. The baby tolerated the procedure well and the surgery was a success.

A multidisciplinary team was required right from diagnosing his condition inside the womb to his recovery.

This high-risk surgery was a first in India. The surgical team stopped at nothing to ensure the baby's wellness. We value life and will do what it takes to save one.

## Case Study 2

### Revolutionary awake cardiac surgery under thoracic epidural anaesthesia

A male, 66 years and a heavy smoker was admitted with acute cardiogenic shock, with pulmonary edema, severe LV dysfunction, renal dysfunction, and respiratory failure. He was put on a ventilator and given antibiotics, ionotropes, diuretics, and antianginal drugs. The support was continued for 20 days, after which he was put on BiPAP for 10 days. After a week CAG was done which suggested severe diffuse critical TVD. With a combined Heart Team the patient was scheduled for an elective CABG, which was very high risk in view of COPD, recent chest infection requiring BiPAP support and HRCT.

Because of the high risk of general anaesthesia, the doctors decided to perform awake off pump CABG under high thoracic epidural anaesthesia (TEA). Routine standard monitoring was put in place. The patient was given unrestricted airway access and only mild sedation. The standard midline sternotomy was performed. Routine OFF PUMP coronary grafting was performed. The sternum was closed with wires and two mediastinal drains and the patient was shifted to ICU in stable hemodynamic condition.

This was a tremendous effort in a very high risk case by a multi-functional team of doctors, surgeons, and nurses. The awake surgery was the only option they had to treat the patient. Focused on his complex condition, they ventured to do what was best for him. The patient recovery was remarkable.

## Case Study 3

### Apollo Cardiologists perform a pioneering cardiac procedure 'Transcatheter Aortic Valve Implantation' on an 80 year old man

A pioneering cardiac procedure, Percutaneous Transcatheter Aortic Valve Implantation (TAVI) was performed on an eighty year old man with critical calcific Aortic Stenosis by Dr. P. C. Rath and team of Dr. Manoj Agarwal, Dr. B. Dikshit and Dr. Sundar Apollo Hospitals, Hyderabad. This procedure is being performed for the first time in this part of the country.

Narrowing of the aortic valve of the heart is called Aortic stenosis. This leads to gradual petering of blood flow and consequently the heart has to make an increased effort to pump blood. This condition can lead to heart failure. In normal circumstances an open heart surgery is performed on such patients to replace the valve. However in the case of this patient due to his advanced age and renal failure, an open Heart Surgery was considered to be a high risk and therefore the minimally invasive TAVI was preferred.

TAVI was performed in the cathlab from the groin region like in angioplasty. After the patient was administered short general anesthesia, the valve was put to the heart through the femoral artery and was implanted accurately under the guidance of fluoroscopy and Trans Esophageal ECHO. The duration of the procedure was approximately one and half hours. The patient was conscious immediately after the procedure and was discharged after 5 days.

## Patient Testimonial

Dear Team Apollo,

I am a 63 year male living in Chennai. I run my own business for the last 35 years, serving the Construction Industry. I recently went thro CABG in your Main hospital and wanted to share my experience with the doctors and Management.

It has been my mission in the last 35 years to bring the latest in construction methods, technologies, equipment and systems into India thro my company ACT. I had been successful many times, but there have also been failures. I can imagine that your tireless Chairman, Dr. P.C. Reddy would have had very similar experiences, the only difference is that you all deal with humans whereas I deal with inanimates.

The care and attention to detail at Apollo is simply amazing. Thousands of people walk in everyday and no two persons speak the same language. Truly a multi racial, multi language patient fraternity. You seem to have a seamless way to greet the patients at the entrance and then walk them to wherever they want. Help is always there in some form. No one is shouting for anything. There is a system even in this crowd. Truly you have allocated jobs as per skills. Bengali patients are maximum. Nurses are mostly from Kerala. Cleaning and house keeping from Bihar and Orissa. Doctors have a good hierarchy of reporting and see the patient everyday. You have an army of doctors as "consultants" and the facilities you give them are on par with the best in the world. I have been to some of the best hospitals in the world and I can vouch for my statement. Though it looks like a chaos, the system works well. They have good clean rooms and OTs. The sheer volume of cases handled by this hospital is phenomenol. In terms of foot falls, this may be highest in the world, based on patients treated per sq ft. I cannot imagine the load on laundry, house keeping, hygiene, catering, clinical waste disposal, irradiated wastes and each specialist's doctor's special requirements. The excellent idea of having all treatments under a single roof is a feather in your cap. I wonder when does the hospital sleeps?

We hear many nasty things about the running of Apollo outside, in media and gossip. I have now completely changed my opinion about what you all do inside this citadel. Patient management is amazing. No one is rushing or running or shouting in the corridors. I am saying all this because I have experienced it.

Now coming to my experience, it was a heart condition called SVT. I was sweating profusely and had very high heart beat when I left a construction site on that fateful morning on 29th March. Initially I wanted to go home and lie down but when the car reached the gate, I decided to go to the Apollo Specialty nearby. Then I asked driver to wait in the car park and I walked into the emergency and asked for a ECG myself. When they took the first ECG there was commotion around me. They wheeled me into another room and took another ECG. That's when they asked me if anyone is with me. I gave them my cellphone and asked them to dial my brother's no and then once he was here, they just put me in an ambulance and rushed me to the main hospital. my brother sitting with me in the ambulance. On hind sight, if I had not decided to go to the hospital but home, then probably I will not be alive to send this mail today.

The whole event was managed beautifully from the time the doctors took charge of me till I was discharged on 8th April. In the CCU and ICU life is tough for the nurses, but they are always smiling. Even though it looks like a factory with steady inflow and outflow of patients, the nurses never made a mistake in medication or for that matter in any process.

Once shifted to the room, the care continued. Nurses are real angels. They make you smile and their mild flirting peps up the patient too. I was so pleased with the attention that I made it a point to call each nurse by her name. When I was discharged, they accepted a large cake as my token of the care they gave me. They are like my own daughters and I did what I would do to my daughters. Thats all. It is nice to see an Institution of this size where there is no corruption. Everyone has to follow rules and no skipping turns.

After discharge, I had a small complication and again this was handled beautifully. There was excellent communication between the surgeon, general physician and cardiologist. It was amazing to see one surgeon attending on another surgeon's patient as he was busy in a case in OT and did not want me to go back home without seeing a doctor. I dont think this sort of cooperation between doctors can be seen elsewhere. I can go on and on but will stop here.

On the whole, my experience at Apollo was fantastic. Hats off to you Sir, Dr P.C. Reddy for building a truly world class institution in India. I wish you do the same in every city and build micro Apollos in our villages. In the building industry, we are now talking about "Affordable Housing" pioneered by our PM. Similarly you can do "Affordable medicare" in our smaller towns and villages.

The doctors involved in my surgery were Dr. L.F. Sridhar. Dr. Vijayachandra. Reddy and Dr JRS. For them, I may be just a statistic, but for me they will remain very special.

I will propagate my views on Apollo wherever I can, as a small token of return gesture.

JAI HIND.

Warm Regards

# CANCER INSTITUTES

The story of cancer in India is very real. There is an alarming rate of increase in cancer incidence and predictions for the future sound dire. But at Apollo we firmly believe Cancer is Conquerable. Our precision diagnostics and technology led cancer treatment is cutting edge and a key differentiator in cancer cure.

The Oncology Team at Apollo Hospitals specifically focuses on cancers most common in India. Grounded in the expertise of over 125 Internationally and nationally trained surgical, medical and radiation specialists, our 9 dedicated centres offer comprehensive 360 degree cancer care across gender and age. We provide the full range of services to our patients from prevention to education, early diagnosis, pretreatment evaluation, staging, best treatment, and surveillance for recurrent disease, support services, and end-of-life care. Our specialists collaborate at these centres and with the help of state-of-the-art diagnostic and therapeutic technology, provide patients with optimal, evidence-based, customised treatments for removal of cancer cells from the body through surgery, radiation and medication. We are the only dedicated organ specific cancer centre among corporate hospitals in the country today.



## CANCER INSTITUTES

**57,000+**  
Chemotherapy Sitzings  
FY 16

**160,000+**  
Radiotherapy Sessions  
FY 16

**COMPREHENSIVE.**  
**COLLABORATIVE. COMPASSIONATE.**

This is our commitment to offering the best to our patients. We launched India's

- † first CYBERKNIFE Robotic Radio Surgery System
- † first Novalis Tx System
- † first PET-MRI suite
- † first TrueBeam Stx

and will soon inaugurate the

- † **Proton Therapy Centre**  
(the first in South Asia, Africa and Australia)

**3,000+**  
Robotic Surgeries  
till date

## Sub-Specialties

- † Surgical Oncology
- † Radiation Oncology
- † Hematology & Medical Oncology
- † Interventional Oncology
- † Neuro Oncology
- † Paediatric Oncology

**CANCER  
IS  
CONQUERABLE**

