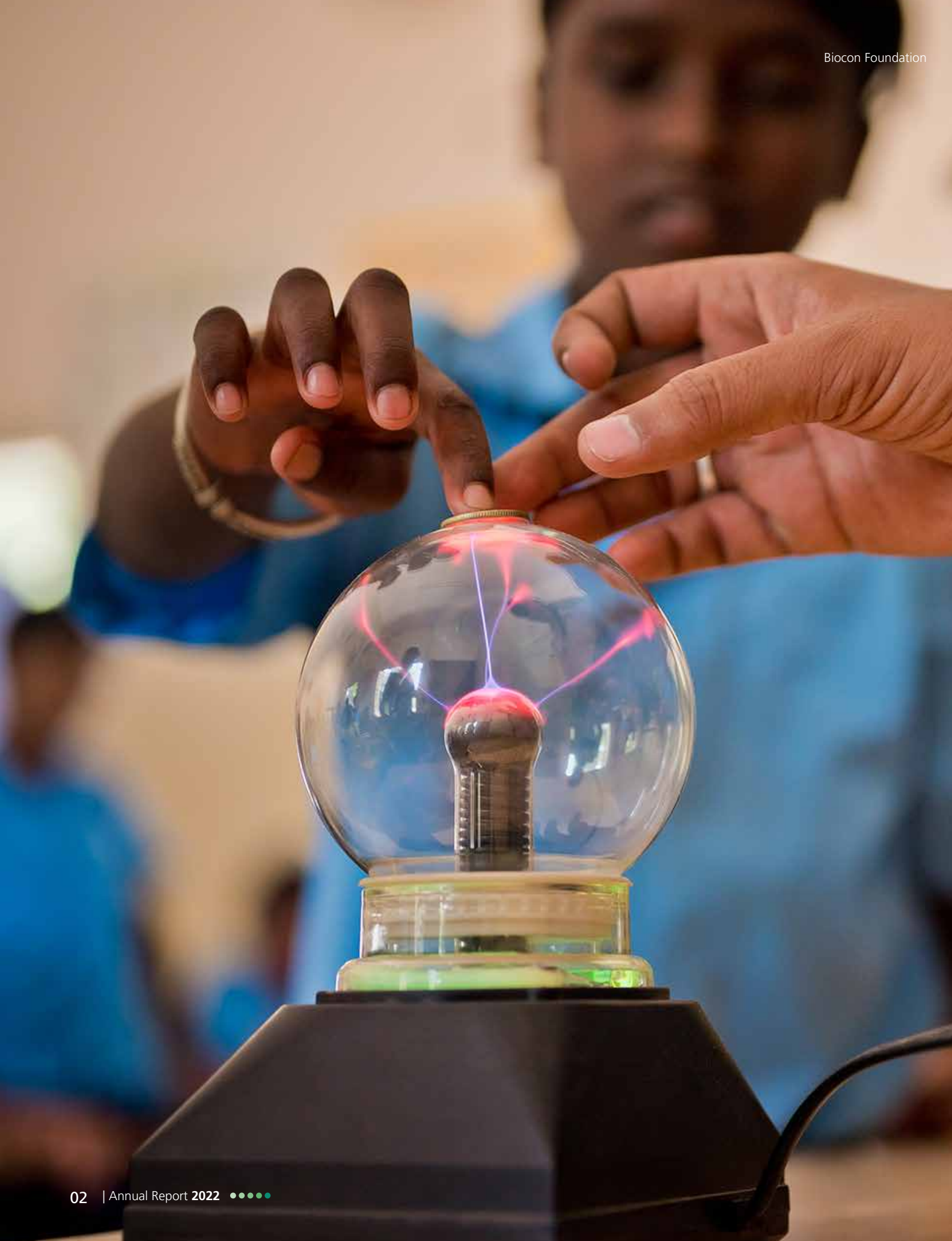




# Transform Action



# Contents

<b>Our Vision</b>	04
<b>Our Mission</b>	05
<b>Our Reach and Administration</b>	06
<b>A Message from the Managing Trustee</b>	08
<b>Sustainable Development Goals &amp; Biocon Foundation Programs</b>	12
<b>Schedule VII CSR Activities &amp; Biocon Foundation Initiatives</b>	14
<b>Healthcare</b>	
Vitalising Disease Prevention & Management	15
<b>Education</b>	
Enlightening & Empowering	48
<b>Environmental Sustainability</b>	
Resuscitating Natural Resources	54
<b>Grant-In-Aid</b>	
Financial Assistance for Commendable Projects	64
<b>Awards and Accolades</b>	73
<b>Biocon Foundation in the News</b>	74



## Vision

To provide socioeconomic inclusion through innovation and sustainable models that deliver scalable solutions.





## Mission

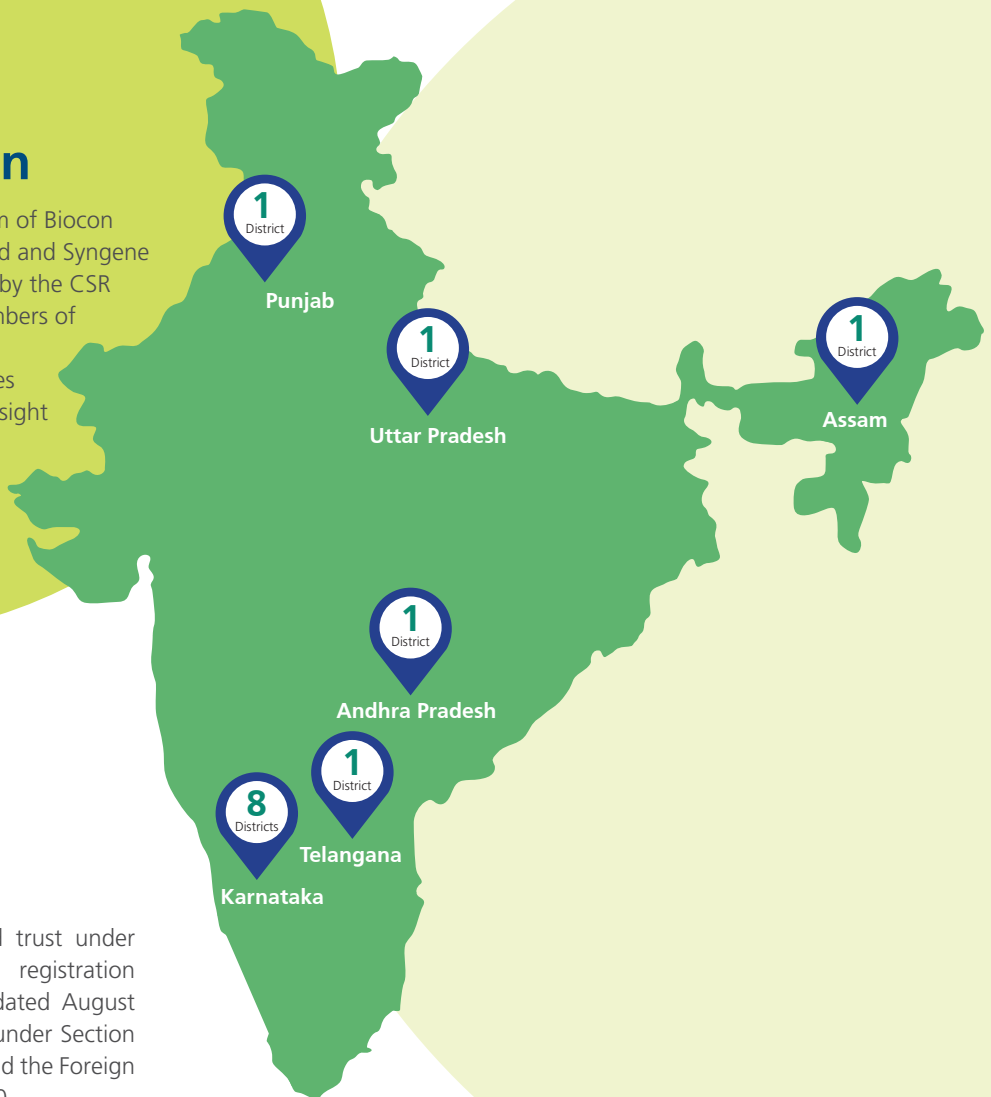
To support interventions that resolve select primary issues faced in sustainable development. Whilst doing so, we shall conform to statutes and policies and adhere to the principles of responsible business practices.

## Strategic Objectives

- Vitalize preventive and primary healthcare
- Mitigate hunger, poverty and malnutrition
- Provide safe drinking water, sanitation and hygiene
- Empower communities through equitable educational opportunities
- Ensure the protection of the environment and natural resources
- Augment essential rural resources
- Disaster relief, rehabilitation and reconstruction
- Reduce inequalities and empower the marginalized
- Conserve traditional art, culture and sites of national importance
- Support projects that create and nurture science and technology
- Facilitate the development of sports
- Contribute to welfare funds with statutory approval

## Our Reach and Administration

Biocon Foundation, the CSR arm of Biocon Limited, Biocon Biologics Limited and Syngene International Limited, is guided by the CSR Committees, composed of members of the Board of Directors of these companies. The CSR Committees provide strategic direction, oversight of CSR policy and monitor the execution of the CSR activities by the Foundation.



Biocon Foundation is a registered trust under the Indian Trusts Act of 1882, registration number ANK-4-00410- 2006-07 dated August 09, 2006. The trust is recognized under Section 80G of the Income Tax Act 1961 and the Foreign Contribution (Regulation) Act, 2010.

The Managing Trustees of the Biocon Foundation are:

- **Ms Kiran Mazumdar-Shaw,** Founder and Managing Trustee
- **Dr John Shaw,** Trustee

The members of the Biocon Limited CSR Committee are:

- **Ms Mary Harney,** Chairperson
- **Dr Vijay Kuchroo**
- **Professor Ravi Mazumdar**

The members of the Biocon Biologics Limited CSR Committee are:

- **Ms Kiran Mazumdar-Shaw,** Chairperson
- **Ms Nivruti Rai**
- **Mr Peter Piot**

The members of the Syngene International Limited CSR Committee are:

- **Professor Catherine Rosenberg,** Chairperson
- **Dr Vijay Kuchroo**
- **Ms Vinita Bali**

The Mission Director of Biocon Foundation is **Dr. Anupama Narayana Shetty.**



# A Message from the Managing Trustee

**"I alone can't change the world, but I can cast a stone across the waters to create many ripples"**

- Mother Teresa


Dear Stakeholders,

The past year has been a time of recovery and building back from the global devastation that the pandemic caused. World over, governments, companies, societies and families have been putting back the pieces, transforming through resilience and action and this time, with sustainability as a guiding force.

In India, every industry and organization rose up to play their part in addressing the COVID-19 crisis that broke in 2020. The biotech and pharmaceutical industry were called on and responded by drawing on their significant strengths in research, innovation and manufacturing infrastructure. The Indian biotech industry developed and manufactured diagnostics, therapies and vaccines at speed and scale to save countless lives.

Even as the government and industry joined hands to respond to the need of the hour, the pandemic unleashed opportunities we never thought existed. India's life sciences ecosystem was galvanized to indigenously develop a range of innovative bio-medical solutions - RT-PCR diagnostic kits, vaccines, therapies, mobile apps for contact tracing and vaccine registration, AI-based medical imaging and telehealth tools.

At the Biocon Group too, our problem-solving spirit came to the fore, driven by our passion for bio-technology-led innovation and equitable health for all.



**Kiran Mazumdar-Shaw**  
Executive Chairperson



## Transform. Action.

These keywords express our ethos, articulate our purpose and direct our actions at the Biocon Group of Companies. We envision a business that builds on the promise of data and analytics, one that has impeccable compliance, world-class ethics and robust corporate governance. We want to build a technology-led company, conscious of ESG (environment, social, governance) concerns that creates exponential and enduring value for our stakeholders, while impacting humanity in profound ways.

Our commitment to ESG is at the heart of our business, and we are taking deliberate actions to transform healthcare and the society and communities in which we operate. In this ambition, the Biocon Foundation is a powerful catalyst that creates a positive impact on people, patients, environment and society. The Biocon Foundation - CSR arm of the Biocon Group companies - leads interventions that address grassroots level issues to ensure socio-economic inclusion.

In FY22, our programs reached more than 200,000 people's lives in 6 states, through more than 10 NGOs, leading academic institutions, hospitals, and other partners. We took action for better nutrition and healthcare, improved education, funded cutting-edge academic research and rejuvenated waterbodies. We continued our fight against COVID-19 with vaccinations, with relief packages and several other measures. We engaged in research that helped address major conditions, such as NCDs and mental health in an innovative manner, with the community at the heart of all our interventions.

**“It is health that is real wealth and not pieces of gold and silver”**

- Mahatma Gandhi

At the Biocon Foundation, we believe that a strong primary healthcare system creates a foundation that nurtures good health and wellness for everyone. Our multi-pronged efforts around strengthening the primary healthcare infrastructure include on-ground and technology-enabled initiatives.

The eLAJ smart clinics in Karnataka focus on ensuring up-to-date electronic medical records (EMRs) that enable better diagnoses and care, empower doctors and allow for strategic medical interventions, like health camps. Besides bolstering the government's efforts to curb COVID-19 at the grass-roots, we continue to operate specialist clinics to give people access to expert consultations. This is combined with health awareness camps that share best practices on mental and physical well-being.

Our oral health program is at the intersection of technology, research and capacity building of frontline healthcare workforce; activities around this initiative continued despite the challenges of the pandemic.

Furthermore, the grants from the Foundation support renowned institutions, including the Indian Institute of Science, National Institute of Mental Health & Neurosciences, Institute of Bioinformatics and Applied Biotechnology (IBAB), St Johns Research Institute, and many other community-based organisations. I would like to acknowledge the resilience and perseverance of our research partners for their sustained efforts.

**“It is not beyond our power to create a world in which all children have access to a good education. Those who do not believe this have small imaginations”**

- Nelson Mandela

Schools are a fertile ground for shaping future citizens with balanced views, healthy habits, curiosity and scientific temperament. In order to provide equitable access and promote excitement about science, we are working with renewed focus to provide better learning opportunities at government schools. An experiential science learning program provides unique opportunity to government school students to interact with science models, conduct experiments, and thereby internalize science concepts.

Our holistic approach to school education puts equal emphasis on wellness, ensuring balanced nutrition through mid-day meals and regular health evaluation. Awareness of healthy living practices and women's health sensitization at schools also introduces positive mindsets to personal health.



**“If conservation of natural resources goes wrong, nothing else will go right”**

- M. S. Swaminathan

Climate change has become the uncontested priority for governments, organizations and individuals across the world. At the Biocon Foundation, we have an unwavering commitment to environmental sustainability. Our strategic initiatives to support urban mobility solutions, resuscitate and maintain sensitive lake ecosystems and create carbon sinks through urban micro-forests will go a long way in ensuring a sustainable tomorrow.

**“A woman with a voice is, by definition, a strong woman. But the search to find that voice can be remarkably difficult”**

- Melinda Gates

While much is always being said about the need to empower women, violence against women continues to be a major impediment to attaining gender equity. A strong coalition to address this deep-rooted issue is one which involves the authorities, NGOs and communities towards a concerted effort to extricate women from these situations, and more importantly, place them firmly and confidently on a new path to safety and inclusion. The Biocon Foundation supports Parihar, an initiative of the Bangalore City Police, which does this. The initiative brings together a strong ecosystem of support including short-stay home facilities, medical services, psychological counselling and legal aid to women.

**“If you want to leave your footprints on the sands of time, do not drag your feet”**

- Dr. A.P.J Abdul Kalam

As we celebrate the 75th year of Indian Independence, collective action is imperative to realize Vision 2047 – India in the 100th year of Independence, where every citizen prospers in a secure environment with equal access to healthcare, education and sustainable livelihoods.

Addressing development, social mobility and critical areas like health, education, environment and empowerment of under-resourced groups is what will define our future as a nation. Our actions must be led by the needs of the communities, informed by the situations, lives and on-ground realities of the people.

At the Foundation, our intrinsic connect with the community and unrelenting engagement at the frontlines pave the way for a nuanced understanding of fundamental issues that matter the most to the people.

This report shares an overview of the impact we have been able to make through the transformative actions of Biocon Foundation, for social good, in every way. We look back with pride on the positive social and environment change that the Biocon Foundation has been able to achieve, as we prepare ourselves yet again in our endeavors for enabling a better tomorrow.

**Let's reshape our future, together!**

Warm Regards,



**Kiran Mazumdar-Shaw**



# Sustainable Development Goals & Biocon Foundation Programs

The Biocon Foundation's Programs align with the UN's Sustainable Development Goals (SDGs)



## 01 No Poverty

- Primary Healthcare
- School Education
- Rural Development
- COVID-19 Relief
- WASH



## 02 Zero Hunger

- Meals to Frontline Health Workers
- COVID-19 Relief
- Curbing Malnutrition



## 03 Good Health & Well-Being

- Primary Healthcare
- E-Health
- Management of NCDs
- Women's Health
- Geriatric Health
- Child Health
- Mental Health
- Child-mediated health promotion
- COVID-19 Relief
- Miyawaki Afforestation
- Mass Transit System



## 04 Quality Education

- Learning Resources
- Experiential Learning
- eLearning
- Mobile Science Lab
- STEM Education
- Grant-in-aid
- Employee Engagement



## 05 Gender Equality

- Women's Health
- Women's Safety
- Domestic Violence Counselling
- Women and Child Helplines
- Rehabilitation of Women Victims



## 06 Clean Water & Sanitation

- Rejuvenation of Water Bodies
- WASH



## 09 Industry Innovation and Infrastructure

- Primary Healthcare Infrastructure
- School and Preschool Infrastructure
- Mass Rapid Transit
- WASH





## 10 Reduced Inequalities

- Women's Health
- Child's Health
- Geriatric Health
- Mental Health
- WASH
- COVID-19 Relief
- Women's Safety
- Rural Development
- WASH



## 16 Peace, Justice and Strong Institutions

- Women's Safety
- Domestic Violence Counselling
- Women and Child Helplines
- Rehabilitation of Women Victims
- Legal Aid to Women Victims
- Rescue of Women Victims



## 11 Sustainable Cities and Communities

- Mass Rapid Transit
- Miyawaki Afforestation
- Urban Landscaping
- Revival of Urban Water Bodies



## 17 Partnership for the Goals

- Government
- Tertiary Hospitals
- Research Institutions
- Oral Cancer Task Force
- Capacity Building
- Data Sharing
- Joint implementation
- Collaborative Research
- Grant-in-Aid
- Employee Volunteerism



## 12 Responsible Consumption and Production

- Revival of Water Bodies
- Miyawaki Afforestation
- Mass Transit System



## 13 Climate Action

- Mass Transit System
- Miyawaki Afforestation
- Revival of waterbodies



# Schedule VII CSR Activities & Biocon Foundation Initiatives

The Foundation's initiatives align with the activities of Schedule VII of the Companies Act of 2013



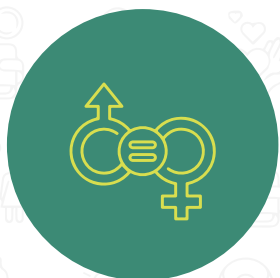
Eradication of Hunger & Malnutrition



Promotion of Healthcare & WASH



Promotion of Education



Promotion of Gender Equality & Women's Empowerment



Ensuring Environmental Sustainability



Restoration of sites of Historical Importance



Rural Development



Disaster Relief, Rehabilitation and Reconstruction



# Healthcare **Vitalising Disease Prevention & Management**



# eLAJ Smart Clinics





# Transforming Public Healthcare by Leveraging Technology

## Primary Health Centers - The Key to Inclusive Health

Geetha, 37, is a tailor from the suburb of Gattahalli, on the outskirts of Bengaluru. As with many small businesses, the lockdowns and disruptions due to COVID-19 severely affected her income and livelihood. With her diminished income, she could only afford the necessities, such as food and clean drinking water, in addition to keeping the utilities running at home. Everything else was a luxury, including healthcare. If not for her local Primary Healthcare Center (PHC), it would have been difficult for her to access health services. Over the last few years, she has relied heavily on the free services offered by the center.

This anecdote is true for millions of households across the country, and the impact of the COVID-19 pandemic has worsened their hardship. In such situations, where meagre earnings go towards basic needs like food and rent, healthcare takes a backseat. It's only the public primary healthcare system that can support such households. PHCs are a critical element to improving care at the grass-roots level - they provide last-mile healthcare and health education, maternal and child health services, access to major national health programs, and free essential drugs and diagnostics.



**At the Biocon Foundation, we believe that supporting the primary healthcare infrastructure is pivotal to Universal Health Coverage (UHC) and foundation for a healthcare system that supports good health and wellness for everyone. This is why our eLAJ Smart Clinics intervention aims to strengthen public healthcare delivery. We use technology to transform PHCs into comprehensive one-point treatment facilities with digitised clinical consultation, advanced diagnostic services and screening for non-communicable diseases.**

### Availability of Public Healthcare in India

Public healthcare infrastructure in India			Shortfall of healthcare centers in India		
<b>1,57,921</b>	<b>30,813</b>	<b>5,649</b>	<b>46,140</b>	<b>9,231</b>	<b>3,002</b>
Sub-centers (SC)	Primary healthcare centers (PHC)	Community health centers (CHC)	Sub-centers (SC)	Primary healthcare centers (PHC)	Community health centers (CHC)

\* As per March 2020 data from Rural Health Statistics, there were around 30,813 PHCs  
 Source: Government of India Ministry of Health and Family Welfare Statistics Division - Rural Health Statistics 2019-20



The number of doctors at PHCs has improved over the years - rural public health centers had 31,716 doctors in 2020-21 as compared to around 26,464 doctors in 2015-16 (as per data from 2021 data from Rural Health Statistics)



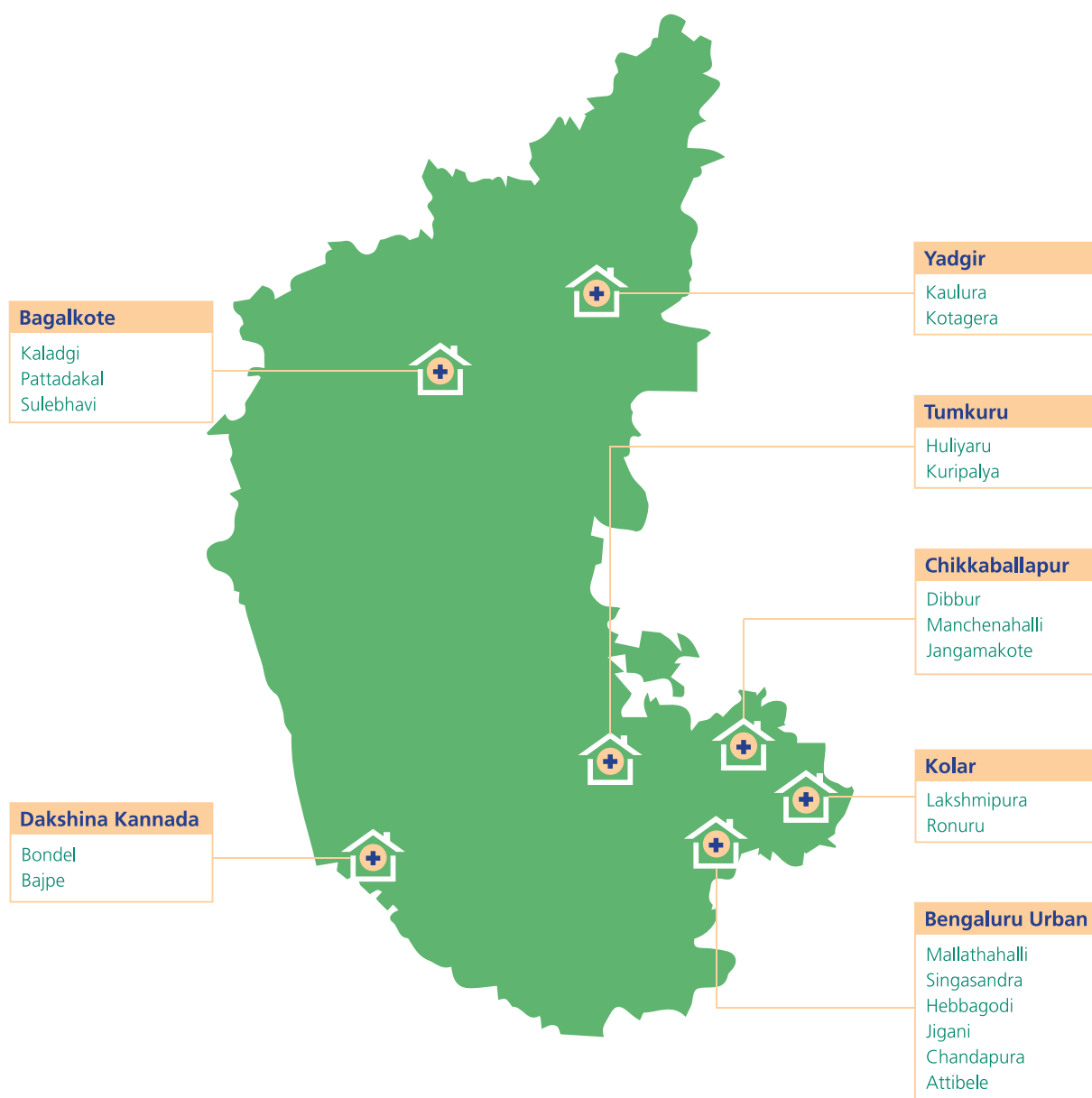
However, community health centers face a dearth of specialists, with only 4,405 specialist doctors against the required 22,000

## How Biocon Foundation transformed public health centers into smart clinics

To support the primary healthcare system, the Biocon Foundation, in partnership with the Government of Karnataka, started the eLAJ Smart Clinic program in 2016. The program supports the public healthcare system with access to medical and diagnostic equipment, improved resource availability and electronic medical records (EMR). The strengthening of diagnostic services and medical records enables doctors to provide better care and more accurate medical advice to patients.

Today, the program caters to more than one million people across seven districts in the state, at 20 government PHCs through a public-private partnership (PPP), and through three clinics run by the Foundation. At these clinics, the eLAJ dashboard captures critical patient data and clinical history, as well as other geographical and community related data. Rather than providing symptomatic solutions, this data allows doctors to provide a continuum of care with better long-term health for the patients.

## eLAJ Smart Clinics Across Karnataka - catering to over 1 Million People across the state



## Providing continuum of care with data from electronic medical records

Dr. Thara Nair, Medical Officer of the eLAJ clinic at Huskur in South Bengaluru, explains how the care provided at the clinic extends beyond one-time consultation, including ongoing quality healthcare for non-communicable diseases, like diabetes.

“As a diabetologist, the work that I do through the eLAJ clinic gives me immense satisfaction. We have regular outpatients who visit our clinic. We also conduct camps in the nearby villages on a regular basis to monitor non-communicable diseases in the community. We provide free consultation which means quality healthcare and diagnosis becomes more accessible to the underserved communities in which we operate,” she says.

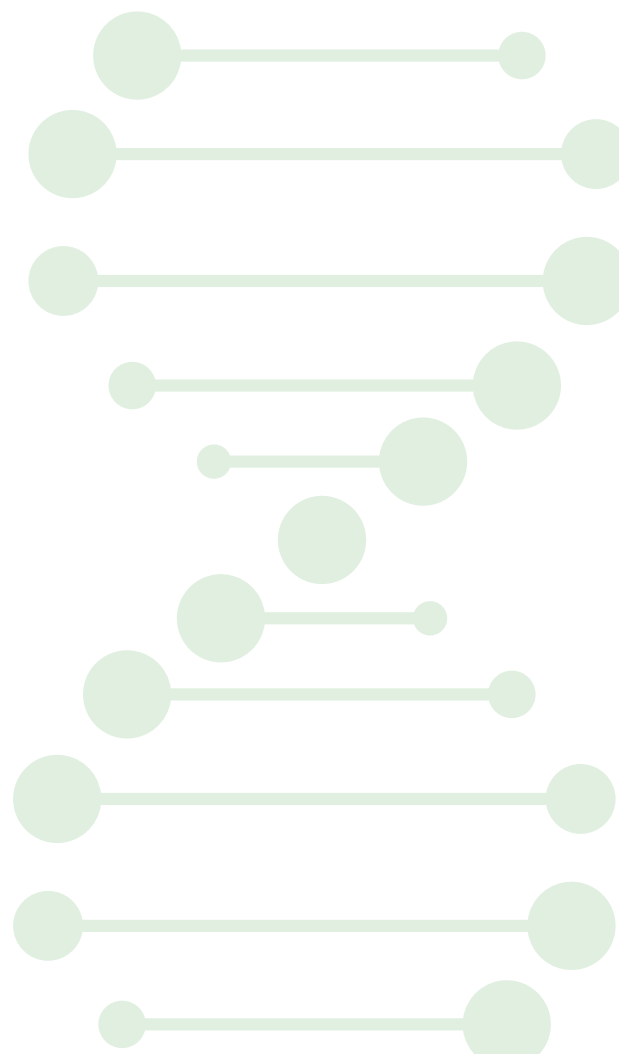
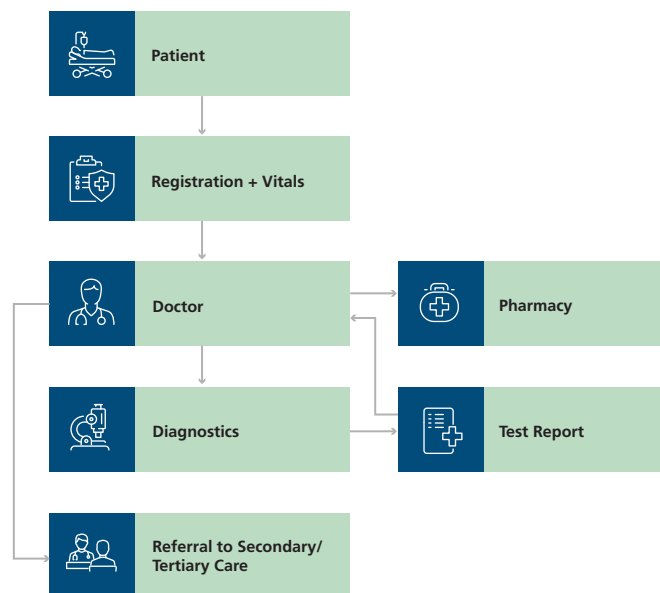
Dr. Thara is also thrilled with the foundation’s technology initiatives that allow monitoring of vital signs, multiple diagnostic tests, and most importantly, the generation of electronic medical records (EMR). She explains why this is important,

**“Electronic medical records are the basis for better long-term care and diagnoses. With the eLAJ EMR, we have a large database on community health. We are able to better diagnose and follow-up with our patients, based on the digital records of their medical history and demographic data.”**

Thanks to the eLAJ Smart Clinics, many members of under-resourced communities have access to high quality healthcare. Backed by technology, the doctors are empowered with information to provide care with a personal touch. Pushpa, a 73-year old homemaker and resident of Huskur, has nothing but praise for Dr. Thara and the clinic and how they have become an integral part of her life.

“My family and I have been relying on eLAJ clinic for our healthcare needs over the past few years. The clinic is accessible, as it’s at a walkable distance from my house. I visit the NCD (non-communicative disease) camps often, which provides free-of-cost and quality check-ups for my diabetes. The clinic is well-kept and the staff are friendly. I also like that Dr Thara, Medical Officer, gives personalised tips on healthy-eating and physical activities to maintain my health. I find myself consistently satisfied with the services provided.”

## Patient-Doctor interface at eLAJ



## Improving human resource availability and diagnostic capability

The Foundation is also focussed on improving human resource availability and diagnostic capability. Data entry operators at the points of registration and clinical examination help input accurate data into the EMR - a more detailed health record leads to more accurate diagnoses and better health in the long run. The Foundation has also made provision of laboratory diagnostic equipment, such as biochemistry and haematology analysers and lab consumables, besides appointing lab technicians to ensure delivery of comprehensive diagnostic services.

K. Nagmani, one of the lab technicians at the eLAJ Clinic, Hennagara, reflects the commitment of his colleagues across the program to nurturing good health, and their satisfaction in helping society.

**"I am extremely happy about working with the eLAJ clinic at Hennagara. Predominantly, our patients are elderly, above the age of 50 years, with very little knowledge about healthcare practices. In addition to my job of conducting various tests based on requirement, I also find it gratifying to support them, create awareness amongst them and convince them to follow their medication regime strictly. We continued our work during the peak of pandemic as well. I was not scared to work during this period as I believed that COVID-19 should be treated like any other disease and it was our duty as a primary healthcare center to support patients, who required medical help during this period," he says.**



**During the pandemic, when the healthcare system was particularly stressed, and needed all the help it could get to manage the overwhelming number of patients, our eLAJ program was well-positioned to support the government's mission to test, track and treat. Our staff rose to the occasion despite personal risk to boost the COVID-19 prevention and control efforts of the government.**

The Biocon Foundation's eLAJ staff were deputed for COVID-19 contact tracing. Lab technicians were well-equipped to handle Rapid Antigen Testing and RT-PCR testing, while data entry operators used the government apps to sync data to the ICMR database. Our staff continue to support the vaccination strategies to contain the spread of COVID-19.

While the eLAJ program pivoted to support COVID-19 efforts, the primary focus continues to be on enhancing the diagnostic capabilities, multi-level interventions and strengthening the digital backbone of the eLAJ program.

# Keeping Patients Healthy and Happy!

## The eLAJ Outcomes

**71,000**

Patient Visits

**46,000**

Patient Benefitted

**22,000+**

Haematology and Biochemistry  
Laboratory Investigations

Transforming public healthcare with technology to address non-communicable diseases

### Keeping track of good health

**28%**

Infectious

**28%**

NCDs

**18%**

Pregnancy

**6%**

Musculoskeletal

**5%**

Gastrointestinal

**3%**

ENT

**2%**

Anaemia

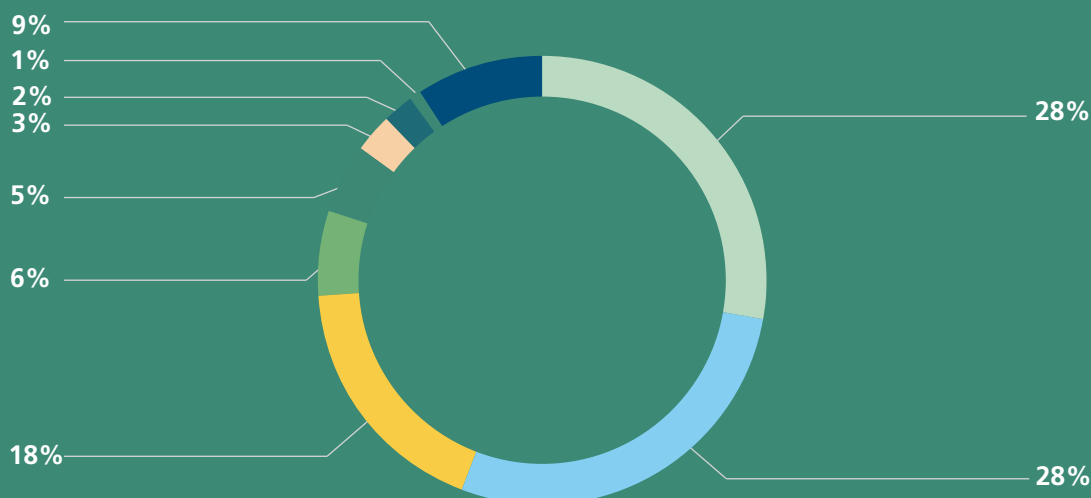
**1%**

Skin

**9%**

Others

Conditions (eLAJ Dashboard) Breakup by Category

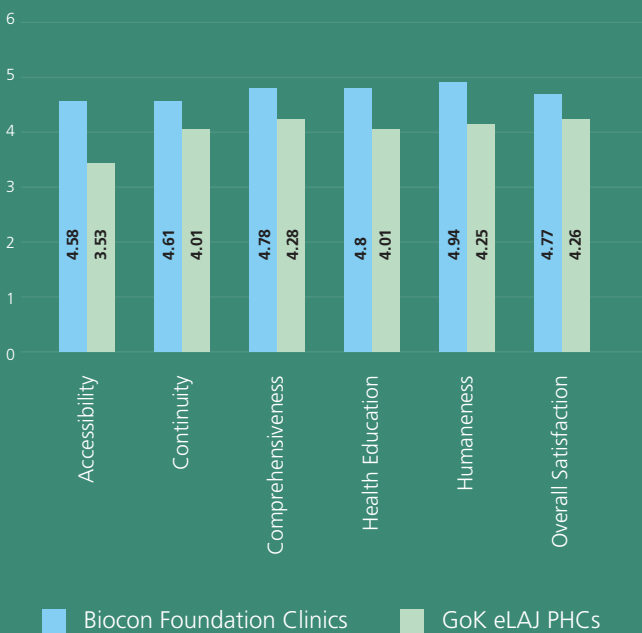


## Keeping patients happy with positive health reassurance

Six key performance indicators (KPIs) were identified and a five-point scale was used to gauge patient satisfaction at eLAJ Smart Clinics.

More than **1,000 outpatients** graded their experience on a scale of 1-5, where **5 signified** a very positive experience.

### Patient Satisfaction Scores



## Overall satisfaction

Overall satisfaction in the Biocon Foundation Clinics and PHCs were greater than 4, signifying an exceptional patient experience. Biocon Foundation Clinics scored 4.5 or higher on all the KPIs, while the Government eLAJ PHCs scored 4 or higher on all KPIs except accessibility.

## Care with compassion

At the heart of the eLAJ program are the people and communities that benefit from it. The Biocon Foundation Clinics scored a very high 4.94, while eLAJ PHCs scored 4.25 on humaneness, which is a testimony to the empathy and concern shown by the staff and doctors.

## Building health awareness

An important aspect of the eLAJ program is to enable healthier communities sans socio-economic barriers. The Biocon Foundation Clinics scored highly on the KPI of Health Education, which is a healthy sign for the sustainability of the program.

## Transforming primary healthcare

The Biocon Foundation Clinics and eLAJ PHCs scored highly on comprehensiveness of the services offered. With better diagnostic capability and electronic medical records, doctors are able to provide care more efficiently.



## Taking the eLAJ journey further

Our experience with running the eLAJ Smart Clinics successfully over the past few years has bolstered our resolve to ensure that quality healthcare is made accessible to all sections of society, and also proven that technology can bring in impactful transformation. The eLAJ program builds a repository of data that can guide wider healthcare strategies. At the Biocon Foundation, we intend to take this journey further to release the benefits of technology by strengthening our on-ground patient support, while building better state-wide health interventions informed by data.





## Specialist Clinics & Community Outreach





## Transformative Actions for Healthy Lifestyles

Taking care of their family's health is no doubt a main priority for every citizen. But finding a well-recommended gynaecologist, a trustworthy paediatrician, a geriatric specialist, or simply knowing when a specialist consultation is called for – these are challenges even for India's urban elite, let alone those from under privileged sections of society.

Radha Bai, a humble tailor, worries about the health risks that come up as she grows older, crossing 67 years of age. She has heard about diabetes and heart attacks, and is concerned about how her family would manage, should anything happen to her. Health-related anxieties are, however, constant at any stage of life. For instance, Shanta, a 25-year-old flower seller and home-maker, also worries about where to take her children when they fall ill.

Radha and Shanta represent one-fourth of the Indian population who are 'multi-dimensionally' poor. NITI Aayog's National Multidimensional poverty index measures indicators like consumption, access to health and educational facilities and the availability of a shelter, telling us how many poor people there are in India and how poor they are. For these 32.25 crore people, access to specialist medical advice and health education is a challenge.

### Non-communicable diseases - The silent epidemic burdening the country

Radha's concerns are not unfounded. One in four Indians are at risk of dying from non-communicable diseases (NCD) before they reach the age of 70, according to the World Health Organisation's (WHO) projections. This is not just in India - NCDs such as heart disease, stroke, cancer, chronic respiratory diseases and diabetes are the leading cause of mortality world-over. WHO estimates that NCDs kill 41 million people each year, that is 74% of all deaths globally and without timely interventions, this number could increase to 55 million by 2030.

For India's burgeoning economy, NCDs are a silent epidemic in terms of human suffering, but also a burden due to the impact on the socio-economic development of the country. There is a strong correlation between NCDs and socio-economic status; according to WHO, 85% of premature deaths and 77% of overall deaths due to NCDs occur in low-and-middle-income countries. The Government of India has committed to meeting the SDG target of reducing premature mortality from NCDs by one-third by 2030. However, the current pandemic to a large extent has diverted attention from this goal.

Despite significant efforts to spread NCD awareness and strengthen infrastructure for diagnostic capabilities and treatment, there are still considerable gaps that need to be addressed, especially in communities with poor access to healthcare.

Source: WHO fact sheet - Noncommunicable diseases (who.int)





At the Biocon Foundation, we believe that the epidemic of NCDs cannot be addressed through curative measures alone. A holistic approach toward NCD education, early diagnosis and community outreach is required to address underlying causes. Since NCDs are more pronounced in disadvantaged and lower-income communities, the Foundation has implemented Specialist Clinics in these areas. The clinics focus on health promotion, health education around risk factors and early detection and management of NCDs. These community-based clinics are conducted monthly at the Foundation clinics situated at Huskur, Hennagara and Austin Town in Bengaluru.

The NCD clinics not only have state-of-the-art diagnostics, but also offer holistic lifestyle counselling and ensure a continuum of care. Patients like Madhurappa, a 63-year-old resident of Huskur, rely on the clinic and the support provided to change their lifestyles.

Madhurappa explains, "I was diagnosed with high blood pressure and diabetes and have been going to the NCD clinics whenever they are organised. All my check-ups are done thoroughly at these clinics and I take the medication prescribed by the doctors there diligently. My blood pressure and diabetes is now under control, thanks to the clinics. The doctors provide excellent care. As I am ageing and find it difficult to commute, having these regular clinics in close proximity to my house is of great help."

The Biocon Specialist Clinics follow treatment protocols that are aligned with WHO guidelines and are equipped with robust diagnostic facilities that screen for creatinine, cholesterol, HbA1c and other parameters. The clinics also have psycho-social counselling to help patients change their lifestyle to modify risk behaviours and improve self-management. The continuum of care is ensured through community health workers, who regularly visit patients' homes to enable behavioural change, address risk factors (tobacco, diet, physical inactivity) and increase medication adherence.

Radha Bai's anxieties find reassurance at the Biocon Foundation clinics.

"I have been going regularly to NCD clinics organised in Huskur for the last 3.5 years. I was told that the Biocon Foundation Clinic provides good care and this has been true of the staff that have interacted with me every time I have been there. They ensure that all my regular check-ups are done and also provide useful information on my dietary and medical requirements. The clinics have benefited me a lot, and I ensure that I do not miss any of the clinics," she says.



## Women, children and elders - specialist clinics for a healthier community

To spread awareness on healthy living, the need for regular check-ups and proper care for various family members, the Biocon Foundation has targeted community-based clinics conducted periodically to address their concerns. Women, children and the elderly are particularly vulnerable to health-related issues, and are seriously affected in low-income sections of society, unable to access correct care, diet and resources.

Shanta, the flower seller at Hennagara, already has two children at the age of 25 years. Not only is she concerned about the best ways to manage her own reproductive health, but also has to manage her two young children's health, vaccinations and nutrition. The Biocon Foundation's Well Baby and Well Woman clinics have become her go-to resource for her own health as well as that of her children.

**"I have attended a couple of clinics and have found it very useful. They conducted blood tests, blood pressure checks and so on and prescribed medicines accordingly. My children also accompany me to the clinics and get checked. I also follow some of the dietary tips that the doctors have provided me," Shanta explains.**

Our Well Woman Clinics offer nutrition, sexual and reproductive health and related services. These periodic health clinics involve scanning for anaemia, breast and pelvic examinations, counselling and referrals for further specialist care as needed.

Renuka, a 31-year-old school janitor, takes advantage of these clinics to learn about her health and keep herself fit. "The wellness clinic was very helpful. They conducted various tests and it was done in a very nice manner. It was interesting to understand all the information provided about nutrition and healthcare"

Just like Shanta and Renuka, many young mothers rely on the specialist clinics of the Biocon Foundation. For them, the Well Baby Clinics are a critical source of information on caring for young children, nutrition and managing the numerous illnesses that come up at the early years.

Geetha S. Kumar, a 37-year-old homemaker from Koramangala in Bengaluru, has been taking her two-year-old to the Well Baby clinic regularly. At the clinic, they conduct regular check-ups and ensure that the child's vitals and milestone markers are on track. She also relies on the clinic for frequent paediatric consultation. "Sometimes, when my baby is unwell, I also go to the clinic. The doctors and nurses treat us amicably and provide good advice about treatment and prevention. Overall, I am satisfied about the service being provided to us."





The Well Baby Clinics primarily deal with anaemia, worm infestations, upper respiratory tract infections, vitamin deficiencies and protein-energy malnutrition. The interventions are aligned with WHO's Global Action Plan, wherein the Foundation dispenses micronutrient supplements to reproductive age groups and pregnant women. Counselling sessions are also conducted for caregivers of children under the age of five years on healthy diets and rearing practices.

Steffi Maria James, another young mother with two children frequents the Biocon Well Baby clinics at Austin Town, Bengaluru. "I have two children, aged 2.5-years and 6-months. I have taken both of them to the Well Baby clinic. It is very helpful as they ensure my children are both in good health. I am happy with the way the doctors provide care and am glad my children are healthy. I will continue following the advice given at the clinic," she says.

With most families living together, especially in the under-resourced areas, caring for the elderly is usually also a top priority. For some families, a primary caregiver manages the health of older parents and relatives. Few others like Nazni and Raja take matters into their own hands and are determined to continue independent living for as long as possible. They are able to do so by relying on the Foundation's Geriatric Clinics.

Touching 70 years, Raja is a retired bank officer, who finds the services being provided at the 60-plus clinic extremely useful. "I have been going to the clinics since June 2015 and they are wonderful. I can't think of a better word to describe how happy I am with the clinics. The doctors are very patient, have the expertise and take great care in explaining diagnoses. I have my vitals under control; but, regardless, the doctors provide insights into the latest medications, exercises and lifestyle habits to follow. I think more residents should take advantage of this service. It is a great service to people who may not have the means to access private hospitals."

Nazni Begum, who is 65-years-old, also feels the same way.

---

**"The way the doctors and nurses treat me and provide care at the clinic gives me a lot of confidence and peace of mind. I have been regularly going to the clinics organised. I have been diagnosed with blood pressure and diabetes, and have been getting tests and check-ups done only at the clinic, as it is cost-effective. I am happy with the care given and the follow-up to ensure I am taking care of myself properly."**

---

## Health awareness camps

In addition to conducting specialist clinics, health education through community outreach is an important aspect of promoting healthy communities.



Several awareness camps were conducted throughout the year on topics such as breast cancer and cervical cancer; menstrual hygiene among adolescent girls; iron deficiency anaemia and the importance of breastfeeding among pregnant women; nutrition, healthy eating and curbing malnutrition in children; cardiovascular health and COVID-19 vaccine hesitancy. These outreach camps shared critical awareness among working professionals and school children alike, hoping to activate a lively conversation among their circles.

“The online awareness session conducted for adolescent girls was very enlightening for all of us. I learnt that good hygienic practices during menstruation are crucial to maintaining a healthy life. I also had lessons in the safe and environment-friendly disposal of sanitary napkins. I look forward to attending more health education sessions in future,” says Keerthana, an 8th standard student in Hennagara. Sushma, who is a young IT professional found the awareness camps to be an eye-opener. Immersed in her work, she often did not give thought to the need for her to stay informed and aware about her health and preventive measures she should take to look after herself.

“The breast cancer awareness session was an eye-opener for us. It hit the right chord with audiences in creating awareness and reducing the stigma of breast cancer through education on signs, symptoms, early diagnosis and treatment. The session also stressed on the importance of breast self-awareness to identify any abnormal changes early. I feel that these small steps can go a long way in saving lives from preventable breast cancer. Equipped with the knowledge, I will make sure that it gets transferred to my family, friends and neighbours.”

## A foundation for healthy living and preventive treatment

To counter the impact of NCDs, lifestyle and awareness are pivotal factors. Both these factors are addressed through the Biocon Specialist Clinics in Bengaluru. Creating awareness of healthy lifestyle and monitoring health through frequent check-ups is helping many people to manage not only their own, but their family's health as well.





## Oral and Dental Health Initiatives





## A Fight Against Oral Cancer

Manju Devi, a sweeper from Varanasi, took to chewing paan as a way to cope with the intense and uncomfortable odours associated with her work. When she went to one of the oral health camps organised by the Biocon Foundation in collaboration with Homi Bhabha Cancer Hospital, Varanasi, she was informed that she had developed white patches in her mouth, and was educated about the immense danger that she was falling prey to due to the habit of chewing paan. Following which, she was urged and counselled to quit the habit.

---

**“My ASHA worker told me about this free oral camp. When I was informed about the white patch in my mouth, I thought it was because of the chuna that I use with paan and that it will go away on its own. It was only when they showed me similar pictures on how this could become bigger, did I understand the situation and got worried. I have almost quit paan. I am trying to convince my husband to quit as well. We have 5 children and I don’t want my kids to suffer because of our addiction.”**

---

Manju Devi is not alone; the etiological factors leading to oral cancer are smokeless tobacco, betel-quid chewing, excessive alcohol consumption, poor oral hygiene and a nutrient-deficient diet. These risk factors are more pronounced in low and middle-income populations, and poor access to adequate healthcare compounds the problem. According to GLOBOCAN 2020, cancer of the lip and oral cavity is rated the most common cancers among males and the fourth most common cancer among females in India. The incidence rate of lip and oral cavity cancer stands at 10.3% and the mortality rate is 8.8%.

At the Biocon Foundation, we are committed to comprehensive, holistic initiatives that target the roots and treatment of oral health related issues. Early screening is an important intervention in cancer control, as direct visual examination of the oral cavity is a cost-effective method for screening in resource-constrained settings. While frontline healthcare providers can help in detecting cancer, limitations such as lack of portable data records, poor patient compliance and poor communication between primary care provider and specialist often hinder patient care.

Our oral health care camps not only spread awareness of healthy practices and oral hygiene, but also screen for early warning symptoms of Oral Cancer. Investing in technology has helped us model an approach to effectively detect cancer early in resource-limited settings.

## Oral health screening camps for early detection and treatment

Suresh, a 43-year-old labourer from Hassan, a district in Karnataka, shares his close call and the timely medical support he received through a camp organised by the Biocon Foundation along with Rotary Quanta, Hassan and KLE Society's Institute of Dental Science (KLESIDS).

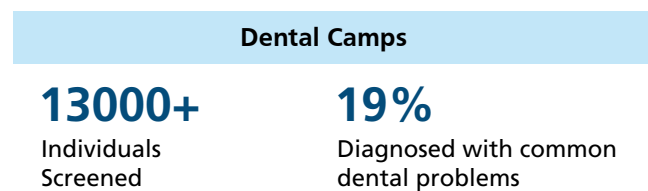
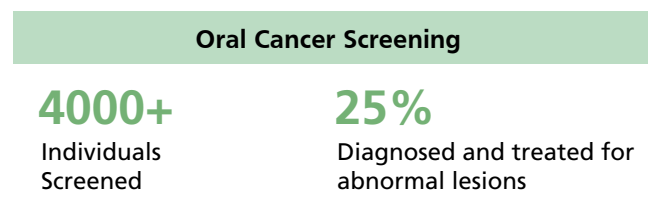
"I have been consuming gutka for the last 12 years. When I heard about the oral screening camp being organised in my town, I decided to contact them and go for a check-up. I was informed about a white patch in my mouth and how it could be cancerous. I was referred to a doctor for treatment. I am now following the advice given by the doctor and want to thank Biocon Foundation, Rotary Quanta and KLE Society for organising the camp and helping me find the right doctor and diagnosis."

Devnarayan Yadav had a similar experience, "I noticed difficulty in opening my mouth, which was causing difficulty in eating. I used to eat gutka and therefore, decided to get a check-up done. On visiting the doctor at KLESIDS, I was informed that my mouth opening was a meagre 21mm. I was referred for treatment, and after quitting the habit and receiving treatment, I have noticed a difference in the amount of mouth opening; now it is around 32mm."



The Biocon Foundation organised several dental camps in partnership with KLE Society's Institute of Dental Science (KLESIDS) where beneficiaries were screened and treated for dental caries (tooth decay) and periodontal diseases. In addition, oral cancer screening is also carried out during these camps and counselling sessions are provided for the prevention and management of oral cancer.

### Transforming screening and care for oral cancer - The Outcomes





## Empowering frontline healthcare staff with technology

With COVID-19 taking a toll on cancer screening, the number of cases at late-stages has grown over the last couple of years. Frontline healthcare workers were particularly stressed and appreciated our initiative to build their capacities to strengthen the screening at the grassroots.

One of the technology interventions that aided the cause of oral health and early cancer detection was the Biocon Foundation's mobile health (mHealth) programme. This mobile-phone-based platform makes oral cancer screening and surveillance more efficient, effective and holistic, and enables the creation of electronic medical records (EMR). A decision-based algorithm for early detection of oral cancer empowers them with tools to properly screen patients. The screening process is evidence-based, as every patient has a unique patient identity correlated with their habit history and clinically-relevant photographs. The mHealth platform enables remote specialists to connect with patients through frontline health workers, who otherwise would have had poor access to diagnosis, follow-ups and referrals.



**The Biocon Frontline workers were trained through a capacity-building programme to use mHealth and effectively screen patients for Oral Potentially Malignant Disorders (OPMDs). As in-person training was hampered, the Foundation conducted virtual trainings for healthcare providers and community health workers on the use of mHealth for the prevention and early detection of oral cancer.**

The mHealth tool has found wide use and value to healthcare workers across the country.

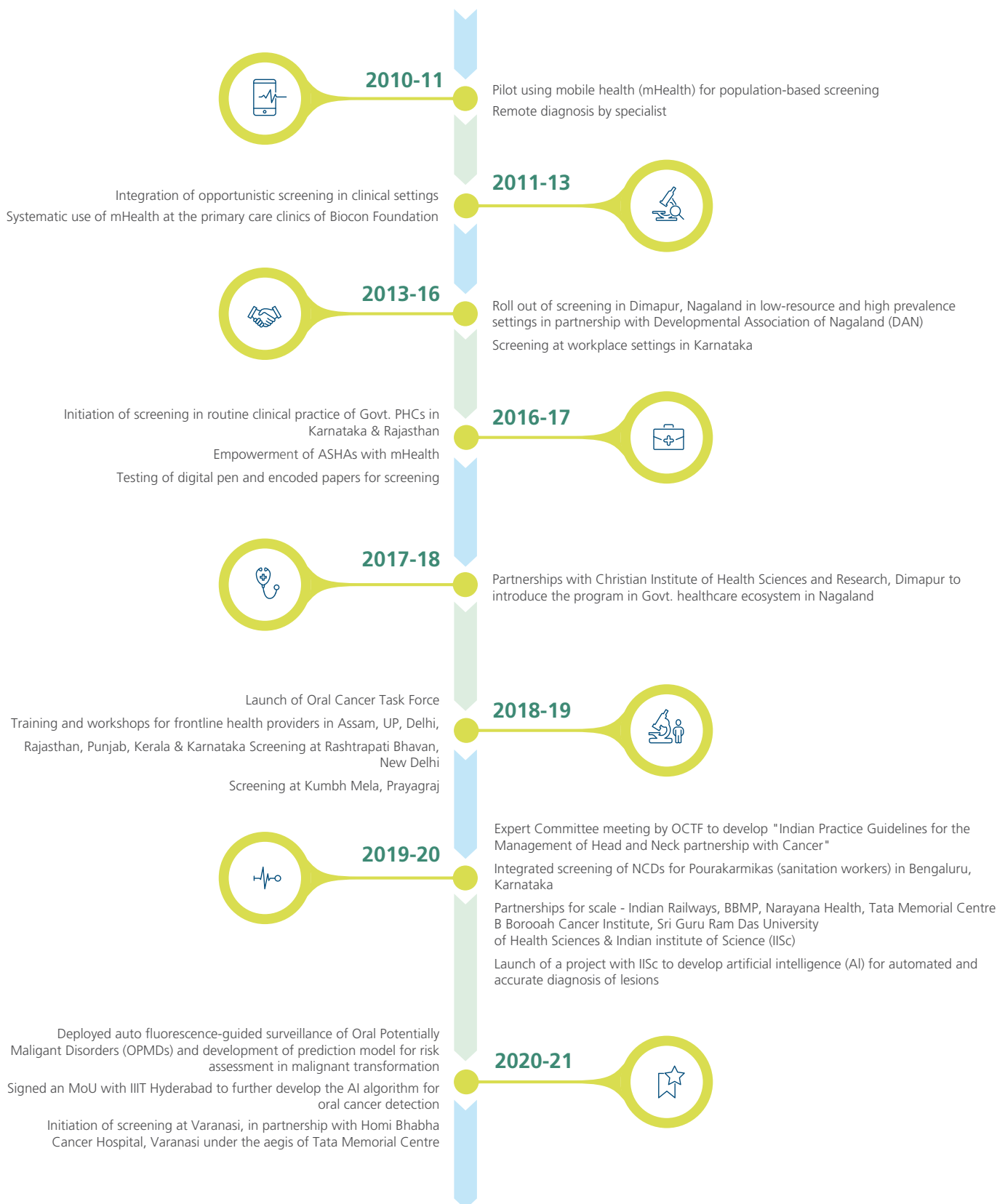
Manpreet Kaur, who is one of the frontline workers for oral cancer screening in Amritsar, Punjab, was overjoyed to be a part of this training with the mHealth tool. **"The capacity building training was very useful to me. We had pre-tests and post-tests during the training programme and it was clear to us how our understanding and our capability of identifying lesions has improved. I have been using mHealth for oral cancer screening and the interface is easy to use and clearly gives us information on what needs to be captured,"** she says.

Further down south, Vikram from Sakleshpur, a hilly region in the Western Ghats of Karnataka, finds the mobile app useful as access to clinics is difficult in the dense forests and steep hills. He is also able to provide the right advice to the villagers on the dangers of gutka and tobacco.

Vikram says, **"We have been using mHealth and doing screening in a very rural setting. The villagers here are unaware of oral cancer. However, the use of gutka and chewing tobacco is extremely high. Hence, we have effectively started going to doorsteps for screening and raising awareness about oral cancer. Through the training provided, I have been able to identify any lesions and the app has helped us quickly update case information and refer potential cases to doctors. If not for this, the villagers would not know whom to reach out to."**



# Timeline of mHealth



## Innovations - Enabling cancer screening with technology and Artificial Intelligence (AI)



To aid frontline workers in their efforts to detect oral cancer early, the Biocon Foundation partnered with Indian Institute of Science (IISc) to develop an enhanced AI for automated and accurate diagnosis of lesions. Over 3500 intra-oral images were taken at three different sites. Images that were out-of-focus, blurry or distorted were excluded and around 2,000 images of good quality were used for analysis. A clinical specialist manually categorised the images used for training into suspicious and non-suspicious, and Inception-ResNet v2 architecture was used to perform this binary classification.

The Foundation is also working with IIIT Hyderabad and has acquired over 500 images that were used to carry out AI model experimentation and developments. An F1 score of 0.87 for the suspicious class of images has been achieved by using the Model Densenet-169.

An Autofluorescence guided surveillance of Oral Potentially Malignant Disorders (OPMD) was also deployed as a study. A device equipped with dual imaging modalities, comprising white light (WL) and auto fluorescence (AF), is used to capture images of the oral cavity. The device consists of a smartphone with a built-in camera, an application for image capture and analysis, along with a mechanical case which has LEDs and drivers for illumination, filters for reflectance and fluorescence imaging and light sensors. The smartphone and device are Wi-Fi enabled and capable of real-time or near real-time synchronisation with the server. A dataset of 6,800 images has been obtained from patients from the outpatient clinics of the Department of Oral Medicine and Radiology at KLE Society Institute of Dental Sciences and outreach programmes. Clinical risk profiling and image analysis have been performed on the data. The images diagnosed as suspicious lesions by an onsite specialist will be analysed and the intensity values will be compared with that of the baseline data to assess the efficacy of auto fluorescence imaging in the surveillance of suspicious lesions.





## Taking the fight further with the Oral Cancer Task Force (OCTF)

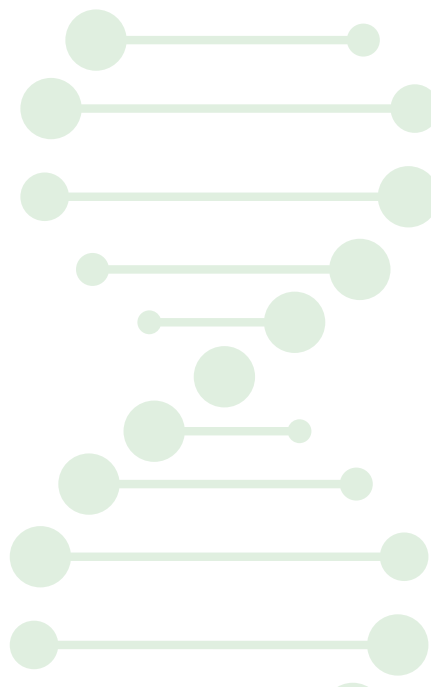
Taking the cause of oral health and the fight against oral cancer further, the Oral Cancer Task Force was formed with a mission to ideate, educate and engage stakeholders and thereby, effectively downstage oral cancer in India. The OCTF is an independent multi-disciplinary task force comprising leading specialists.

“The best way to prevent oral cancer is to stop tobacco use completely. Through this task force, we aim to create awareness and work on ways to prevent and enable early detection,” said Kumar Prabhash, medical oncologist, Tata Memorial Hospital.

The aim of the task force is to develop a strategy for oral cancer control in India over the next decade. The task force has already made strides toward designing a cost-effective and sustainable national oral cancer control programme that can provide efficient care to the community and reduce the burden of cancer.

Dr G.K. Rath, Head, National Cancer Institute, AIIMS, said, “Mortality and morbidity in oral cancer is very high at an advanced stage. The National Cancer Institute India has been created for this purpose, to conduct research into all aspects, including prevention, early diagnosis and management. This is the largest single healthcare project of India.”

The OCTF’s position paper on the “Management of Oral Potentially Malignant Disorders” is accepted for publication by the Indian Journal of Cancer. The OCTF also organised their fourth OCTF conference in Bengaluru on the theme ‘Accelerating Innovations’. It was attended by leading domain experts, speakers and delegates from India and overseas.



## Continuing a multi-pronged approach to fighting oral cancer



The Biocon Foundation's multi-pronged approach to fighting against oral cancer is evidence of our commitment to make a strong and positive change. Our approach is holistic and comprehensive, including targeting health seeking behaviour with oral healthcare camps, spreading awareness, using technology to identify affected persons fast, increasing their chances of returning to health and extending to unifying research and medical associations across the nation in the fight. We have left no stone unturned and continue to look for ways to mount the next advance in this war against oral cancer.





# Covid-19 Support



## Providing Essential Support to Fight the Pandemic

Over the past few years, healthcare systems across the world have been struggling with the COVID-19 pandemic. India was no exception; hospitals, clinics, and medical care workers faced an immense burden trying to keep up – equipment was scarce, beds were few and staff were overworked. Small towns and urban cities were equally affected. The situation called for government organisations, NGOs and every hand in the community to unite to fight this scourge.

The town of Anekal near Bengaluru is one example; even with a relatively small population of approximately 5 lakh people, medical facilities are few in number. The Government General Hospital in Anekal became the central point for COVID-19 care, and urgently needed support to cope with the sudden surge of patients. The Biocon Foundation stepped in to address gaps in the infrastructure.

Dr. Nalini, Administrative Medical Officer, Anekal General Hospital, says,

**“We suddenly faced a shortage of equipment and oxygen during the pandemic. This is when the Biocon Foundation came forward and supported us with various lab equipment, ICU monitors and Oxygen concentrators. This helped immensely as we had a shortage. They have also installed a Liquid Medical Oxygen (LMO) storage tank at our hospital recently, which is helping us with our general oxygen needs currently at the hospital. Our relationship with Biocon Foundation has been very cordial and they are constantly available to support the community.”**

The Government General Hospital in Anekal was given special attention to ramp up COVID-19 care. Oxygen concentrators, ICU monitors, digital x-ray, ultrasound, pulse oximeters, defibrillators and other medical equipment were supplied to the hospital. In addition to this, a Liquid Medical Oxygen (LMO) storage tank of 2,000-litre capacity was installed at the hospital to augment the availability of medical-grade oxygen and oxygen-supported beds.



As a result of the Biocon Foundation's support to Anekal General Hospital:

- Oxygen-Supported Beds doubled from 43 to 100
- Intensive Care Units (ICU) capacity doubled from 3 to 8

# ನಾನು ಲಸಿಕೆ ಪಡೆದಿದ್ದೇನೆ



ನಾನು 3 ಲಸಿಕೆ ಪಡೆದಿದ್ದೇನೆ



Biocon | Biocon Biologics | Syngene  
Biocon Foundation  
EMPOWERING COMMUNITIES  
COVID-19 VACCINE

BeatCOVID

#StrongerTogether





## Providing relief measures and supporting vaccination drives

Over the last two years, the COVID-19 pandemic has been a severe burden on our healthcare system. Testing, tracking, treating and vaccinating for COVID-19 was a mammoth task. Like the rest of the country, we at the Biocon Foundation pivoted our efforts to support COVID-19 relief operations.

- We supplied meals to 500 health workers across 14 government health centres and 75 pourakarmikas (sanitation workers) of Hebbagodi CMC over one month in Anekal.
- Our staff in our eLAJ smart clinics and Primary Healthcare Centres assisted in door-to-door contact tracing, raising awareness about COVID-19, Rapid Antigen and RT-PCR testing, and data entry operations. It was truly heartening to see our staff supporting the government staff to mitigate the crisis effectively. This support has been extended to enable the vaccination strategy of the Government.
- While our staff continue to support government officials in carrying out vaccinations, the Biocon Foundation also conducted its vaccination drive in Huskur Panchayat in Bengaluru. The drive was organised by utilising Covishield vaccines.
- We also created COVID-19 vaccination awareness modules. Several online awareness sessions were conducted to address the vaccine hesitancy.

## Validating our resolve to strengthening health infrastructure



Having witnessed first-hand how the COVID-19 pandemic exposed the gaps in the healthcare system in the country, we, at the Biocon Foundation, have strengthened our resolve to join hands with the government in ensuring that quality healthcare is made accessible to all. The pandemic has also taught us to be ready to tackle any eventuality head-on.





# Promoting Mental Health for a Healthier Society



# Promoting Mental Health for a Healthier and Happier Society



## BUMHI - Bengaluru Urban Mental Health Initiative

We've all felt stress and uncertainty, and the pandemic only escalated this for everyone. Constant exposure to COVID-related statistics, fear of the virus, changes in lifestyle, lockdowns, disruptions to work-life balance, closure of schools, vaccination anxiety, and the looming possibility of a surge in cases, escalated existing mental health issues in society and increased the prevalence of mental health disorders. The COVID-19 Mental Disorders Collaborators conclude that, throughout 2020, the pandemic led to a 27.6% increase in cases of major depressive disorders and 25.6% increase in cases of anxiety disorders globally. India is also experiencing massive urbanization, which brings with it perils such as work-life imbalance, breakdown of support systems, and fast-paced lifestyle that together with inherent predisposition may cause individuals to develop mental health problems.

---

Source: COVID-19 Mental Disorders Collaborators. Global prevalence and burden of depressive and anxiety disorders in 204 countries and territories in 2020 due to the COVID-19 pandemic. *Lancet*. 2021 Nov 6;398(10312):1700-1712. doi: 10.1016/S0140-6736(21)02143-7. Epub 2021 Oct 8. PMID: 34634250; PMCID: PMC8500697.



## Equipping society to self-care

According to an article published in the Indian Journal of Psychiatry, there are only 0.75 psychiatrists per 100,000 people in India, which is below the recommended three per 100,000. Evidence suggests that public and private healthcare providers focus on providing curative services for mental disorders, while mental health awareness and promotion does not receive the attention it deserves.

Mental health literacy is the gateway to mental health interventions. To foster awareness, conversations and self-care in Karnataka, the Biocon Foundation partnered with the Centre of Public Health, National Institute of Mental Health and Neuro Sciences (NIMHANS) to launch Bengaluru Urban Mental Health Initiative (BUMHI). This initiative attempts to develop, implement and evaluate urban-specific strategies aimed at strengthening self-care and informal community care for mental health. This is aligned with the WHO framework for mental health services. This framework is built on the conviction that promotes self-care and informal community care as the most important and cost-effective services needed to promote mental health in the community.



The BUMHI initiative has documented perceptions, priorities and concerns about mental health among urban dwellers. With NIMHANS as knowledge partner, the Biocon Foundation launched a Self-Care Mental Health Kit that aims to improve awareness about protecting and promoting mental health. The self-care program has modules on 11 skills that are essential for good mental health, knowledge about common mental conditions (like depression and anxiety) and skills for providing mental health first aid.

Source: Garg, K. & Kumar, C.N. & Chandra, Prabha S.(2019). Number of psychiatrists in India: Baby steps forward, but a long way to go. Indian Journal of Psychiatry. 61. 10105. 10.4103/psychiatry.IndianJPsychiatry\_7\_18.



# Self-Care Mental Health Kit - Modules & their Relationships with Mental Health

1

## Self-Knowledge

The foundation of positive mental health is the awareness of self. Individual development is a catalyst for overall well-being, and to learn skills required for mental wellness, self-awareness is a basic necessity.

2

## Conscientiousness & Spirituality

Conscientiousness & spirituality are generally major indicators of success, good health and longevity. This quality in a person is important to maintain healthy relationships and overcome challenges effectively to lead a peaceful life.

3

## Accountability

When a person/agency is accountable, they always look for ways to successfully and effectively finish the task and if something goes wrong, they try to solve it successfully. Accountability makes people take care of themselves, and others and be responsible.

4

## Emotions

Being able to regulate emotions is important as it allows overcoming negative effects, such as stress (building resilience), helps with efficient problem solving, and is also associated with increased well-being, attention, social interaction among several other positive outcomes.

5

## Stress Management

Reading of the module by the individuals will enhance their understanding of stress and increase their skills to deal with everyday hassles.

6

## Empathy

It helps us manage our emotions better, address our interpersonal conflicts better and feel content with being able to support others.

7

## Communication

This module guides individuals to leverage communication to overcome their everyday dilemmas and conflicts. It can help with intrapersonal relationships a lot better, if the ways and methods to communicate with the self are patiently, compassionately, and effectively applied.

8

## Assertiveness

An assertive individual can defend one's rights without violating the rights of others. It is a skill we can learn, and practice throughout our life for the sake of our personal and interpersonal well-being.

9

## Goal Setting, Problem Solving & Decision Making

It will help people to set right goals, solve the problems they face in life and make appropriate and required decisions efficiently and enhance the quality of their life.

10

## Strengthening Social Support & Balancing your Life

The module will help in gaining clarity about goals and priorities in various aspects of life. The effective balance will create greater levels of well-being.

11

## Healthy Eating, Physical Activity and sleep

Diet, physical activity and sleep are the three pillars of good physical health, and therefore, they are the pillars of good mental health too.

12

## Mental Health Awareness

Improving mental health awareness is the first step in empowering individuals and communities to actively seek care and support for mental health problems.

13

## Psychological First-Aid

The first aid involves humane, supportive and practical help to individuals suffering mental health issues.

## The efforts to promote positive mental health are ongoing

The next phase of BUMHI involves ensuring that the self-care kit reaches individuals in communities. It is only when community members are sensitized and aware of mental health, will we create a sustainable change in society. Hence, community-based organizations (CBOs) in 44 wards of the Bengaluru east zone will be mapped. As part of the BUMHI, sensitization program, training for members and volunteers will be conducted. We will also forge active collaborations with the District Mental Health Programme (DMHP) team and BBMP to implement the program.



**We aim to have at least one CBO in every ward and slum in the east zone in Bengaluru completely trained in all the modules of the BUMHI self-care kit, who will then be capable of continuing the training independently within the community.**

## Community healthy hearing initiative - Promoting hearing health

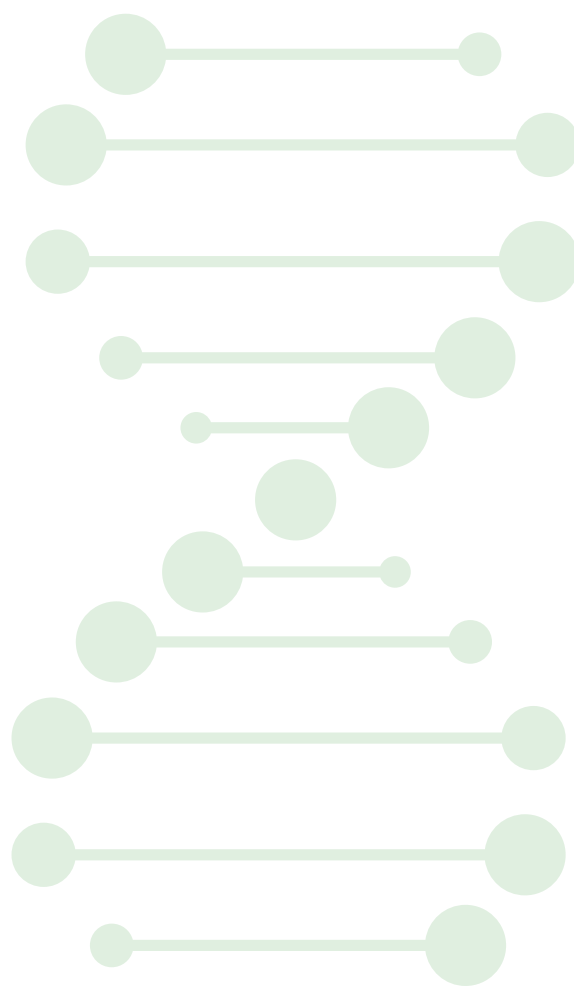
Hearing loss is the most common sensory deficit in humans today. It is estimated by WHO, that the 6.3% of the Indian population is affected by significant auditory impairment. In the elderly population, unidentified and untreated hearing loss greatly hinders cognitive health. Hence, it is important to screen for hearing impairment in the community to ensure measures can be taken to negate the effects using the latest audiology technology.



**To advocate and integrate a holistic approach toward age-related hearing loss and develop a scalable model for community audiology, the Community Centre for Hearing Health programme was instituted to take high-quality audiology services to underserved communities. As part of the initiative, a soundproof audiological booth has been inaugurated at General Hospital, Srinivasapura, Kolar, the Public Health Observatory of the Department of Epidemiology, NIMHANS. Biocon Foundation donated over 100 hearing aids to elderly patients with hearing difficulties from underserved communities.**

## The time is right for a mental health revolution

One of the outcomes of the COVID-19 pandemic has been a raised level of awareness of mental health, from personal awareness to family support and organizational tolerance and inclusiveness. Dealing with the magnitude of the mental health problem society faces requires interventions at many levels. A rights-based approach needs to be developed to make the mental health care policies and programmes more equitable, accessible, and encourage help-seeking behaviour. A rights-based approach ensures that people have access to quality mental health care, and an environment that reduces stigma, violence and inequity. As the mental health revolution grows, with information and awareness, the Biocon Foundation's initiatives will continue to support the path towards a rights-based approach to mental health.





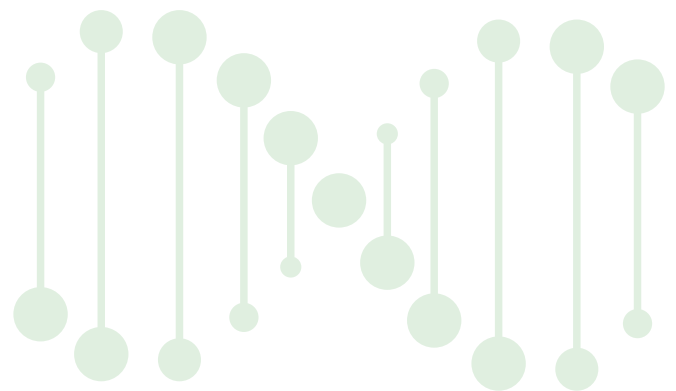
## School mental health - Tackling technology addiction

Mobile phones are in every hand now, even when it comes to school children. With COVID-19 lockdowns and online schooling, many children now have easy access to mobile phones, laptops and the internet. While the medium has been a boon for education, its misuse may lead to unhealthy outcomes such as increased levels of distress due to gaming addiction, information overload through social networking platforms and decreased academic performance. Technology addiction amongst adolescents is considered an emerging behavioural addiction and they tend to have severe social deficits, impulsive behaviour, oppositional symptoms, sensation-seeking tendency and poor ability for self-regulation.



To tackle this trend, Biocon Foundation started the School Health Initiative to address issues related to technology addiction amongst school-going adolescents. A teacher training module development to equip teachers to sensitise students and lead interventions is in progress. The Institutional Ethics Committee of NIMHANS has approved the project. Desk review for manual development has been completed and study instruments for the field survey have been finalised.

Furthermore, on psychological first aid, NIMHANS in partnership with Biocon Foundation conducted a two-day training workshop for instructors of Agastya International Foundation, which covered the aspects of identifying and addressing child mental health needs in the context of the pandemic. Agastya, the partner of Biocon Foundation for school education, works to provide creative, hands-on education to underserved children and teachers.





Education  
**Enlightening &  
Empowering**





# Innovation in Science Education



## Empowering children from underserved communities

Anekal, a suburb of Bengaluru city, is seeing rising development, transitioning into a central hub for nearby villages. The proximity to Bengaluru raises the level of expectations from education in the town, as inhabitants of the villages aspire for their children to find fulfilling and lucrative careers in science and IT. At the Government Higher Primary School in Attibele, one of the neighbouring villages of Anekal, excited cheers are heard from teachers and students alike, as a mobile science lab rolls into the campus. The mobile lab has a fully equipped science lab, with models and interesting learning aids – science just became alive, fun and a possible career option for these children.

The mobile science lab has been seen in schools around Anekal since 2018. It is equipped with over 100 science models and two instructors trained on experiential learning pedagogy guide children in their exploration and focused reflection on learning. Students perform experiments, learn by doing and are fully immersed in the subject.

Mr. Nagendra, who is the Principal of the Government Higher Primary School in Attibele, says,

**“We are always short-staffed and finding ways to make children excited about science is a challenge. However, it is an important discipline for them to become curious about. We need support on infrastructure and the latest methods of teaching scientific thinking.”**

His school is one of the 21 schools that receives support from the Biocon Foundation to promote science, technology, engineering, and mathematics (STEM) learning amongst government schools in Anekal. The mobile lab is just one of these activities. The Biocon Foundation has been working with the Agastya International Foundation, to implement a series of activities to enhance learning outcomes for students and build capacity for teachers.





## Experiential learning sparks curiosity for students in Anekal

The COVID-19 pandemic had a devastating effect on the education sector in India. While schools have now reopened, the gap in school time has resulted in a significant learning loss, especially for children in low and middle-income sections. The World Bank, in a recent report, had raised concerns that India's 'learning poverty' had risen to 70% from 54%. Learning poverty is defined as the inability of children to attain minimum reading proficiency and its correlation with the proportion of children who are out of school. The inequalities in education were exacerbated further during the pandemic. UNESCO estimated the closure to be approximately 82 weeks, impacting India's 250 million children in 1.5 million schools.

In Anekal too, COVID-19 brought about financial distress to families, and as a result, enrolment declined in private schools and rose in government schools. However, learning levels of school children also needed to keep pace with increased enrolment. With increased number of students, low teacher to student ratios and fewer facilities than private schools, there was scope to improve learning outcomes in the government school system. One approach to enhance learning outcomes is for students to be involved in the learning process and not just be passive listeners. In order to achieve this, pedagogy must evolve to make education more experiential, inquiry-driven and learner-centred.

In conventional rote (memorization of information based on repetition) or didactic (structured lessons that focus on lectures) learning, the learner plays a comparatively passive role when

compared with experiential/hands-on learning. Learning by doing and reflecting on the experiences not only augment the learning that has occurred in the classroom but also help students develop critical thinking and problem-solving skills and result in better retention of science concepts.



For the past four years, the Biocon Foundation, along with the Agastya International Foundation has implemented an experiential learning model for the schools in Anekal to complement their classroom learning with a number of interventions. The initiative resonates with the aims of the National Education Policy (NEP) 2020 - to spark curiosity and help children develop scientific temperament. The framework for the program was crafted with experiential hands-on learning as the focus.

Mr. Ramji Raghavan, Founder and Chairperson of Agastya International Foundation talks about the long-term partnership and the impact it has made on students, saying

**“This is the fourth year of our partnership with Syngene and we are delighted to have received support in sparking curiosity - a vital foundation for 21st century skills like creativity, critical thinking and innovation - in underserved children through multiple programs. We enriched the interventions by combining education and healthcare with a very unique CHAMPS program to raise awareness of lifestyle diseases like hypertension by engaging children as change agents. We thank Syngene and Biocon foundation for their continued support.”**

Due to the risk posed by COVID-19, a blended learning model was adopted where students have both online and offline exposure to learning. While some programs were carried out at schools with strict COVID-19 protocols, students also had the option to learn through virtual classes.

The pedagogical framework encompassed the following:

- **Mobile Science Lab** - equipped science instruments and models, resumed services and engaged students in the practical application of science
- **Explore, Play and Learn (EPL)**: At-home learning activities where students used ordinary household materials and apply them to real-life scenarios
- **Shikshana** - Capacity building was conducted for professional development of teachers and to refine their skills in STEM and new approaches of teaching science
- **Digital Summer Camps**: Children experienced workshops in arts and crafts, low-cost model building and other activities.
- **Science Fair** - To learn how hands-on learning translated to creativity, students were engaged in making low-cost models, learning concepts and applying scientific methods to solve real-world problems.
- **Career Guidance** - virtual program assisted students of Class 9 and 10 to understand their interests and aptitudes to choose the right stream to pursue career opportunities.

To evaluate the learning, a mixed-method survey consisting of a pre-and post-test assessment of 313 randomly selected children with focus group discussion was conducted. The aim was to measure the impact of the program in terms of Awareness, Curiosity, Confidence and Science Knowledge.

Mr. Nagendra’s concerns about inculcating a scientific temper and curiosity about STEM are allayed by these initiatives from the Biocon Foundation that prepare students for robust careers. He reflects the voice of all the teachers who benefited from the experiential learning programme and other initiatives.

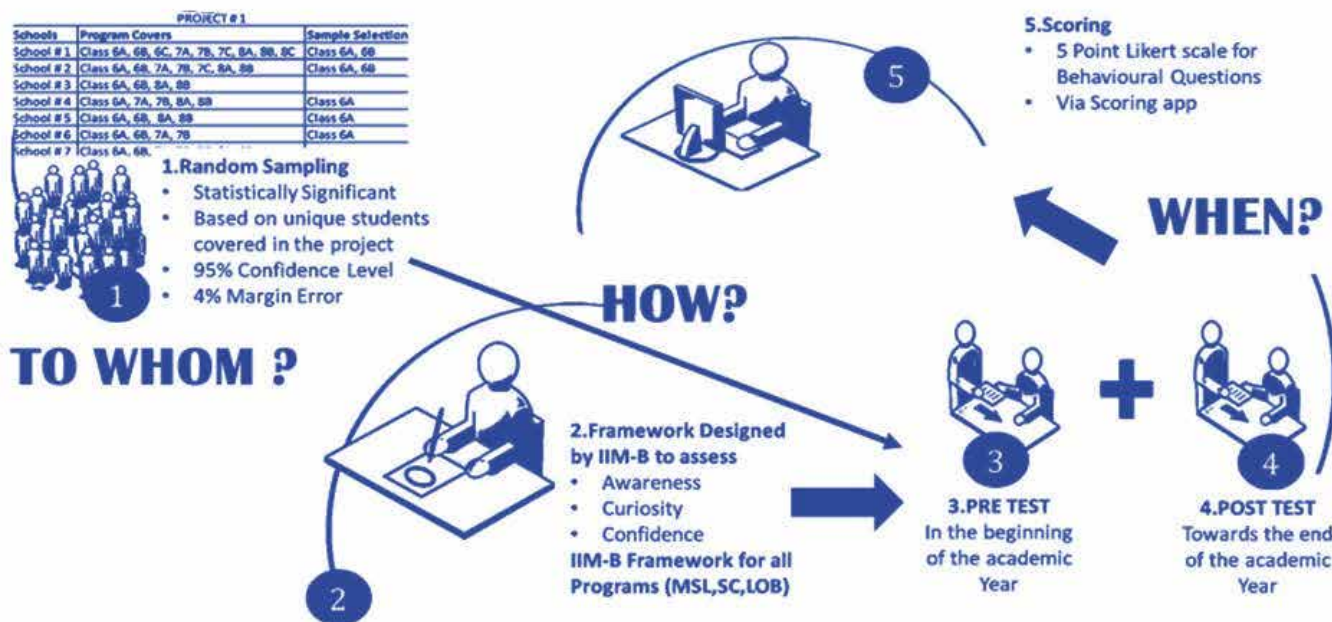
**“The training we received as well as the activities for the students are helping us to see a different way of teaching. The experiments conducted by the teachers when the mobile lab comes to the school are very useful for the students and relevant to the topics in the curriculum. We hope to get more support in the future,”** he says.



# Transforming the Future means Actioning Now

## Continuing to Make Learning Relevant and Equip Students with 21st Century Skills

Education is a powerful enabler of social change, and plays an important role in the future of the nation. The COVID-19 pandemic surfaced an opportunity for technology to prove its efficacy in scale and reach. While significant efforts were made by the Foundation to bridge the gap between technology and access to education during this time, we are now continuing our efforts to improve school and Anganwadi infrastructure, and design programs that can engage learners creatively and make learning fun.



### Impact

#### 10.9% increase in Awareness

Knowledge of alternate experiential methods of learning and teaching science

#### 10.2% increase in Curiosity

behaviour characterised by exploration, investigation, observation, and a desire to learn more about new, incongruous or unknown elements

#### 11.5% increase in Confidence

The ability to stand up, speak out and develop consciousness of their own abilities

#### 14% increase in Science Knowledge

Knowledge of science concepts

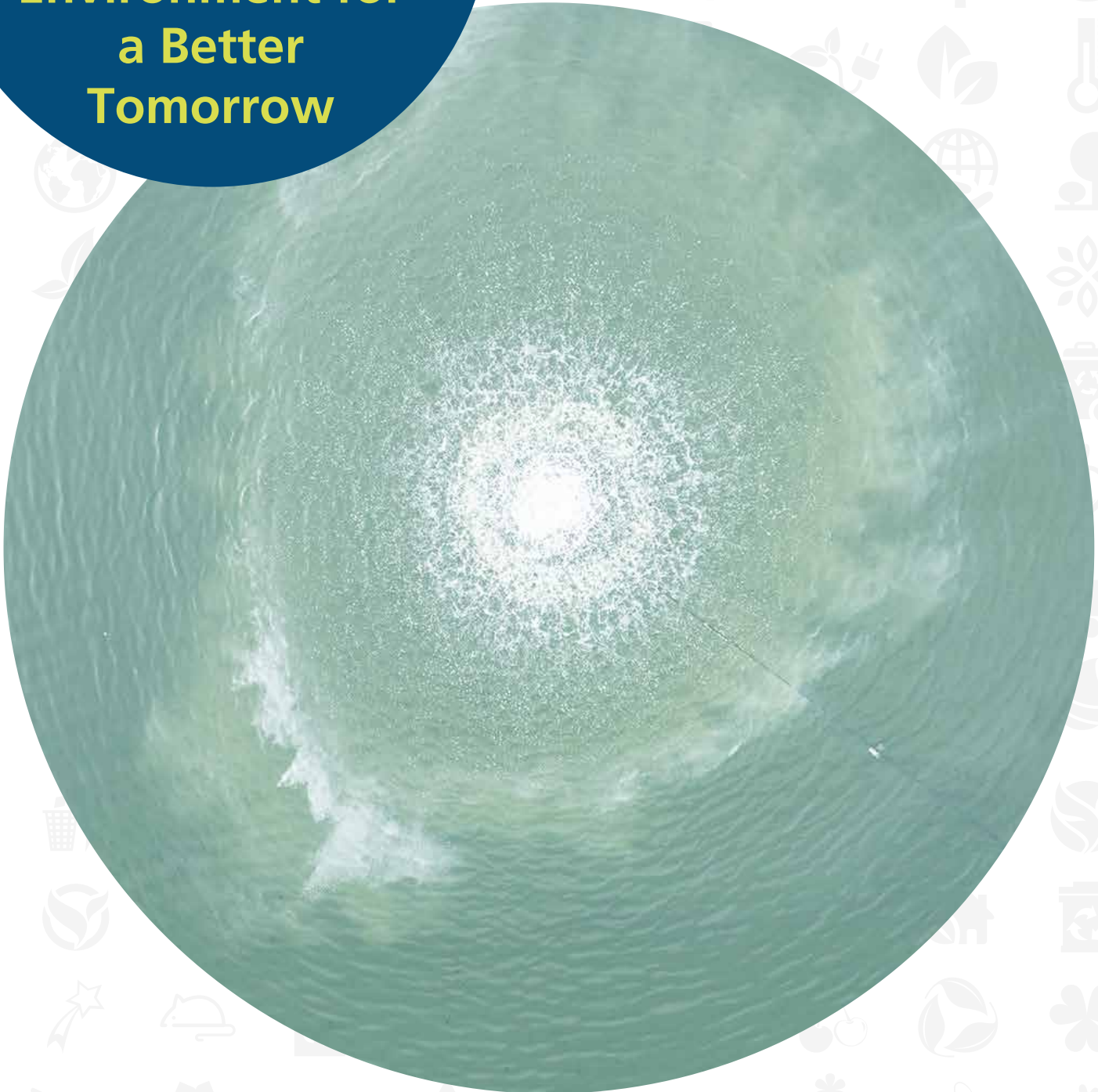
More than 3,200 students of 21 government schools in Anekal received more than 59,000 virtual and face-to-face exposures, each exposure being at least 1-1.5 hours in duration.



Environmental  
Sustainability  
**Resuscitating  
Natural Resources**



# Transforming the Environment for a Better Tomorrow



# Restoring Lakes and Water Bodies

## Biocon Foundation's efforts towards water conservation

When it comes to taking action for the environment, an enormous amount of effort in this direction is called for, and even this may not suffice. The World Economic Forum's global risk report for 2022 mentions biodiversity preservation and climate change mitigation among the top five global risks faced by the world today. In fact, climate change is already a matter of life and death for many regions of the world, with severe cold waves, forest fires, and rising ocean levels.

In and around where Biocon companies are located, we are witness to the urgent needs of the environment and the struggle to temper urban growth with environmental balance. For example, according to IQAir data, Bangalore recorded an estimated 7,200 avoidable deaths owing to air pollution with particulate matter (PM) of 2.5 present in the air in 2021. With rapid urbanization, an increase in the number of vehicles per household, poor road management, infrastructure and traffic congestion, this level is only rising. Similarly, Bangalore's struggle with water has been a constant issue for the city and the areas surrounding it. As per a survey conducted by the

Environmental Management and Policy Research Institute in 2018, there were 1521 identifiable water bodies in the Bengaluru Metropolitan Area (BMA), of which only 684 exist now. Once recharging its aquifers from a system of interconnected lakes, rapid urbanization and an increase in population have caused the disappearance of a majority of these lakes.



**The Biocon companies are a part of the eco-system and community, the Biocon Foundation is making efforts to balance the impact of urbanization on the environment. We are optimistic that with concerted efforts we can improve the condition of our environment and conserve it for future generations. In keeping with this philosophy, we have made efforts to contribute to restoring the environment in urban landscapes, by rejuvenating lakes, encouraging mass transit systems, enabling sustainable afforestation, to make our cities greener and cleaner.**







The history of Bengaluru's lakes is one that goes back to its founding father Kempe Gowda-I in 1537, who envisioned tanks all around the city, to ensure sufficient water for settlements. These tanks or lakes were designed to overflow into each other, creating a system for adequate water for the city. However, over time, these lakes began to be taken over for civic amenities and then appropriated by developers. Researchers take the example of well-known landmarks Kanteerva stadium and Cubbon Park which were earlier Sampangi Lake. The research paper (Fathima & Rajesh, 2012) goes on to state - Bangalore's inorganic growth consistently caused its urban areas to merge with the peripheral rural fringes, engulfing the existing water-bodies and settlements, as urban villages. The interconnectivity that is an important feature of the waterways has been threatened and is changing the topography of the land. Many lakes and ponds are lost, and the surviving lakes are polluted with sewage in the process of urbanization.



**Pledging to engage in the revival of lakes in Bangalore, Biocon Foundation first undertook the rejuvenation of the Hebbagodi lake. The lake is spread over 35 acres with a 2km perimeter and located in Anekal taluk of Bangalore Urban district. As Anekal Taluk does not have a sewage treatment plant (STP), the lake has been receiving sewage and effluent estimated to be at 6 million litres per day (MLD). From a derelict lake to a vibrant revitalized ecosystem, the Hebbagodi lake sets an example for the transformative power of collective action.**

The Hebbagodi lake was restored in 2016 with efforts from Biocon India and Syngene International; it remains a hub of activity, keeping the welfare of the lake prominent in the minds of the community. The Hebbagodi lake is known for its islands and floating wetlands that preserve the unique biodiversity of the lake. Separate islands cover 12,000-sqft, made up of rafts that allow plants to grow hydroponically (without soil, and through mineral nutrient solutions) and act as cleaning agents. The floating rafts are built with the help of reused PVC pipes. In the rejuvenation, significant resources and expertise were adopted to resuscitate the lake.

We continue our efforts to maintain the 35- acre Hebbagodi lake. The maintenance of the lake involves a long list of activities that need to be carried out daily to keep the water healthy. These includes bioremediation, which is the production of enzymes with a bioreactor, weeding, mechanical aeration, prevention of sedimentation, floating island treatment, removal of garbage and other floating material. A green belt has also been maintained around the lake with a children's park so that

the community can enjoy the pleasure of the rejuvenating atmosphere. Security cameras have also been installed for enhanced surveillance.

Mr. Harish, who is the ex-Councillor and a resident of Hebbagodi is an active champion of the lake, he says.

---

**“We are very happy with the lake rejuvenation work carried out by Biocon Foundation. The facilities provided such as the children’s park and walking path for the community are very nice. I am certain that further improvements such as tiling on the walking path and clearing of debris that has accumulated over the monsoon will be carried out which will make the space more inviting for residents.”**

---





### **Kere Habba - Lake festivals keep the community engaged**

To spread awareness and encourage the conservation of the lake in the local community, a series of activities have been planned, known as 'Kere Habba' or Lake Festival.

In the inaugural event, a group of 50 school students visited the lake and received first-hand experience of the rejuvenation efforts. Drawing and essay competitions were also organised at Hebbagodi Government Higher Secondary School to drive the message of conservation in the younger generation. The Kere Habba events are not just a chance for school children to learn about conservation – they bring together the community and officials involved in the importance of preserving the ecosystem.

Amrutha, who is a high school student in class 9 from the Government High School (GHS) in Hebbagodi is thrilled at the experience she had when she visited the lake.

---

***"Kere Habba gave me a unique opportunity to understand the importance of water quality with live demonstrations of water testing, waste segregation and conservation of the lake. I pledge to protect my natural surroundings," she says.***

---



## The Hebbagodi lake rejuvenation project has yielded great results



- Lake water quality is periodically assessed by NABL-accredited labs. Samples are taken from select locations across the lake, allowing the team to gauge improvement in the water quality from inlet to the outlet of the lake.
- pH of water is maintained between the appropriate levels of 6 and 9
- TDS moderation (<1,000 mg/L) implies notable reduction in dissolved solids
- Dilution of COD & BOD are indicative of the low level of organic pollutants in the water
- Dissolved Oxygen (DO) level has increased to more than 4 mg/l from nil
- Phosphates, nitrates and other parameters are within prescribed range

## Biocon Foundation extends water conservation to Yarandahalli

In the continued endeavour to revitalize lakes, Biocon Foundation has re-initiated the stalled work on the Yarandahalli Lake in Bommasandra, Anekal. Years of waste and sludge accumulation, improper management of treatment systems and abuse of feeder drains allowing sewage water into the lake, have spoiled the entire ecosystem and rendered it a dead lake.

A comprehensive action plan is in place for the rejuvenation of the lake, which includes de-weeding, de-watering, sludge removal, bund strengthening, inlet and outlet reconditioning,

silt trap construction, lagoon creation, natural sewage treatment and native tree plantation. There are also plans to make the lake community-friendly with the installation of benches and a children's play area. The lake will then be maintained by the Biocon Foundation to ensure its consistent health and protection.

In addition, we are also involved in the conservation and management of a pond adjoining Sri Madduramma Devi Temple in Huskur, Anekal. Regular maintenance work is carried out to keep the water body healthy.





## Towards cleaner and greener cities - The Biocon Foundation's efforts to reduce carbon emissions in urban cities

India's growing and young population are moving towards the cities, in search of financial security, and quality of life. The 2001 census of India showed that 28.53% of India's population was in urban centres, which has increased to 34% in 2017 according to the World Bank. A survey by the United Nations predicts that around 40% of India's population will be based in urban areas by 2030.

The challenges of sustainable living and balancing development while reducing carbon emissions in cities are many. Sustainable cities with healthy living conditions for citizens call for a range of solutions from power, to mass transit systems, and even urban forests to act as carbon stores. The Biocon Foundation has invested in several projects that tackle the issue of making cities more liveable and environmentally sustainable.

## Biocon-Hebbagodi metro station soon to reduce traffic, stress and pollution

In 2020, the Biocon Foundation signed an MoU with BMRCL (the Bangalore Metro) to fund the construction of the Metro Station at Hebbagodi. This investment is in line with the memorandum issued by The Ministry of Corporate Affairs, Government of India to include urban transport as a permissible CSR activity item no (iv) "ensuring environmental sustainability" of Schedule VII of the Companies Act, 2013.

Not only is mass transit more environmentally friendly than other public transport facilities, it also tackles the city's traffic woes; reducing the number of vehicles on the road reduces traffic, stress and pollution caused by individual vehicles.

The Hebbagodi Metro Station is still under construction, as part of the new Phase-II line of 18.82 km from RV Road to Bommasandra. The Biocon Foundation is actively working with BMRCL on the project- the second tranche of INR 8 crores was released to BMRCL in April 2021. In recognition of the contribution, the Government of Karnataka has renamed the Hebbagodi Metro Station as 'Biocon-Hebbagodi Metro Station'.

Once open for public use, the new Metro line is expected to see an average daily ridership of lakhs of passengers, reducing the amount of road traffic congestion and level of emissions and improving air quality. An overbridge and station access infrastructure work is also being carried out as part of this project to improve access for commuters.



## Reducing heat islands - Greenscaping and afforestation



Studies suggest that as more people from the village move to urban settings, their consumption of resources also increases, putting pressure on the ecosystem. Researchers have reported that loss of lakes and vegetation has caused urban heat islands (Ramachandra & Uttam Kumar, 2013). An urban heat island is a metropolitan area that has a higher temperature than rural areas, because of the concentration of concrete buildings, vehicles etc., not offset by vegetation. There is a cascading effect of urbanization as well. As more urban expansion appropriates agricultural land, the same effect catapults towards the displacement of forest land. India's national forest policy aims at maintaining 33% of the country's geographical area. As efforts are underway to preserve our forests and national reserves, there is also an opportunity to create more green spaces and increase the area of urban forests in our cities.



**In Bengaluru, the Biocon Foundation has signed a memorandum of understanding with BMRL to modify the visible feature of Minsk Square, one of the prominent central traffic islands in the city. The landscaping involved electrical works, improving drainage, planting of more than 4,000 saplings, shrubs and trees of 20 varieties, and installation of LED lights. The first phase of the project has been completed and the area has been transformed into a patch of vegetation that can help change the city from being a heat island.**

For cities to be sustainable, an optimum amount of greenery or 'lungspace' is needed to balance the concrete jungles around. Unfortunately, due to disorganized planning, cities grow only in terms of real estate, ignoring the need for plants and foliage that provide much needed oxygenation and carbon reduction. To address this, the Biocon Foundation is supporting various projects that create 'urban forests' using the unique Miyawaki afforestation technique.

This method involves growing dense, multilayer forests using native fauna. It is believed that this approach results in 10 times faster plant growth and 30 times denser plantation than conventional methods and requires no maintenance after three years. A multi-stratal approach of a sub-tree layer, tree layer and canopy layer is used to develop a quasi-natural ecosystem.

In partnership with the Ramakrishna Mission, we implemented our first urban forest project in Mangaluru, using the Miyawaki afforestation technique. More than 40 varieties of native saplings from the Western Ghats that include different plant groups were identified and planted in the Ramakrishna Mission campus in Mangaluru. The mini urban forest now covers an area of 8700 sq ft with 500 native saplings. A drip irrigation system has been installed to deliver water and vermicompost with 7.2 NPK is being prepared out of kitchen waste to nourish the plants. The project has been opened to the public in 2020 and saw encouraging number of visitors. It has become a health respite for citizens.



On the back of the success of the Ramakrishna Mission Forest, we have now entered into an agreement with the Vana Charitable Trust and developed land provided by Mangaluru City Corporation. This urban micro-forest is spread across a plantation area of 21,000 sq. ft. and more than 2,000 saplings have been planted. The forest is envisioned to prevent the



barren land from becoming a garbage dump. The project will clear the site, prepare the soil with scientific methods using virgin soil, solid laterite stone, coco-pear and organic manure and plant native species of trees. A rainwater recharge pit and sustainable irrigation system will create a self-sustaining eco-system. When it is completed, this will also be equipped with benches and other amenities, becoming a place where urban dwellers can commune with nature. In an urban environment, the forest also offers an opportunity for young children to interact with nature, and provide much-needed lung space for the city. When the work began, employees of Syngene were also involved to clear the site and plant the saplings.

### Taking Action to balance urbanization with Environmental Sustainability

Even though the pace of urbanization cannot be slowed, transformative actions can help restore a semblance of balance to urban environments. The actions can be urban afforestation, restoration of water bodies, and encouragement of measures that conserve energy and reduce carbon emissions such as public transportation. Every action mitigates the damage caused and results in a healthier living environment for people. The Biocon Foundation will continue to invest in such initiatives, taking impactful actions towards environmental sustainability.



Grant-In-Aid  
**Financial Assistance  
for Commendable  
Projects**





## Grant-in-Aid Programmes



## Engendering Positive Partnerships for Social Impact

At the Biocon Foundation, we strongly believe that we can make strides towards sustainable development goals by cooperation, nurturing strong partnerships. While the Foundation implements CSR projects, we also support non-profit organizations that have a track record of credible work in similar focus areas.



In order to ensure that the right support reaches the right people, at the right time, we carry out thorough due diligence to determine the risks and benefits of working with a potential partner. Keeping the welfare of the community at the centre of every decision, the Foundation has funded several initiatives in areas such as nutrition, scientific research and women's safety in the year under consideration.



## Parihar - Enabling women's safety and wellbeing

Bhagya's story is one that is sadly, more common than one might think. She was married to her first cousin, at a young age. Despite being a victim of domestic abuse, she took several brave risks to secure her family's living conditions. Taking out a loan to construct a house for them, she ran into financial difficulties when the chit fund she used to manage ran into the doldrums.

**"I incurred huge losses and could not pay back anybody. I am still struggling with it. Simultaneously, the twenty-five lakhs that I had taken for the construction of the house also came upon me, so I mortgaged the papers of my house and paid it back. But I am now paying for the mortgage to be released," she narrates.**

This was not the end of her story – after seventeen years of marriage and very little financial support from her husband, it was revealed that he had a second wife. Almost at the end of her will to live, she went to Parihar for help.

Parihar is an initiative of the Bangalore City Police that the Biocon Foundation began to support in September 2019. The initiative is based out of the office of the Police Commissioner and consists of professional counsellors, trained volunteers and

police staff. It provides support to women and children in distress through family counselling centers, Vanitha Sahayavani (Women Helpline), Makkala Sahayavani (Child Helpline) and Vanitha Sahayavani Santwana Centres. They also provide a short-stay home facility, medical service, psychological counselling and legal aid to women victims of violence. In addition, Parihar also organizes workshops to sensitize police personnel and people in the community to make the city a safer place for women and children.



**Parihar – an initiative of Bangalore City Police, involves Vanitha Sahayavani (Women Helpline), Makkala Sahayavani (Child Helpline) and Vanitha Sahayavani Santwana Centres to provide relief and consolation to women who are victims of domestic and gender-based violence.**

**1403**  
cases were registered  
in Parihar

**1293**  
92% of cases - were  
reconciled and settled



Bhagya was able to get the strong support she needed to turn around her life.

---

**“I went to Parihar hoping to reunite with my husband, but he was very adamant about staying with his second wife. I thought that I would lose my house and my children would not be able to continue with their education. The very thought made me think of committing suicide, but I did not have the courage to do so,” she says.**

---

At Parihar, the team convinced her husband to bear the educational expenses of their daughter who was still in school. Parihar also handheld Bhagya through vocational training to empower her to live a dignified life.

Bhagya shares her journey, “Since I knew tailoring, I had told the counsellors that I can take part in training. I was called for their tailoring workshop where I was taught to stitch cloth bags and I was given the initial orders and raw materials as an initial investment. They also gave me a sewing machine free of cost after the training. Today, I am taking bulk orders from hotels, bakeries and shops. I am able to earn money almost every day. When I find it difficult to stitch by myself, I also take help from my neighbours and pay them. My daughter is still studying. My son is pursuing his graduation and working for a food delivery app after college hours. I am somehow able to make ends meet and pull off each day. I am happy to have become financially independent. I feel empowered. I am very proud of helping other women too.”

Violence against women is a significant concern in India. It hinders progress, educational attainment, and earning potential and comes at significant economic and social costs. The COVID-19 pandemic had increased the cases of domestic violence during the lockdown. According to the National Crime Records Bureau (NCRB), 370,000 cases of crime against women were reported in India in 2020.

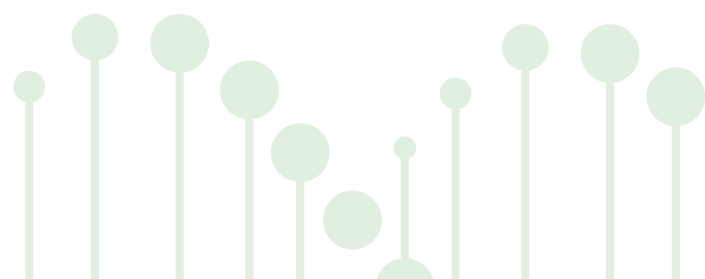
The Biocon Foundation’s partnership with Parihar is in keeping with UN SDG 5.2 to “eliminate all forms of violence against all women and girls in public and private spheres” by 2030. Bhagya’s story is one of the many lives they have helped re-build.




---

**A vocational training centre was inaugurated for women survivors of violence by Dr. Sharanappa S.D, Deputy Commissioner of Police, Bengaluru City in March 2022 on the eve of International Women’s Day. The centre helps women develop skills that will create employment and financial independence. A full-time tailoring trainer has been appointed and currently, 24 women are part of the four-month course. The training is free of cost.**

---



## Providing nutrition in collaboration with the Akshaya Patra Foundation

In the 2021 Global Hunger Index (GHI), India ranked 101 out of 116 qualifying countries. With a score of 27.5, India has a level of hunger that is 'serious'. GHI is based on four indicators - undernourishment, child stunting, child wasting and child mortality. Though the country showed improvement in certain indicators such as the under-5 mortality rate, stunting among children and prevalence of undernourishment remain huge concerns.

The COVID-19 pandemic further complicated the situation, especially for severely under-resourced populations, who relied on government and social programmes for basic nutrition and to allay their family's hunger. With many parents from these communities, the primary motivation of sending their children to school is so that their children avail a nutritious mid-day meal provided by the school, often the only full meal the children get to eat in a day. With schools closed during the lockdowns, they were deprived of even this.



**To help alleviate hunger, the Biocon Foundation has been actively working with Akshaya Patra Foundation over the years to fund the provision of nutritious meals to underserved communities, during and post-COVID-19.**

In Karnataka, as the lockdowns eased and schools restored physical classes, we resumed the supply of hot mid-day meals to government schools with strict adherence to COVID-19 guidelines. This was well received by students, teachers and parents as children returned to schools after 18 months of the nationwide lockdown imposed in March 2020.

Nutrition kits were also provided in collaboration with the Department of Women & Child Development, to malnourished children through Anganwadis in Anekal, Bengaluru.

In Telangana, meals were provided for pregnant and lactating women and children under the age of 6 years of anganwadi centres in Narsingi.





## 3900

Students across 72 government schools in Anekal, Bengaluru benefitted from mid-day meals

**4.51 lac meals served**

## 1800

Children under-six years of age, and pregnant and lactating women across 114 anganwadi centres benefitted in Narsingi, Telangana

**2.22 lac meals served**

## 1300

Malnourished children received Shakti Kits across 450 anganwadis in Anekal, Bengaluru

In addition to the other COVID-19 relief activities carried out, we also served 19,000 meals through the Akshaya Patra Foundation to frontline healthcare and sanitation workers during the second wave of the COVID-19 pandemic in Anekal, Bengaluru. This was a welcome relief for stressed frontline healthcare professionals like Anitha, a lab technician in Chandapura Government Hospital.



**“During the second wave of COVID-19 and subsequent lockdown, we did not have access to restaurants and were heavily burdened with casework. The food served by Akshaya Patra Foundation and Biocon Foundation at our workplaces came as a relief. We were also helping a few of our patients with the food that was arranged. We are thankful for the support received during the most difficult time.”**

## Biocon Chair - Encouraging research for essential cures



According to the Global Tuberculosis (TB) Report 2021, the estimated incidence of all forms of TB in India for 2020 was 188 per 1 lakh population. Childhood TB also is a grave concern, with the country contributing approximately 31 per cent of the global burden. India also reported a sharp 19 per cent rise in TB cases in 2021 over the previous year, according to the TB Report 2022. Similarly, cancer is also posing a threat to the healthcare system in India. According to the Indian Council for Medical Research (ICMR), the number of Indians suffering from cancer is projected to increase to 29.8 million in 2025 from 26.7 million in 2021.

Looking at the potential threat of these diseases to the community, the Biocon Foundation has established a 'Biocon Chair' at the Institute of Bioinformatics and Applied Biotechnology (IBAB).

Dr H.S Subramanya, Director, IBAB, holds the scientific chair which is focused on driving high-quality training and research to discover new drugs that work through a novel mechanism to treat TB. It is also targeting DNA Polymerase Theta (Pol O) for the development of cancer therapeutics.

He explains how the association with Biocon Foundation is invaluable to further research. "We have been conducting research to find novel mechanisms to treat tuberculosis. We are seeing higher resistance toward multi-drug TB treatment. Hence, we are screening natural compounds that can be used as a completely different mode of treatment for TB. We have identified a few natural compounds and are carrying out further analysis on the same. We are also targeting DNA polymerase theta which can play a vital role in DNA repair in cancer cases."

Since the inception of the Biocon Chair, several developments have taken place at IBAB. A Master's degree program is being offered in biotechnology and bioinformatics which gives students exposure to both computational and experimental biology. Over 76 students are currently enrolled as part of this MSc program. The institute has recently also started a post-graduate diploma in Big Data biology which focuses on the use of artificial intelligence and machine learning in the life sciences and healthcare.

---

**"Our association with Biocon Foundation is invaluable to further such research. IBAB is a not-for-profit organisation and we require high-quality faculty to drive programs, training and research. The support of Biocon Foundation allows us to ensure we have the best minds in the space who could foster innovations and developments in biotechnology, life sciences and healthcare," says Dr. Subramanya.**

---

The institute has also been offering several short-term training courses on genomics, biodiscovery and others, that have benefitted PhD students, researchers and medical practitioners. A total of 39 workshops have been conducted and over 900 candidates have been trained.

## Other research collaborations supported



### Collaboration with Indian Institute of Science (IISc) for Biocon-Syngene General Medicine Block

Biocon Foundation has signed an MoU with IISc to fund the construction of a post-graduate medical school and hospital in Bengaluru. The institute will have a not-for-profit 800-bed multi-speciality hospital. The medical school will offer a dual degree MD-PhD programme in clinical research to develop new treatments and healthcare solutions. In recognition of the funding support, the General Medicine facility will be named the Biocon-Syngene General Medicine Block.

### Collaboration with St. John's Research Institute (SJRI)

In our work with underserved communities, we continue to witness significant gaps in peripartum care and nutrition for children. Hence, the Biocon Foundation joined hands with SJRI to pursue research in peripartum mental health and child nutrition. The objective is to improve the health of communities and patients through evidence-based interventions. As part of this program, the following initiatives will be carried out:

#### Peripartum Mental Health

Despite the increased general awareness of health and mental welfare of pregnant mothers, there is still very little information about common peripartum mental disorders, especially in India. Peripartum mental disorders could range from schizophrenia, affective psychosis, and psychotic and non-psychotic forms of bipolar disorders. The Biocon Foundation is working to increase this awareness through screening and management of Common Peripartum Mental Disorders (CPMDs) among peripartum mothers by trained Community Health Workers at Government Maternity Home, Austin Town, Bengaluru.

### Nutrition - Knowledge, Attitude & Practice (KAP) Assessment

This program is aimed at the assessment of the current nutritional status of Anganwadi children, KAP of Anganwadi Workers (AWWs) regarding the management of malnutrition, and effectiveness of training programs for AWWs in Anekal, Bengaluru.



### Supporting Partners with Funding for Positive Change

The Biocon Foundation's grant-in-aid initiative has supported several initiatives that effect a positive social change, and funded research in areas that are critical. Through these, we hope to achieve a long-term, sustainable upliftment of families and communities, and positive direction to a better future through research.



# AWARDS AND ACCOLADES

## Mahatma Gandhi Award 2021



On the eve of Gandhi Jayanti, Mahatma Award 2021 was conferred on Biocon Foundation under the **“Good Health and Well-being”** category. The award was presented by Dr. Kiran Bedi, the first woman IPS officer of India and former Lieutenant Governor of Puducherry to Dr Anupama Shetty, Mission Director, Biocon Foundation at India International Centre, New Delhi.

## Bengaluru Women Achievers Award



The **Bengaluru Women Achievers Award 2022** was conferred on Dr. Anupama N Shetty, Mission Director, Biocon Foundation by the Bangalore Political Action Committee (B.PAC)

## National CSR Leadership Award



**South India’s Best CSR Leaders Award** was conferred on Dr. Anupama Shetty, Mission Director, Biocon Foundation at the National CSR Leadership Congress & Awards.

## Top CSR Initiative for Cancer Prevention

**Biocon**  
 Each year approximately 1 million people in India are diagnosed with oral cancers. India has a peculiarity in harboring worlds highest number, nearly 20% of oral cancers. The age standardized incidence rate of oral cancer is 11.2%, mortality rate is 10.2% and prevalence rate is 12.6% per 100,000 populations amongst Indian men. More than two-thirds of patients report the cancer in an advanced stage. It is evident that most of the oral cancers are largely preventable, if detected early. But often there is a delay in diagnosis due to lack of awareness, inadequate diagnostic services, and lack of trained specialists.

There is evidence that direct visual examination of the oral cavity is a cost effective method for oral cancer screening in resource-constrained settings. However, conventional screening has few limitations. Rigid follow-up to monitor the progression of Oral Potentially Malignant Disorders (OPMD) is very critical in oral cancer surveillance programme.

To address the shortcomings in conventional screening, Biocon Foundation — the CSR arm of Biocon — introduced a mobile health (mHealth) programme. The Foundation has developed and implemented a mobile phone-based management platform for cancer screening and surveillance that enables the creation of electronic health records and facilitates targeted screening for Oral Cancer. The CSR programme empowers the frontline healthcare providers with mobile phone equipped with decision-based algorithm for early detection of oral cancer. This mHealth allows Electronic Data Capture (EDC) that provides a platform to connect specialists with rural population for diagnosis. It also creates an opportunity for follow up and referrals.

The screening process is evidence-based, as every patient has a unique patient identity correlated with their habit history and clinically-relevant photographs. Started in 2011, the award-winning CSR programme has been successfully implemented in various resource-constrained settings in partnership with Governments of Karnataka, Rajasthan and Nagaland.

The Oral Cancer screening programme won the 2017 CSR Journal Excellence Award. In 2020, the CSR programme was the recipient of a Jury Commendation Certificate from IICCI under the category of 'Exemplary Innovation'. Biocon Foundation forged a partnership with the Indian Institute of Science (IISc), Bengaluru to develop artificial intelligence (AI) tools capable of detecting precancerous oral lesions; enabling point-of-care diagnosis for oral cancer. The Foundation has collaborated with the Shri Guru Ram Das University of Health Sciences, and the Tata Memorial Centre, to organize screenings in Punjab and Uttar Pradesh and conduct research studies to establish the efficacy of its mobile phone-based (mHealth) screening process against conventional screening methods in resource-limited settings.

The Oral Cancer mHealth program was recognized by **The CSR Journal** as one of the Top CSR Initiatives for cancer prevention and early detection on the occasion of the National Cancer Awareness Day 2021.

# Biocon Foundation in the News



ಬೆಂಗಳೂರಿನಲ್ಲಿ ಬಯೋಕಾನ್ ಗ್ರೂಪ್‌ನ ಬಯೋಕಾನ್ ಫೌಂಡೇಷನ್ ಆಳಿವಿನಂಟೆರಿದ್ಲಿ ಸಮುದಾಯಕ್ಕಾಗಿ ಬೆಂಗಳೂರಿನ ಹುಸುಕಡಕಟ್ಟೆ ಇನ್‌ವೆಲ್‌ವೆ ಸ್ಪಾಟ್ ಕ್ಲಿನಿಕ್‌ನಲ್ಲಿ ಆಯೋಜಿಸಿದ್ದ ವ್ಯಾಕ್ಸಿನೇಷನ್ ಡ್ರೈವ್‌ನಲ್ಲಿ ಬಯೋಕಾನ್ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಧ್ಯಕ್ಷ ಕೆ.ರಾಜ್ ಮೆಹುಂದಾರ್ ತಾ ಉದ್ಘಾಟಿಸಿದರು.

## ಪ್ರಜಾವಾಣಿ ಲಸಿಕೆ ಆಂದೋಲನ ಯಶಸ್ವಿಗೆ ಸಲಹೆ

**ಪ್ರಜಾವಾಣಿ ವಾರ್ತೆ**  
**ಬೆಂಗಳೂರು:** ಲಸಿಕೆ ಪಡೆದವರನ್ನು ಮೂಲಕ ಕೆಲವೇ ವಾರಗಳಲ್ಲಿ ಲಸಿಕೆ ಪಡೆಯುವಂತೆ ಮಾಡಲು ಬಯೋಕಾನ್ ಫೌಂಡೇಷನ್ ಮುಖ್ಯ ಕೆಲಸ ಮಾಡುತ್ತಿದೆ. ಲಸಿಕೆ ಪಡೆಯುವಂತೆ ಮಾಡಲು ಬಯೋಕಾನ್ ಫೌಂಡೇಷನ್ ಮುಖ್ಯ ಕೆಲಸ ಮಾಡುತ್ತಿದೆ. ಲಸಿಕೆ ಪಡೆಯುವಂತೆ ಮಾಡಲು ಬಯೋಕಾನ್ ಫೌಂಡೇಷನ್ ಮುಖ್ಯ ಕೆಲಸ ಮಾಡುತ್ತಿದೆ. ಲಸಿಕೆ ಪಡೆಯುವಂತೆ ಮಾಡಲು ಬಯೋಕಾನ್ ಫೌಂಡೇಷನ್ ಮುಖ್ಯ ಕೆಲಸ ಮಾಡುತ್ತಿದೆ.

### Vaccination drive for marginalised communities

Biocon Foundation, the corporate social responsibility arm of the Biocon Group, rolled out a community vaccination drive for the marginalised community. The drive is being hosted at an established eLAJ Smart Clinic, operated and managed by the Foundation in Husk Bengaluru. Individuals will be vaccinated utilising Covishield vaccine provided free of charge. The vaccination drive was inaugurated by Kir Mazumdar-Shaw, executive chairperson, Biocon.

### National survey on urban mental health from February 22; would also look at the impact of Covid-19 on people

NIMHANS in association with the Ministry of Health & Family Welfare will conduct the NIMHS Phase 2 on urban mental health in six metros and one Tier-II city in Karnataka from February 2022.



### We will survive

By Pragna L.Krupa / Updated: Feb 19, 2022, 06:00 IST



**How a victim of domestic violence is now helping other women to be independent**  
 A 40-year-old domestic violence survivor is empowering women, providing employment to them through her tailoring business.  
 Bhagyamma HC, a resident of Sunkadakatte, had a tough life — she married at an early age and her abusive husband had been harassing her everyday, she tells BM.



ENGALURU: National Institute of Mental Health and Neurosciences (Nimhans) will launch a mammoth study from February 2022 to assess the mental health of citizens living in metro cities, especially in the wake of the pandemic. Titled 'Cities and Mental Health', the study will also double as the second phase of the National Mental Health Survey.


Donated by :  
**Biocon Foundation**

ಬಿಸ್ ರಾಧಾಕೃಷ್ಣನ್





**Biocon Foundation**

20<sup>th</sup> KM, Hosur Road, Electronic City,  
Bengaluru – 560 100, India

 Telephone: +91 80 2808 2808

 [www.bioconfoundation.org](http://www.bioconfoundation.org)

 +91 80 2808 2808  
[info.bioconfoundation@biocon.com](mailto:info.bioconfoundation@biocon.com)

 [www.facebook.com/BioconFoundation](http://www.facebook.com/BioconFoundation)

 [www.twitter.com/biocon\\_fdn](http://www.twitter.com/biocon_fdn)