



2012 - 2013





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INFRASTRUCTURE

MANGALGUDDA

The houses were completed and handed over to the district administration in December 2012. 300 families have moved in, some of them have moved partially as they are waiting for the village festival to finish. Solar panels have been fixed on all the houses; we are now waiting for them to move in to fix the lights as we do not have the keys.

Biocon Nagar, Mangalgudda





Most of the people from the Mangalgudda community have moved into their new houses. Solar lights have been fixed in each house, so this village need not ever be dark. Each house has its own toilet and bathroom to ensure safety and privacy for the women and children and better health for all the community members. All 411 houses were handed over to the Government in December 2012.

Stories of Change in Biocon Nagar, Mangalgudda, Badami Taluk

Forty eight year old Sangamma and her husband work as coolies wherever there is work in and around Mangalgudda. They lost their house in the floods in 2009. She was given a small room in the sheds near Mangalgudda.



Sangamma & her family in front of her house

Eight months ago this family of four moved into a house built by Biocon. This is what Sangamma has to say about her life in Biocon Nagar – “Our house is very nice, we are happy to be living in this layout where all the houses are the same. It is so much better to live here, we feel safe and secure, and all are treated equally in Biocon Nagar. The roads are better, the dhobi ghat is nearby, Biocon has given us solar lights so our village is not dark at night, and we do not feel scared”.

Sangamma and her friends Renuka, Neelavya, and Sommava were actively involved in the construction work in Biocon Nagar.

INFRASTRUCTURE PLAN FOR 2013 – 2014

A. HUSKUR

- Rebuild the Primary School
- Rejuvenate the Temple Tank
- Install a Solid Waste Treatment Plant for the Community Toilet

B. MANGALGUDDA

- Construct a Higher Primary School and Primary Health Centre (PHC)
- Construct a rainwater harvesting system
- Provide clean drinking water
- The government has indicated that it might be necessary to build 40 to 50 houses more

C. HALIYAL

- Girls’ hostel

HEALTH CARE

AROGYA RAKSHA YOJANA (ARY) INTEGRATED HEALTHCARE INITIATIVE

Background

Many underserved communities face significant health challenges due to the lack of comprehensive, accessible and affordable healthcare services. The ARY Integrated Healthcare Initiative was started to fill this gap by providing a single-entry point primary healthcare services led by a qualified doctor, who is supported by a nurse, a pharmacist, and Community Health Workers (CHW). This was expected to make healthcare services easier for communities to access. In addition, the combination of preventive health education and the availability of a doctor for advice and referrals were expected to rationalize the use of hospital services and health insurance.

The ARY Integrated Healthcare Initiative aims to:

1. Provide access to holistic healthcare services from preventive health to hospitalization
2. Increase our focus data driven health programmes
3. Actively provide a broad range of accessible health services
4. Avoid duplication of government services by working closely with the government healthcare system
5. Strengthen local relationships to build community connectedness. Promote collaboration between communities, local providers and the government
6. Reduce isolation and provide peer professional support to local staff working in rural communities
7. Finally, our longer term objective is to make the clinics profitable so that local doctors will be motivated to provide healthcare using this service delivery model

The need for such a service has been established by the consistent patient footfall in all of the 9 ARY clinics (between 30 and 45 patients a day). In this last year we have concentrated on strengthening our systems to provide seamless services to patients. We have also tried to develop a matrix that will assess the impact of the delivery model.

BASELINE DATA COLLECTION

Information collected

- Demographic details
- Basic health details (Diseases / Immunization / Family Planning)
- Vital events (Births / Deaths / Migrations)
- Antenatal information
- Utilization of health services / Income / Medical Expenses
- Socio-economic data (housing/ sanitation/ water) Kuppaswamy socio-economic score assigned to each family

Page: Basic details

GPS Accuracy: 610, Target: 20 metres

Latitude Longitude

Name of Panchayat

Name of Village

Name of head of family *

Address *

Phone number

Data collected through PoiMapper, a GPS enabled data collection software

POPULATION SURVEYED IN 2012 – 2013

Sl.no	Clinic	Health Workers	Volunteers	Villages	Households	Total Population
1	Huskur	2	74 (Biocon)	8	1035	4287
2	Hennagara	2	14 (Local)	8	2964	11674
3	Austin Town	2	0	9	5282	23635
4	K R Puram	3	3 (Local)	7	3421	14215
5	Kalkunte	4	0	6	1200	5272
6	Chikballapur	4	0	10	2472	10346
7	Mandya	4	0	10	1814	7672
8	Polali	2	0	7	2981	14249
9	Kaladgi	8	0	1	2203	11965
10	Mangalgudda	3	0	1	398	2217
Total		34	91	67	23770	105532

SNAPSHOT OF HEALTH DATA IN BIOCON FOUNDATION SERVICE AREAS

Clinic	Pop	Targeted group > 16yrs				
		Pop	Tobacco + Alcohol	%	DM + HT	%
Huskur	4,287	3,299	720	21.8	261	7.0
Hennagara	11,674	8,545	2,400	28.1	719	8.4
Austin Town	23,635	17,406	4,800	27.6	2,204	12.7
Chikballapur	10,346	8,042	2,100	26.1	726	9.0
Kalkunte	5,272	4,009	1,200	29.9	334	8.3
KR Puram	14,215	10,243	2,800	27.3	1,921	18.8
Polali	14,249	10,678	1,450	13.6	1,394	13.0
Mandya	7,672	5,893	1,156	19.6	472	8.0
Kaladgi	11,965	8,062	1,100	13.6	523	6.5
Mangalgudda	2,217	1,493	622	41.7	18	1.2
Total	1,05,532	77,670	18,348	23.6	8,572	11.0

Data will be collected again in 2014

LEVEL 1: PREVENTIVE HEALTH EDUCATION & IMPLEMENTATION HIGHLIGHTS

SCOPE

The preventive health continues to provide the education and communication required to encourage people to adopt healthier behaviors that will impact their overall health in a positive way.

PREVENTIVE HEALTH EDUCATION - TOPICS IN 2012 / 2013

- Personal hygiene workshops continued
- Reproductive health and cervical cancer
- Tobacco cessation during oral cancer screening & during house visits
- Anaemia study and workshops completed. Funded by IDE
- Diabetic & Hypertension follow up
- MCH with emphasis on Malnutrition

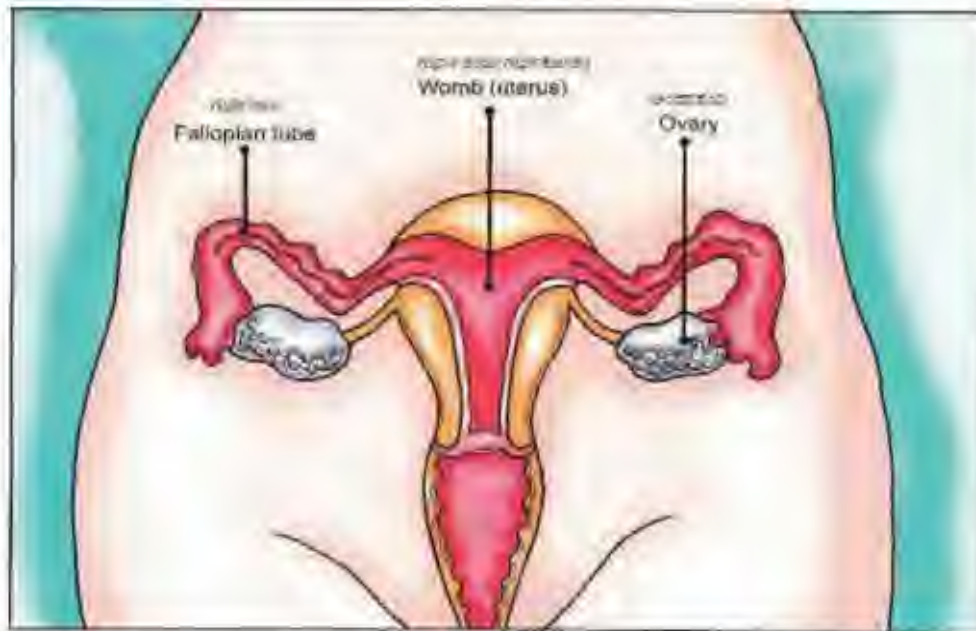
Prevention of Cervical Cancer Workshop



Personal Hygiene Workshop



Example from Reproductive Health Module



Part 1: Understanding our Bodies

The female reproductive system is made up of several organs that work together to produce and nurture a baby.

- **Uterus:** The uterus is a pear-shaped organ that is the site of pregnancy. It is made of muscle and is about the size of a pear. It is located in the center of the pelvic cavity. The uterus is divided into two halves by a vertical line called the fundus. The fundus is the upper part of the uterus, and the cervix is the lower part. The cervix is the opening of the uterus into the vagina.
- **Fallopian tubes:** The fallopian tubes are two long, thin tubes that connect the uterus to the ovaries. They are responsible for carrying eggs from the ovaries to the uterus. They are also responsible for carrying sperm from the vagina to the uterus.
- **Ovaries:** The ovaries are two small, almond-shaped organs that are located on either side of the uterus. They are responsible for producing and releasing eggs. They are also responsible for producing hormones that regulate the menstrual cycle.



Other reproductive organs are inside our bodies, where we can't see them.

- **Ovaries:** The ovaries release an egg into a woman's fallopian tubes each month. When a man's sperm joins the egg, it can develop into a baby. A woman has 2 ovaries, one on each side of the uterus. Each ovary is about the size of an almond or grape.
- **Fallopian tubes:** The fallopian tubes connect the uterus with the ovaries. When the ovary releases an egg, it travels through the fallopian tubes into the uterus.
- **Womb (uterus):** The womb is a hollow muscle. Monthly bleeding comes from the womb. The baby grows here during pregnancy.

Image credit: PHRI, Mysore

Example from Cervical Cancer Module



Part 3: Cervical Cancer

Visual inspection

Visual inspection is a simple and non-invasive method of screening women at risk of cervical cancer. It involves looking at the cervix and vagina with the naked eye. The cervix is the lower part of the uterus, and the vagina is the canal that leads from the uterus to the outside of the body. Visual inspection can detect changes in the cervix that may be a sign of cervical cancer.

Visual inspection

This low-cost method of screening women at risk of cervical cancer uses a simple (acetic acid) solution that is poured on the cervix and turns abnormal tissue white. The cervix is examined, sometimes with a small lens that makes it easier to see. If a woman has abnormal tissue, she needs other tests or treatment.



Image credit: PHRI, Mysore



CHW - Personal Hygiene Workshop

NUMBER OF PEOPLE CONTACTED THROUGH WORKSHOPS

Clinic	No. of adults & School children
Austin Town	9800
Huskur	3100
Hennagara	8250
Kalkunte	4100
Chikballapur	8400
Mandya	5500
Kaladgi	8750
Polali	7850
K.R. Puram	7750
Total	63500

SANITATION – HIGHLIGHTS OF SURVEY CONDUCTED BY GoK IN HUSKUR

The Ministry of Drinking Water & Sanitation renamed and re-launched the Total Sanitation Campaign (TSC) and Nirmal Bharat Abhiyan (NBA) programme on April 1, 2012. The objective of this initiative is to accelerate the sanitation coverage in rural areas, by providing financial assistant to Below Poverty Line (BPL) & Above Poverty Line (APL) households in villages.

The GoK conducted a baseline survey in December 2012 to determine the number of “Nirmal” villages and villages with adequate piped water supply. The results for the Huskur Survey are below:

State Name: Karnataka
District: Bangalore Urban
Block Name: Anekal
GP Name: Huskur

A. Individual household latrines

Category	Households	With Toilets	Without Toilets
BPL – SC	361	359	2
BPL – ST	6	6	0
BPL – OTHERS	77	74	3
APL – SC	2	2	0
APL – ST	1	1	0
APL – Small & Marginal Farmers	458	456	2
APL – Landless with homestead	57	56	1
APL – Physically Handicapped	0	0	0
APL – Women headed households	190	186	4
APL – Other	8	8	0
Total	1160	1148	12

B. Functionality of toilets

Category	Functional	Defunct
BPL – SC	359	0
BPL – SC	6	0
BPL – OTHERS	74	0
APL – SC	2	0
APL – ST	1	0
APL – Small & Marginal Farmers	456	0
APL – Landless w home	56	0
APL – Handicapped	0	0
APL – Women headed	190	0
APL – Other	8	0
Total	1148	0



Comments

1. This survey was carried out in December 2012. The Zilla Panchayat office shared this information with us in April 2013
2. When we cross checked we have found that in spite of continued education some families have not maintained their toilets properly. We have restarted the IEC and we are doing minor repairs on almost 100 toilets
3. The community toilet built by us has been recorded in the survey
4. GoK is helping the 12 families who do not have toilets to access the funds available for this purpose
5. At present there is severe shortage of water in Huskur, so some families have gone back to open defecation. It is likely that more people will do this till the water situation improves.

EARLY DETECTION AND MANAGEMENT OF CHRONIC ILLNESSES

ORAL CANCER SCREENING



The screenshot displays a mobile application interface for oral cancer screening. At the top, there is a status bar with signal, battery, and time indicators. Below this, the app header shows a green cross icon and the text 'New Patient'. The main form contains several input fields: 'City/Taluk' with 'Chikballapur' selected from a dropdown menu, 'GPS Coordinates' with a location pin icon, and 'Patient's First Name' with 'mallamma' entered. Below these fields is a section titled 'Create New Patient?' containing three radio buttons: 'Not Answered', 'Create new Patient?', and 'Update existing patient?'. The 'Update existing patient?' option is currently selected, indicated by a green dot. At the bottom of this section, there is a label 'Enter Patient's Medical Record ID Number?' followed by a text input field.

Globally, India accounts for the highest number of oral cancer cases, with the government recording a staggering 80,000 cases every year across the country. In addition 30% of all cancer deaths in India are caused by oral cancer.

Oral cancer is caused by chewing tobacco and gutka which is more common in rural India, than smoking. Though oral cancer is completely preventable, delays in presentation and diagnosis, result in low treatment outcomes and higher costs to patients. Reasons for delay in diagnosis and treatment especially in rural areas are:

- Lack of trained specialists
- Inadequate diagnostic services
- Poor awareness
- Economic and social barriers to seek help
- Poor infrastructure and connectivity

Our community health workers are trained to use a simple module loaded on mobile phones to screen high risk populations, for oral lesions that could turn malignant. They also highlight the correlation between chewing tobacco or gutka and the development of mouth lesions and they assist and encourage patients to seek medical advice.

WORK FLOW – ORAL CANCER SCREENING



ORAL CANCER SCREENING 2012 – 2013

Details	Population based screening			Opportunistic	Total
	Anakanur	Mangalgudda	Coorg	Dentists	
Total Population	1040	2200	326	1440	5006
High risk group	246	583	300	1440	2569
Screened	246	327	104	1440	2050
Positive Lesions	71	67	71	106	315
Biopsies	1	3	71	106	181
Aquasol Ointment	17	40	0	0	57

The Mangalgudda Oral Cancer Screening Program was selected by the American Head and Neck Society for a poster presentation at the Combined Otolaryngeal Society Meeting, April 2013 at Orlando.



ORAL CANCER SCREENING PLAN FOR 2013 – 2014

Clinic	Villages	High Risk
Chikballapur	4	2,100
Huskur	8	720
Hennagara	8	2,400
K.R Puram	4	2,800
Kalkunte	4	1,200
Austin Town	8	4,800
Kaladgi	12	1,100
Mandya	4	1,156
Polali	4	1,450
Coorg	4	3,000
Total	60	20,726

HARVARD SCHOOL OF PUBLIC HEALTH

Dr. Vishwanath and Robyn Long (from Dean Frenk's office) visited us in January 2013. Dr. Vishwanath was particularly interested in our work on Tobacco Cessation. He is very interested in helping us test and further develop the "Quit Smoking App"



The image shows a mobile application interface for the Biocon Foundation. At the top, there is a header with the Biocon Foundation logo and the text "Cold Turkey Help us help you Stop Smoking". Below the header, there are several input fields and buttons for user registration or survey completion. The fields include "Your Age" (a text input), "Gender" (with "Male" and "Female" buttons), "Are you studying or working" (with "Studying" and "Working" buttons), "City" (with a dropdown menu showing "Bangalore"), and "List of Colleges/Companies" (with a dropdown menu showing "College 1"). The interface is clean and uses a blue and white color scheme.

We hope to collaborate with HSPH to develop and launch this app and the tobacco cessation education module.

EARLY DETECTION OF CERVICAL CANCER THROUGH SCREENING & EDUCATION

World Health Organisation (WHO) data in 2007 revealed that 74,000 women in India died of Cervical Cancer even though it is completely preventable. 99% of cervical cancer cases are linked to infection with Human Papilloma Virus (HPV).

A cervical cancer prevention and control program requires three key service delivery components that must be linked together: community information and education, screening services, and diagnostic and/or treatment services.

We conducted a Cervical Cancer Consultation at the Biocon Foundation office on the 14th of November, 2012 in order to understand the aspects of Cervical Cancer Screening in India. Our expert panel included:

Dr.Elizabeth Vallikad - HOD Gynecologic Oncology, St. John's Medical College and Hospital, Bangalore

Dr.Rhoda Nussbaum - Director, PINCC, USA

Dr.R.Rajkumar - International Collaborator for Cancer Registry and Cervical Cancer Screening Projects in India, Professor, Community Medicine, Meenakshi Medical College, Kanchipuram

Dr. John Adams - Administrative Director, PINCC, USA

Dr.Sulekha T - Assistant Professor Department of Community Health, St. John's Medical College and Hospital, Bangalore

This meeting gave us an insight as to how Cervical Cancer has been ignored as a burning health issue because of the lack of qualifying data, there is no public health program which caters to this disease.

CERVICAL CANCER SCREENING PLAN FOR 2013 - 2014

Biocon Foundation hopes to collaborate with Tertiary Cancer Centres to incorporate a cervical cancer screening and prevention program into its current preventive and primary healthcare model through our network of 9 clinics in Karnataka.

Our clinics in Huskur and Hennagara are in close proximity to the Mazumdar-Shaw Cancer Center (MSCC) Bangalore. We are sure that if we work in collaboration with the hospital, we will be able to comprehensively screen and treat the population at risk in our areas of care.

These two villages have a strong patient base, the socioeconomic background is mixed, with some from BPL background, some are factory workers with Employee State Insurance (ESI) coverage, while a proportion of the population are not a part of any health plan.

Clinic	Field practice area	Target group (women in the age group of 30-45 years)
Huskur	5 Km radius	586
Hennagara	9 Km radius	1431
Total		2017

1. The Health workers are currently undergoing training for the Primary module. They have been encouraged to use the module for training in controlled settings like the clinic with their female peers
2. The pilot training was conducted at our clinic in Polali wherein a group of twenty women were addressed by our preventive health educator from Bangalore. Subsequently the Health Workers at Polali have addressed 120 women in batches. The Secondary Module training for Community will commence in Huskur and Hennagara in the third week of April
3. Specialist consultation and focused screening in our clinics, by doctors from MSCC, starting in May
4. Subsidized screening tools – Biocon Foundation and MSCC
5. Referral if required to MSCC for further care and management at a subsidized rate, or through health insurance cover.

DIABETES MELLITUS (DM) & HYPERTENSION (BP)

Our health workers in the Austin Town clinic continue to follow up with diabetic and hypertensive patients to help them optimize management of these chronic illnesses. These patients are from two streets near the clinic. Many of these patients go to the government hospital but we help them with their follow up.

Patients	DM	BP	DM+BP
Women	122	187	68
Men	45	58	32
Total	167	245	100

Barriers to effective management and follow up:

- Men are reluctant to talk about their illness
- Economic barriers – when they do not have money they stop taking their medicines and they do not get their blood sugar tested regularly

Diabetic Patients

Clinic	Case Files	Follow ups
Huskur	80	661
Austin Town	48	369
Chikballapur	300	1488
Hennagara	25	284
Kaladgi	10	60
Kalkunte	60	485
KR Puram	66	585
Mandya	120	431
Polali	18	168
Total	727	4531

The doctors in our clinics primarily prescribe oral hypoglycemic drugs; these are primarily generic drugs in order to reduce the cost to the patient. We also receive outside prescriptions which often use Biocon drugs.

Plan for 2013 – 2014

- Specialist consultation – we have requested Biocon to help us with this
- This year we are giving our diabetic patients a file to ensure that their records are in one place and thus improve treatment compliance, improve their understanding of the illness and help the clinic to manage their treatment more efficiently. Health workers are being trained to help patients maintain this file. We would like to bring in a specialist once or twice a month
- The Arogya Raksha Yojana (ARY) Diabetes & Hypertension (HT) Record file will have the following sections:
 1. Patient profile
 2. Checklist for Doctor's visit
 3. Anthropometry
 4. Prescriptions
 5. Investigations
 6. Consultations
 7. Podiatry section including foot care
 8. Vitreoretinal section
 9. Cardiovascular, Nephrology, Neurology and Psychiatry section
 10. Diet
 11. Hypoglycemia

MALNUTRITION

Childhood malnutrition is a major public health issue in India. 50% of all childhood deaths are attributed to Malnutrition.

BAGALKOTE

- A survey in Bagalkote identified 3108 malnourished children in the under-5 age group
- The Bagalkote Government and Biocon Foundation decided to develop a strategy for optimal management of this problem

Objectives:

- Area wise mapping and identification of malnourished children
- Identify gaps in the existing system, develop and implement solutions
- Develop an MIS for correlation of anthropometric measurement and malnourished children and the availability of food ration in their areas of care
- Management of malnutrition by supplementing the government programs

We conducted a baseline survey of the Anganwadis under the jurisdiction of Pattadakallu and Kaladgi Primary Health Center (PHC). These Anganwadis have been geo tagged and mapped on our portal. During our visits to the Anganwadis, we have taught the workers about the importance and the correct method of weighing the children and tabulating the growth charts.



Kaladgi PHC Anganwadis



Pattadakallu PHC Anganwadis

PHC	Anganwadis	Malnourished children
Kaladgi	97	151
Pattadakallu	26	64
Total	123	215

Based on the survey we have suggested the following plan to the government:

- We have suggested a division of labour plan to the government
- Focused education about malnutrition targeting Anganwadi supervisors, workers and parents
- Borderline Severe Acute Malnutrition (SAM) – Moderately nourished children who are Oscillators must be included in the radar
- Training of Community educators and propagators of good nutrition
- Provision of protein or vitamin supplements in high risk areas
- Wall paintings to highlight nutritious and affordable foods – this will be done by Biocon Foundation

GUDIBANDE – CHIKBALLAPUR

In Chikballapur district, about 50% of children are under nourished and a little over 1000 children are severely malnourished. Biocon Foundation was approached by the Department of Women and Child Development, Chikballapur to help them with the MCT oil project that was being started by the Zilla Panchayat in Chikballapur district to combat malnutrition. Medium-Chain Triglycerides (MCT) are generally considered a good biologically inert source of energy that the human body finds reasonably easy to metabolize. Due to their ability to be absorbed rapidly by the body, MCT's have found use in the treatment of a variety of mal-absorption ailments.

Taluk	SAM Children	Reqmt / mth (bottles)	Reqmt / 6 mths (bottles)
Bagepalli	245	1470	8820
Chikballapur	125	750	4500
Chintamani	172	1032	6192
Gowribidanur	266	1596	9576
Gudibande	113	678	4068
Shidlagatta	198	1188	7128

We have dispatched 900 bottles of MCT oil for use in Gudibande. An amalgamated report of the Improvement in SAM children in Gudibande Taluk will be submitted to us in October 2013, which will mark the end of one year since the initiation of the project.

**CENTER FOR AFFORDABLE MEDICAL TECHNOLOGIES, (CAMTech)
MASSACHUSETTS GENERAL HOSPITAL CENTER FOR GLOBAL HEALTH**

CAMTech, is a global consortium of academic, clinical, corporate and implementation partners working to expedite the development of affordable medical technologies in Lower and Middle Income Countries (LMICs). CAMTech's mission is to co-create, test and deploy innovative, high-quality and affordable health technologies to improve health outcomes in LMICs. Their first priority area is Maternal, New-born and Child Health (MNCH).

In March 2013, Biocon Foundation was invited to participate in CAMTech's 2nd Innovator Conclave for Medical Technologies – at the Vellore Institute of Technology. Biocon Foundation suggested a few need areas where medical technology could help extend and improve public health delivery in low resource and challenging settings. CAMTech in turn converted these suggestions into challenges.

The challenges:

- **Virtual Monitoring** – miniaturized low-cost, low-power wireless devices that relay patient vitals in real time for remote at risk new-born monitoring
- **Microbiology** – high-resolution add-on devices that digitalize microscope images but are low-cost and robust
- **Remote Consultations** – audio and video enabled virtual consultation rooms that do not use Internet
- **Diabetic Diagnostic Screening Device(s)** – aids for diagnosis or screening for complications of diabetes (neuropathy, retinopathy, and nephropathy) that would help expand access to care
- **Cumulative Cardiovascular Risk-Assessment Mapping** – relying on such attributes age, gender, blood pressure, blood glucose, lipid profile, and cumulative smoking history, user-friendly algorithms and devices that allow front line workers to identify risk objectively
- **Tuberculosis Diagnostics** – testing that would allow rapid identification and treatment of active disease
- **Cervical Cancer Screening** – a user-friendly device that is non-invasive and permits lesser trained workers to systematically screen women for cervical cancer or its precursors
- **Oral Cancer Screening** – screening devices that provide provisional diagnoses to solve problems of follow-up

LEVEL 2: PRIMARY HEALTHCARE THROUGH THE AROGYA RAKSHA YOJANA (ARY) CLINICS

The NINE Arogya Raksha Yojana clinics continue to offer clinical services to the communities where they are located. This year we have seen 65,000 patients across all our clinics. In addition we treated nearly 10,000 patients through our outreach camps, for which our clinics collaborate with local hospitals or NGOs.



Kalkunte ARY clinic

- We continue to collaborate closely with the local PHCs and ASHA workers are actively involved with our preventive health programmes
- Clinics continue to promote health insurance to patients to ensure that critical surgeries are covered
- The Jain Institute of Vascular Sciences provides diabetic foot checkups and treatment to almost 3,000 patients through monthly camps at our clinics in Austin Town, Huskur, KR Puram and Chikballapur
- St. John's Medical College Community Medicine Department provides the medical consultation services for our clinic in Austin Town. In addition they visit the Kalkunte clinic once a month for a Mother and Child Health (MCH) camp
- The clinic in Chikballapur saw 1000 Cardio-Vascular Disease (CVD) patients last year. We use the on line ECG facility which is connected to Narayana Hrudalaya Hospital. Speedy diagnosis from the NH cardiologists makes it easy for patients to monitor their disease and comply with prescribed treatment. This telemedicine facility is useful for people living in remote areas to manage their illnesses
- Gastro-intestinal and respiratory infections and general fever / body pain account for 30% of the cases in the clinics, this is a marginal drop from the previous year when 35% of our patients were treated for hygiene and sanitation related illnesses. Most patients cite inadequate supply of clean water as a major cause for this

CLINIC STATISTICS

a) No of Patients

Clinics	YEAR								Total
	2006	2007	2008	2009	2010	2011	2012	2013	
Huskur	7345	9367	10385	11274	12845	13287	14230	13,034	84,422
Chikballapur		960	2015	2846	3576	5834	8712	12,473	37,416
Kaladgi, Bagalkote			759	946	1956	9364	11364	10,370	34,759
Austin Town			635	945	2874	4384	5613	3,673	18,124
KR Puram				645	2164	6359	7352	6,731	23,251
Mandya					102	1067	6146	5,833	13,148
Hennagara						793	4858	6,454	12,105
Polali, Mangalore							2802	3,280	6,082
Kalkunte							1654	2,678	4,332
Old Clinics	3,746	4,821	1,045						9,612
	10093	14073	18615	17701	23517	42088	62731	64,526	2,43,251

b) Disease profile

	2005 - 2012	2012 - 2013
No of Clinics	9	9
Total Patients		
In Clinic	1,88,818	64,526
Outreach (Health Camps / Mobile Clinics)	1,20,556	20,000
Major Illnesses Treated	% of total	% of total
Respiratory Illnesses	14	11
Fever / Body Pain	13	13
OB / GYN	11	5
Hypertension	10	8
Pediatric Cases	9	13
Anaemia	9	2
Gastrointestinal Illnesses	8	9
Diabetes (Clinics & Camps)	8	9
Orthopedics	6	5
CVD		3
Others	12	22
Total %	100	100

c) Number of individual case files

Clinic	No. Case Files
Austin Town	2214
Chikballapur	1254
Hennagara	2702
Huskur	4336
Kaladgi	3276
Kalkunte	844
KR Puram	1113
Mandya	2180
Polali	518
Total case files	18,437

MATERNAL AND CHILD HEALTH

The Maternal Mortality rate in Karnataka is 178 per 1, 00,000 live births and the Infant Mortality in Karnataka is 41 per 1000 live births.



Most of these deaths have been attributed to lack of awareness about the importance of antenatal checkups and institutional deliveries. We have started a monthly Maternal and Child Health Clinic in collaboration with St. John's Medical Hospital at our clinic in Kalkunte.

Women who attend this clinic have their Ante-Natal Check-up (ANC) while being taught about the importance of diet and warning signs. Free Calcium, iron and folic acid tablets are given to the women, the health workers check compliance of these patients periodically. Children are also immunized during this clinic. The information about the immunizations and ANC are shared with the government Auxiliary Nurse Midwife (ANM) who then registers these cases.

Month	ANC	Gynecology	Immunization	Total
November	8	12	24	44
December	6	15	26	47
January	11	13	22	66
February	7	13	11	31
March	11	4	16	31
Total	43	57	99	219

OTHER OUTREACH SERVICES - HEALTH CAMPS - 2012 / 2013

NGO	No. Camps	No. Patients
JIVAS	223	10,000
VDRMT	2	4,000
Kalkunte	21	4,000
Polali	4	2,000
Total	250	20,000

BIOCON FOUNDATION AND ST. JOHN'S MEDICAL COLLEGE & HOSPITAL

Biocon Foundation approached St. John's Hospital for their help and expertise to ensure the optimal functioning of the Urban Health Centre in Austin Town. This collaboration with St. John's which started on the 1st of October, 2012 has yielded satisfactory results in a very short time.

The footfall of patients has increased and we are able to have specialist clinics here with Doctors coming in from St. John's.

The Ophthalmology Clinic which was conducted on 15th February, 2013 and 18th March, 2013 had a combined footfall of 55 patients. Three patients were found to have cataract and have undergone surgery at the Muglur Community Health centre run by St. John's Hospital.

The Community Health Workers during their field trips noticed that a high percentage of patients in this area had skin related problems. In response to this a Dermatology clinic has been organized once a month which will start in April.

Mental health problems which go unnoticed due to the stigma attached to these problems and the lack of awareness is also common in these areas. We are therefore starting a program of creating self-awareness using a simple questionnaire and scoring system which

can be used by the Community Health Workers to detect people at risk for common mental health disorders. Post Graduate students from the department of Community medicine, St John's Hospital have started training our Health workers for this program.



Austin Town Clinic

We believe that partnerships with committed tertiary centers like St. John's Hospital, is the way forward to ensure good quality primary health care services at our Health Centers.

DENTAL CLINIC IN CHIKBALLAPUR

OBJECTIVE: To increase awareness about oral hygiene and dental problems by introducing regular dental screening in rural areas.

We started the Dental clinic at our ARY Clinic in Chikballapur on the 22nd of February, 2013. The Karnataka Lingayat Education Society (KLE) Institute of Dental Sciences, Bangalore has donated a dental chair, compressor and airtor for use in this clinic. The Blocon Foundation Dentist visits this clinic once in 15 days providing basic treatment like cleaning, extraction and fillings, any case which requires further treatment is referred to the dental college.

Consultations	22
Cleaning	4
Filling	2
Extraction	1
Referrals	9
Total	38

KLE Dental College has agreed to donate a dental chair for our clinic in Kalkunte, we should therefore be able to start a clinic here in a couple of months.

AROGYA RAKSHA YOJANA CLINICS – A HUB AND SPOKE DELIVERY MODEL

Objective:

To create a complete health ecosystem by extending the reach of our preventive and primary health programs to remote locations where there are no doctors.

The Hub:

Full service - ARY Clinic providing a doctor, pharmacy, diagnostic center

The Spoke:

Preventive Health Centers staffed by a pharmacist and a trained community health worker. Customers / Patients will pay for services and products that will be provided at the Biocon Foundation Preventive Health Center

- Patients / customers to be registered on CMS
- Multi Parameter Vital System to check vitals (MPM600). Readings to be sent via phone or internet to the doctor at the hub. Based on these vitals the doctor can ask for diagnostic tests or prescribe medicines
- Point Of Care (POC) diagnostic (iDX) tests to be done by the pharmacist / health worker and results sent through the internet (CMS) to the doctor who will then prescribe medicines (which the patient can buy at the center) OR the doctor might advise the patient to come to the hub or go to the nearest doctor
- Well stocked village pharmacy where essential medicines will be sold at a subsidized rate. These will include OTC as well as basic prescription drugs for treatment of infections and drugs required for management of chronic illnesses (Diabetes, CVD)
- The pharmacy will also stock personal and preventive health and hygiene products like soaps, powder, toothpaste, toothbrushes, combs, condoms
- Drinking water in canisters – this will drive footfall to the center since people need clean drinking water
- Preventive health education modules to be printed on flyers and kept in the center for patients to pick up

The Status:

- We have found two places in Chikballapur District – Poshetahalli and Anakanoor, where we can pilot this model
- Step 1: Develop the Clinical Decision Support System;
- Step 2: Track acceptance levels in both villages and measure patient / customer footfall over 6 months to a year
- Field testing of MPM600 being done in Huskur & Hennagara clinics. We have collected 75 readings of BP and Blood Sugar; we have to collect 200 readings to check the accuracy of the machine and usability by health workers and pharmacists. POC diagnostic device supplied by iDX (manufactured by Audit Diagnostics, Ireland) to be integrated into our current clinics (the hubs) and at the outreach health centers; (the spokes).

THE HUB & SPOKE MODEL



LEVEL 3: TERTIARY AND SECONDARY HEALTHCARE

HEALTH MICRO INSURANCE IN KARNATAKA - A SNAPSHOT

Schemes in Karnataka

	Scheme	Year of Launch	Promoter
1	Yeshasvini	2002	GoK
2	Arogya Raksha Yojana	2005	Biocon Foundation
3	Suvarna Chaitanya	2007	GoK
4	Vajpayee Arogyasri	2009	GoK
5	RSBY	2010	Gol / GoK

Target Audience

	Scheme	Target Audience	Age	Family Size
1	Yeshasvini	Co-op Society Members	75	All
2	ARY	Unorganized Sector	70	7
3	Suvarna Chaitanya	Govt School Children	Std. 7	All kids
4	Vajpayee Arogyasri	BPL	All	5
5	RSBY	BPL	All	5

Premium – Amount and Source

	Scheme	Premium (Rs.)	Source
1	Yeshasvini	210	50% self / 50% GoK (mandatory)
2	ARY	260	Self (voluntary)
3	Suvarna Chaitanya	Free	GoK
4	Vajpayee Arogyasri	Free	GoK
5	RSBY	Rs. 30 Reg. fee	Self
		Rs. 400	Gol / GoK

Sum Insured				
	Scheme	Sum Insured	Type of cover	Details
1	Yeshasvini	200,000	Family Floater	1600 surgeries
2	ARY	100,000	Individual	850 surgeries + Med Hosp.
3	Suvarna Chaitanya	N.A.	Individual	All hospitalization
4	Vajpayee Arogyasri	200,000	Family Floater	465 procedures (incl. cancer treatment)
5	RSBY	30,000	Family Floater	700 surgeries (incl. limited cancer treatment)

No of Lives Enrolled (2013)		
	Scheme	Number (Lives or Families)
1	Yeshasvini	40,00,000 lives
2	ARY	36,700 lives
3	Suvarna Chaitanya	Info not available
4	Vajpayee Arogyasri	9.4 lakh families
5	RSBY	8 lakh families

Financial Overview (2013)				
	Scheme	Total Premium (Rs lakhs)	Cases	Claims Paid (Rs lakhs)
1	Yeshasvini	6400.00	66,749	5500.00
2	ARY	95.42	367	78.17
3	Suvarna Chaitanya	Not available	NA	NA
4	Vajpayee Arogyasri	Direct budget	NA	6000.00
5	RSBY	3200.00	NA	NA

NOTES:

- Not sure of the reliability of the data on government schemes, there are many contradictory reports
- The Vajpayee Arogyasri covers major diseases like cancer, CVD – its plan is very comprehensive. Though we have heard in the field, that hospitals periodically stop accepting cards because of huge outstanding payments, we still encourage and assist patients to use the cards as the cover is very comprehensive.
- The RSBY covers BPL families as listed in the Gol records. There is a discrepancy between the number of BPL families listed with the central government and the state government.

AROGYA RAKSHA YOJANA HEALTH MICRO INSURANCE

History

Groups	2006		2007		2008		2009	
	Lives	Premium	Lives	Premium	Lives	Premium	Lives	Premium
Retail	12,427	15,21,934	13,259	16,23,830	13,350	16,34,975	24,101	29,51,650
Corporate	2,820	3,45,365	7,613	9,32,364	7,568	9,26,853	8,668	10,61,570
Schools / Colleges	29,897	36,61,485	29,519	36,15,192	29,376	35,97,678	26,720	32,72,400
NGO / MFI	11,267	13,79,869	12,141	14,86,908	19,030	17,18,254	13,000	15,92,200
TOTAL	56,411	69,08,653	62,532	76,58,294	69,324	78,77,760	72,489	88,77,820
Avg. Premium	122.47		122.47		122.47		122.47	

Groups	2010		2011		2012		2013	
	Lives	Premium	Lives	Premium	Lives	Premium	Lives	Premium
Retail	31,527	39,58,215	35,188	51,51,523	32,179	52,69,633	24,700	64,22,000
Corporate	4,212	5,28,820	10,338	15,13,500	8,350	13,67,396	7,500	19,50,000
Schools / Colleges	26,700	33,52,200	15,000	21,96,000	10,000	16,37,600	Nil	Nil
NGO / MFI	12,315	15,46,150	19,003	27,82,039	8,335	13,64,940	4,500	11,70,000
TOTAL	74,754	93,85,385	79,529	1,16,43,062	58,864	96,39,569	36,700	95,42,000
Avg. Premium	125.55		146.4		163.76		260.00	

Claims Analysis

	2006	2007	2008	2009	2010	2011	2012	2013
No Lives	56,411	62,532	69,324	72,489	74,754	79,529	58,864	36,700
Premium (Rs. Lakhs)	69.09	76.58	84.90	88.77	93.85	116.43	96.40	95.42
Premium per life (Rs)	122.47	122.47	122.47	122.47	125.55	146.4	163.76	260.00
No hospitals	20	20	20	20	30	35	35	38
Claims								
No. claims	320	324	410	483	527	452	565	367
Value of claims (Rs lakhs)	29.95	68.92	90.84	97.65	112.62	186.28	134.95	78.17
Avg. Claim Cost (Rs.)	8,418	21,273	22,157	20,218	21,370	23,183	23,900	21,300
Claim Ratio (%)	43	90	107	110	122	160	140	81.9

Claims by illnesses

Illness	% of total
Cardiac Procedures	13
OB / GYN	24
Ophthalmology	5
All others	58
Total	100

- Cardiac surgeries, deliveries and hysterectomies account for 37% of total number of procedures
- The Yesashvini tariff for open heart surgery was reduced from Rs. 75,000 to Rs. 60,000. Hospitals are making up the difference by collecting money from patients. More cardiac cases under ARY
- Most deliveries are C-sections. The difference in tariff is Rs. 5,000 for a normal delivery and Rs. 7,500 for a C-section
- Hysterectomies were being recommended by hospitals after a young woman had two children, or when a young woman wants to stop her pregnancies. After we threatened to blacklist hospitals and report them to the government, this came down slightly

Enrollment via mobile phones

ARY enrollment at a field clinic



ARY Mobile Enrollment



Use of mobile phones to:

- Speed up enrollment process
- Reduce data entry error
- Reduce lead time for issuance of identity cards to customers

EDUCATION

CHINNARA GANITHA

Strengthening the learning of basic math concepts



Chinnara Ganitha class wise distribution 2012 – 2013

Place	Std 1	Std 2	Std 3	Std 4	Std 5	Std 6	Std 7	Total
Anekal	3400	2800	2750	2750	2950	2900	3000	20550
Chikballapur	2,000	2,000	2,000	2,000	2,000	1,800	2,000	13,800
Coorg	1900	1800	1900	1800	1300	1850	2000	12550
Mandya	2650	3000	3000	3100	3400	3300	3500	21950
Badami	550	550	550	550	550	600	550	3900
Kaladgi	300	300	300	300	300	300	300	2100
Mangalore	650	700	700	700	700	700	700	4850
IISc	200	200	200	200	200	200	200	1400
Total	11650	11350	11400	11400	11400	11650	12250	81100

Chinnara Ganitha Area Wise Schools 2012 – 2013

Place	Schools
Anekal	271
Chikballapur	261
Coorg	127
Mandya	268
Badami	16
Kaladgi	9
Mangalore	6
IISc	4
Total	962

‘CHINNARA GANITHA’

IMPACT OF CHINNARA GANITHA MATHS MODULES
ON THE MATH ACHIEVEMENT SCORES OF STUDENTS OF
CLASSES 5 TO 7 OF GOVERNMENT SCHOOLS OF ANEKAL
AND HOSKOTE TALUKS OF BANGALORE DISTRICT

RESULTS AND INTERPRETATION
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BENGALURU

Introduction

"I don't like maths", "I am not good at maths", "I always score less in maths" are some of the things that we commonly hear children all over the world say. Yet once they have understood the key concepts, and learned to apply them, their confidence levels soar and what we hear is Maths is all about understanding concepts, requires no rote learning and maths is fun.

It is often said that mathematics is about a certain way of thinking and reasoning. Enough importance should be given to allow children to articulate their reasons behind solving or performing a mathematical operation. It is imperative that maximum opportunities are provided for developing math concepts in a spiral manner in a language familiar to children.

It is with these objectives that Macmillan and Biocon Foundation set about to offer activity-based Practice material covering all the important competencies of maths for classes 1 to 7, closely mapped with the DSERT curriculum.

Some features of 'Chinnara Ganitha'



- **'1-Maatu'** and **'Kivi Maatu'** help to reinforce basic mathematical skills and improve speed and accuracy.
- **'Buddhige Thindi'**, a comprehensive quiz provided at the end of each section, helps in the recall of the concepts learnt. It can also be used for remedial work.
- **'Thatantha Uttarasi'**, a set of test papers at the end of each book, serves as an excellent revision guide for all the concepts learnt in the academic year.
- **'Chakamaki'**, provides opportunities to students to use and apply the skills in a variety of different situations and contexts.
- **'Saval-Javab'**, provided at the end of each book makes mathematics fun and enjoyable.
- **'Reward Stickers'**, provided at the end of the book, to encourage and motivate the student.
- **'Self-assessment Icons'**, at the end of each page for children to self-assess the activities.

Objective of the study

To study the effectiveness of Chinnara Ganitha a supplementary study material on the mathematics achievement of class 5th to 7th Standard students of Govt. elementary schools.

Hypothesis of the study

There is no significant relationship between the math achievement scores of students and Chinnara Ganitha.

Sample

The students studying in Govt. elementary schools from Standard 5th to Standard 7th of Bangalore District constitute the population of the study.

A simple random sampling technique was used to select the students.

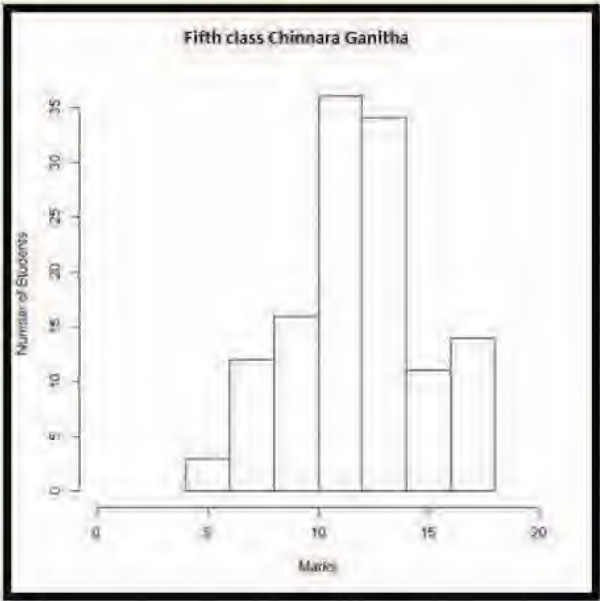
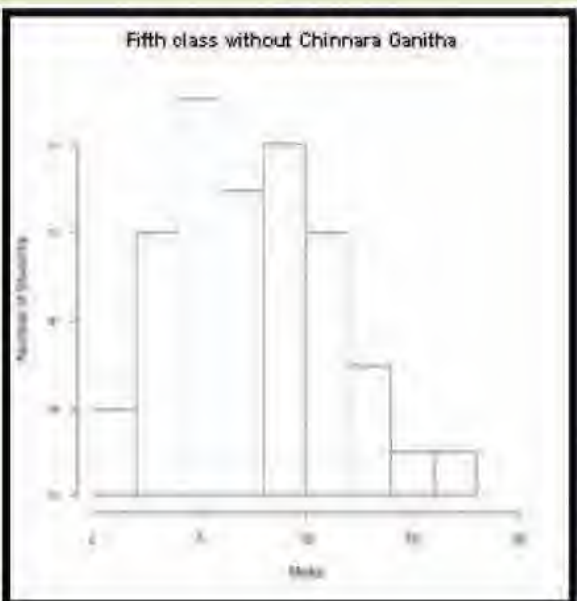
Standard	Schools exposed to 'Chinnara Ganitha'			Schools NOT exposed to 'Chinnara Ganitha'		
	No of schools	No of students	Total	No of schools	No of students	Total
5	5	126	126	5	43	43
6	5	175	175	5	58	58
7	5	139	139	5	58	58

Tools used

Achievement tests for standard 5 to 7 had 11 items, 12 items and 9 items respectively covering different concepts of mathematics at the elementary level. The items were based on four important domains of learning knowledge, understanding, application and skill.

IMPACT ANALYSIS OF 'CHINNARA GANITHA'

COMPARISON OF CLASS 5

WITH CHINNARA GANITHA		WITHOUT CHINNARA GANITHA	
No. of students	126	No. of Students	43
Mean Score	12.43651	Mean Score	8.139535
			

Output of t-test :

Null hypothesis	Use of Chinnara Ganitha has no significant impact on the scores
p-value	1.412e-08
Difference in the means is statistically significant, hence we can reject the null hypothesis	

COMPARISON OF CLASS 6

WITH CHINNARA GANITHA

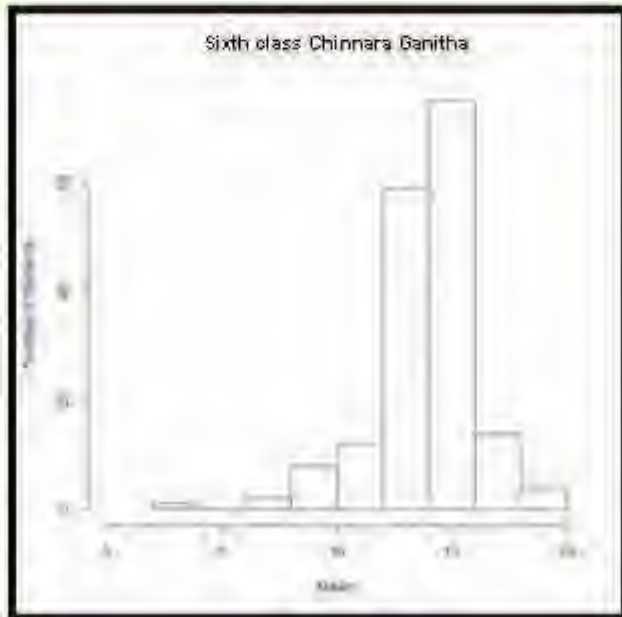
WITHOUT CHINNARA GANITHA

No. of students 175

No. of Students 58

Mean Score 14.24571

Mean Score 7.793103



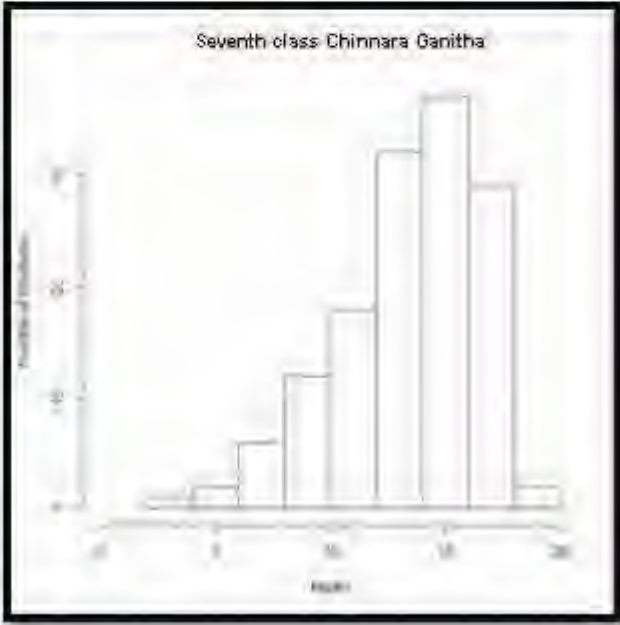
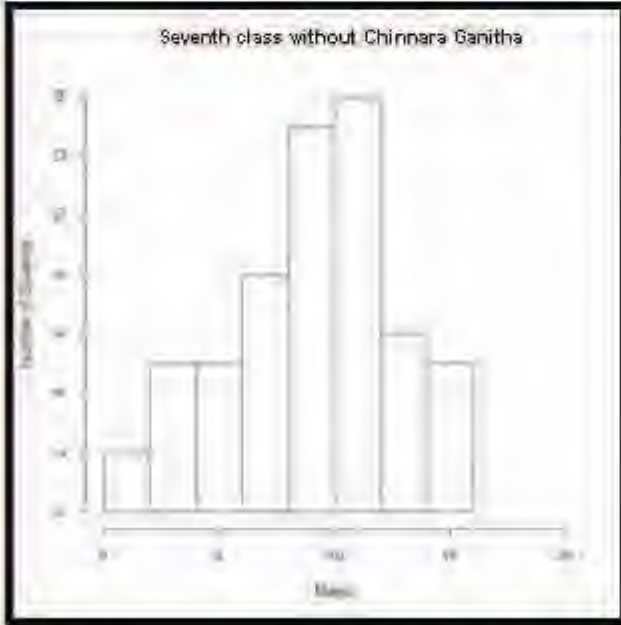
Output of t-test :

Null hypothesis Use of Chinnara Ganitha has no significant impact on the scores

p-value < 2.2e-16

Difference in the means is statistically significant, hence we can reject the null hypothesis

COMPARISON OF CLASS 7

WITH CHINNARA GANITHA		WITHOUT CHINNARA GANITHA	
No. of students	139	No. of Students	58
Mean Score	13.91367	Mean Score	9.517241
			

Output of t-test :

Null hypothesis Use of Chinnara Ganitha has no significant Impact on the scores

p-value 2.291e-12

Difference in the means is statistically significant, hence we can reject the null hypothesis

Interpretation of the study

The analysis shows a positive impact on the math achievement scores of users of Chinnara Ganitha of classes 5 to 7 of Government elementary schools.

Appendix: A test was conducted for the 5th, 6th and 7th Std children. A sample of the 5th Std question paper is below

	ತರಗತಿ : 5	
ಹೆಸರು: _____ ತಾಲ್ಲೂಕು: _____ ವಯಸ್ಸು: _____ ಲಿಂಗ: _____ ತಂದೆಯ ಹೆಸರು: _____ ತಂದೆಯ ವೃತ್ತಿ: _____ ಸಮಯ : 30 ನಿಮಿಷಗಳು ಅಂಕಗಳು : 20		
1. ಕೆಳಗಿನ ಸಂಖ್ಯೆಯನ್ನು ಅದರ ವಿಸ್ತರಣಾ ರೂಪದಲ್ಲಿ ಬರೆಯಿರಿ. (1×1) 567.8 = ನೂರುಗಳು + ಹತ್ತುಗಳು + ಏಡಿಗಳು + ದಶಾಂಶ		
2. ಸೂಕ್ತ ಗುರುತನ್ನು ಸೇರಿಸಿ <, > ಅಥವಾ = . (1×1)  1.0 ಕೆ.ಗ್ರಾಂ.  0.9 ಕೆ.ಗ್ರಾಂ.		
3. ನನ್ನ ತಂದೆಯು ಪ್ರತಿ ತಿಂಗಳೂ, ಮನೆ ಬಾಡಿಗೆಗೆ ರೂ. 15,000, ಸಾರಿಗೆ ವಾಹನಕ್ಕೆ ರೂ. 1,500 ಮತ್ತು ಮನೆ ದೀಪಗಳಿಗೆ ರೂ. 8,500 ಖರ್ಚು ಮಾಡುತ್ತಾರೆ. ಎಲ್ಲದನ್ನೂ ಅವರು ಖರ್ಚು ಮಾಡುವ ಹಣವೆಷ್ಟು? (2×1)		
4. ಅ. $13 \times 7 =$ (1×2) ಆ. $\times 6 =$ 90		
5. ಒಂದು ತರಗತಿಯ ಒಟ್ಟು ಒಳ್ಳೆ ಪ್ರಯೋಗದ 2,250 ರೂ.ಗಳು ಆ ತರಗತಿಯಲ್ಲಿ 50 ವಿದ್ಯಾರ್ಥಿಗಳಿದ್ದರೆ, ಪ್ರತಿಯೊಬ್ಬರೂ ಕೊಡಬೇಕಾದ ಹಣವೆಷ್ಟು? (2×1)		

6. ಕೆಳಗಿನ ಜೋಡಿ ಸಂಖ್ಯೆಗಳಲ್ಲಿ ಅವುಗಳ ಮ.ಸಾ.ಅ. ಕಂಡು ಹಿಡಿಯಿರಿ.

(2×1)

16 =
28 =
ಮ.ಸಾ.ಅ. =

7. ಕೆಳಗಿನ ಭನ್ನರಾಶಿಯನ್ನು ಅದರ ಕನಿಷ್ಠ ರೂಪಕ್ಕೆ ತನ್ನಿ.

(2×1)

$$\frac{16}{18} = \boxed{}$$

8. ಸಮಾನ ಭನ್ನರಾಶಿಗಳನ್ನು ಪೂರ್ಣಮಾಡಿ.

(1×2)

ಅ. $\frac{2}{5} = \frac{18}{\boxed{}}$ ಆ. $\frac{8}{11} = \frac{\boxed{}}{99}$

9.

(2×1)

$$\frac{48}{36} \times \frac{18}{64} = \boxed{}$$

10. ಕೆಳಗಿನ ಅಳತೆಗಳನ್ನು ಪರಿವರ್ತಿಸಿ.

(1×2)

ಅ. 10 ರೀ. ಅನ್ನು ಮಿ.ರೀ.ಗೆ $\boxed{}$

ಆ. 8,000 ಮಿ.ರೀ. ಅನ್ನು ರೀ.ಗೆ $\boxed{}$

11. 78ರ ಅವಿಭಾಜ್ಯ ಅಪವರ್ತನುಗಳನ್ನು ಪಟ್ಟಿಮಾಡಿ.

(2×1)

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AATA PAATA WADI

An after-school resource center for under privileged children

Biocon Foundation & Skanda Foundation opened the AATA PAATA WADI in Thithimati, Kodagu district. This centre, which opened in 2009, is an after school center for children from local government schools; it is a place where children are taught life skills – Spoken English, Digital Literacy & how to tap into their innate creativity. The aim of this program is to provide a fun learning environment for children from Std. V to Std. VII.

Through this program we hope to expose children from economically weaker sections to opportunities that other children get in urban and private schools.

Overall, a total of 151 children have benefitted from our center and at present we have 26 children.

Our main objectives are:

- Access to computer education
- Lay a good foundation for future English education
- To provide life skills education
- Help children's artistic skills to bloom



Art & Crafts Workshop

In the last year, we feel that there is a vast and drastic change in the children's overall perception of themselves, life, education, health, environment, family, etc.

In computers, children have gone from zero knowledge to accessing information on the net. Some examples to mention; they were aware of the word computer but what is a computer and how much fun it can be and how it can help them gain knowledge and get entertainment through games was imparted at the centre.



Spoken English

In English, we have got the concept down from teaching spoken English to teaching phonics as we found that the ground reality was the kids did not even know the Kannada alphabets. So, Dr. Lalitha Appachu's Center for Excellence and Training was roped in to provide phonic's kit (Level 1 to Level 2) to all kids.

In Life skills we use the Macmillan's "On track" books Part 1 – 7 to teach self-awareness, personal safety, civic sense, responsibility towards environment, express & control emotions and generally teach how to be aware of themselves and their actions and how it can affect others.

In art, local volunteer who sells her art works in Kodagu district was requested to volunteer once a week to help the kids explore their artistic ability.

Outcomes in the last year:

- Drastic tangible improvement in the way children approach the computer and handle it. They have realized that it is a learning tool because of the educational software installed which enables interactive learning – where the most retiring and shy child has the confidence to play pin ball games and google search topics.
- For eg: Children google searched Kilimanjaro (extinct volcano) which they had heard in their geography classes.



Digital literacy

- Kids had not heard of men wearing skirts and thought it was derogatory to a man to wear one until they were shown the Scottish national dress for men – kilt. So also their fascination with submarines and whales. Children were fascinated with the concept of undersea living and to see the biggest fish which was as big as the room they were sitting in.
- The children now are capable of switching on and booting up the systems they use.
- We have enabled the children to have a good foundation in English by teaching from the phonics level 1 & 2 prepared by Centre for Excellence & Training – Dr. Lalitha Appachu. Alienation of English that the children felt has been taken care of.
 - For eg: Children can read and write using the phonics method but not by memorizing like before
 - Old batch kids who came in this year are now able to converse in English on topics as varied as themselves, relatives, friend, family, school, village
 - Children volunteer in reading the English material which was not seen before
 - The present batch which have seen the old batch talk in English, want to come back next year to the centre to learn the same

In Life skills, children become active participants in the group discussions on various topics like self-awareness, controlling & expressing emotions, valuing the work their mother's do, that animals have feelings, etc.

The art class has brought a major change in the children's perception of shapes, colors, re-use waste like newspapers, make things of value for themselves from simple material like bracelets, paper ear hangings, etc.

Art classes brought out self-belief in kids who up till now had been marginalized in school. This activity is a real self-esteem booster for the kids.

Biocon Women's Self-help group



The women's self-help group started in 2012 with 5 women from the local area to enhance their income and boost their self-confidence. The volunteer Ms. Ponappa trained the women on to make gift wrap paper and gift envelopes using local flora.

The products are sold at Orange county resorts, Ambreen's Ooty, Bamboo club, Serenity Bangalore, Elephant corridor, Nambikay, Nilgiris in Kodagu and also at Biocon head office.

The work of the women was widely appreciated at Biocon and an employee got 200 wedding invitations and their envelopes decorated and also 530 Women's day cards decorated and couriered back in just 2 days. All this enabled them to earn a total of Rs. 50,000/- in a year. So good has been the word of mouth publicity that the number of women has gone up to 8 women.

KELSA+

Kelsa+ provides a platform to low income support staff to learn basic knowledge in computers. Two different sections are made available for the male and female staff.

Three internet enabled computers have been installed in the campus. Two trainers teach the staff to use the computers, use search engines, read newspaper online, place online ads, create facebook page, open e-mail id's, etc.

Based on the work schedules a timetable is set to enable them to have convenient access to the systems. 27 women and 34 men use the Kelsa+ computers regularly at the 20th KM campus.



Staff reading the Kannada newspaper online



Female staff learning how to save the document

Case study:

Rajendra Sharma:

Mr. Rajendra attended Kelsa+ during his tenure at Biocon, he picked up basic knowledge in computers. He attended the classes for almost a year while he was working for the Maintenance department as a D group worker.

During his classes at Kelsa+ through the support of the trainer he created an e-mail id, registered in social networking sites and applied for jobs online. At present he works for a pharma company called "Apotex" as a "Maintenance In-charge" and is thankful to the support provided by Kelsa+.

Plan for 2013-2014

- Motivate more women to join Kelsa+
- Make Kelsa+ a volunteer driven program. Identify interested employees from the company who would mentor the Kelsa+ employees and give them simple assignments like data entry, typing on a weekly basis
- Create awareness on health issues by showing online videos / presentations / movies, etc on various health issues like chewing gutka, smoking, personal hygiene and also issues related to women like cervical cancer, self-examination of breast cancer, etc

