





Mobility India is the recipient of the National Award for 'Outstanding Work in the Creation of Barrier Free Environment for Persons with Disabilities' by the Ministry of Social Justice and Empowerment, Department of Disability Affairs, Government of India, in 2014.



Department for Empowerment of Differently Abled and Senior Citizens, Government of Karnataka, honoured Mobility India with a State award in 2017, in recognition of its unique work in the field of disability.



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About Mobility India

Mobility India (MI), a Registered Society was established in Bangalore in 1994. MI started its journey to promote Rehabilitation and Assistive Technology (AT) sector. Since then, MI has been a progressive force in the disability and rehabilitation sector. MI's aim is to enable Disability Inclusive Development on the ground especially for the well-being of most vulnerable populations, in which there is greater equity and to bring changes in the lives of people with disabilities, their family members, the elderly population and other disadvantaged groups as a part of the development process.

The Rehabilitation Research and Training Centre at Bangalore, established in 2002 spearheads all the activities in Bangalore and is a model for accessibility and disability-friendliness. The Inclusive Development Centre at Guwahati, Assam established in 2015, is taking good shape; and field offices for community projects across urban slums in Bangalore, Jigani, Anekal Taluk and Chamrajnagar District in Karnataka are promoting Community Based Inclusive Development Programs for reducing poverty through disability inclusion.

MI's core activities include rehabilitation and assistive technology, provide and facilitate equitable access to quality, affordable rehabilitation services in unreached areas, with a wide range of assistive devices such as prostheses, orthoses, wheelchairs and development and mobility devices with therapeutic interventions as per the individual needs with a gentle humanitarian touch which improves health for individuals and is firmly identified as the target of Sustainable Development Goal 3: Ensure healthy lives and promote wellbeing.

Besides promoting the AT Sector in India for several years, MI played a major role in developing the AT sector for the Global South; for example, so far 484 personnel from 28 countries have been trained. MI also collaborated many initiatives with WHO at all three levels, especially to develop and implement the WHO Priority Assistive Products List (APL).

MI, a training institute recognized by Rehabilitation Council of India (RCI), has been conducting different levels of long term training programs in Prosthetics and Orthotics and Rehabilitation Therapy. The



short term trainings in Wheelchair Service Training Package for Basic, Intermediate and Manager Levels as well as Training of Trainers are conducted according to WHO guidelines. The Bachelors in Prosthetics and Orthotics course is affiliated to Rajiv Gandhi University of Health Sciences (RGUHS), Karnataka and recognized by Rehabilitation Council of India. MI is the only Prosthetic and Orthotic school in India to obtain ISPO CAT II status.

MI addresses challenges for persons with disabilities, their families at the community level in situations of poverty, working with and through community based self-help groups, local governance and institutions in promoting the participation and voice of people with disabilities in the decision making process. MI ensures services such as health, inclusive education and livelihood opportunities, sanitation and housing all accessible to persons with disabilities. MI supports grassroots organisations working in disability in urban and rural areas, thereby building their capacities.

MI is active, from the grassroots to national, regional and global levels of engagement. This is achieved mostly through collaboration with international agencies like ISPO and ISWP and with leading institutions and Universities both National and International organisations like ICRC, CBM, IIT Madras, IIT Bombay, IISc and DEBEL (Ministry of Defense, GOI). MI also works closely with many grassroot and national networks and associations. MI contributes to the strategies that are framed at the national and international level. MI's reach over the last 25 years has been in South, East, North-Eastern States of India and middle income countries.

Creating Impact over the last 24 years



24th Anniversary Celebrations

Stepping into 25th anniversary and launch of Silver Jubilee Logo



Mobility India's 24th anniversary celebrations commenced with Dr. Charles Prabakar, President, Mobility India welcoming all the guests. Ms. Albina Shankar, Director, Mobility India highlighted the journey of the organization, as well as the major events over the past 24 years. Ms Soumya Reddy, MLA, Jayanagar Constituency, who graced the occasion as the Chief Guest, congratulated the MI team and digitally launched the Silver Jubilee logo. Speaking on the occasion, Ms K N Lakshmi Nataraj, Corporator (BBMP ward 177, J.P.Nagar) and Dr Siddaraju, Director, Department for Empowerment of Differently Abled and Senior Citizens, Karnataka, appreciated the work done by Mobility India. IPS Dr Sharanappa S D, Deputy Commissioner of Police, South Division, Bengaluru, was also present on the occasion, as one of the guests.

The program was followed by a discussion on Health and Well-being wherein Mr Chapal Khasnabis, Programme Manager, Global Cooperation on Assistive Technology, WHO; Mr Kishore S Rao, Chairman, Karunashraya; Dr Anand P Ambali, Consultant Geriatric Physician; Dr Rajani, Deputy Director, Health and Family Welfare, Karnataka; and Mr Soikat Ghosh, Assistant Director, Rehab services, Mobility India participated. Topics on health-related issues and practices such as sharing of experiences, healthy aging, assistive technology and Mental Health for the elderly were also discussed. Vote of thanks was proposed by Ms. Romola Joseph, Secretary, Mobility India.

Governing Body Members



Dr. Charles Prabakar,
President,
Practicing Chartered Accountant



Dr. (Mrs.) Elizabeth Thomas,
Vice President,
Educational Consultant



Ms. Romola Joseph,
Secretary,
Professional Social Worker



Mr. Sheshadri Nagaraj,
Treasurer,
VP (HR and Finance) Jurang
Consultants (India) Pvt. Ltd.



**Dr. Ashish Kumar
Mukherjee,**
Member,
Director General, Member
Board of Governors, Indian
Spinal Injuries Centre New
Delhi



Mr. K. L. Vinaya,
Member,
Retd. General Manager
NABARD



**Ms. K. M.
Geethamrutha,**
Member,
Retd. Bank Employee,
President - Margadarshi, the
Association for Physically
Challenged

Vision

An inclusive and empowered community, where people with disabilities, their families and other disadvantaged groups have equal access to education, health, livelihood and enjoy a good quality of life.

Mission

- Assisting poverty reduction.
- Promoting inclusive development.
- Facilitating access to services related to rehabilitation and assistive devices.
- Developing appropriate human resources in the field of Disability, Development, Healthcare, Rehabilitation and Assistive Technology at national and international levels.
- Capacity building of grassroots organisations in the field of Disability, Development, Rehabilitation and Assistive Technology.
- Research and development of appropriate Assistive Technology and improving its access at an affordable cost.
- Realising the aspirations of the Convention on the Rights of Persons with Disabilities (CRPD), Incheon Strategy to 'Make the Right Real' for persons with disabilities and all related National Legislations.

Priority

People with disabilities, especially the poor, children, women and older people.

Core Values

* Respect * Honesty * Innovation * Safety * Quality

President's Message



“There is nothing I love as much as a good fight.” That is a quote attributed to one of the world’s most charismatic political leaders: Franklin D Roosevelt, the 32nd President of the USA, he was the first President with a significant physical disability.

For us at Mobility India, the word ‘Mobility’ is a positive metaphor that has helped the organization kick start a movement that has helped thousands and millions of people with disabilities for the past 24 years. It is a significant milestone in the organization that began with a vision of building an inclusive and empowered community by providing equal access to education, health, livelihood and a good quality of life to people with disabilities, their families and other disadvantaged groups.

MI has earned a place in the disability sector as a professionally managed organization, which is evident from the fact that international and national organizations have come forward seeking partnership. MI has been serving with its heart, soul and mind for the past 24 years. Our resolve to create more opportunities to make them cope even better in their lives will continue with renewed vigour and strength over the next 25 years and more, so that India will rise to be a beacon in the whole world for its service among people with disabilities.

I would like to take this opportunity to thank all our donors, partners and friends for their continued trust and support of our work. I am grateful to my Governing Body Members for their active engagement with the affairs of the organization, to Ms. Albina Shankar, Director, and her entire team, I extend my special appreciation and gratitude for their excellent work.

Charles Prabakar
President

Director's Message



It is a matter of great pride for me to see Mobility India (MI) embrace a good value system, seek high aspirations, and achieve more than what one ever thought was possible. MI has made all of us proud not only just by its achievements but to have proved that a plausible impossibility is better than a convincing possibility of a noble objective to eliminate the barriers that exclude persons with disabilities from social participation. MI was founded, envisioning a holistic development to empower persons with disabilities and break the cycle of poverty and disability.

MI worked against all odds to make what seemed impossible, possible in the inclusive development sector, especially for the well-being of the most vulnerable populations; people with disabilities, older people and people living with chronic conditions and living in poverty.

I am pleased to present our past year's journey in a nutshell and I thank everyone who has been a part of our journey for their continued support and confidence in our work and creating visible impacts in the lives of people with disabilities.

MI is making a significant contribution to promoting the AT Sector in India. MI played a major role in developing the AT sector for the Global South; for example, we have trained to date 484 personnel from 28 countries. MI also collaborated many initiatives with WHO at all three levels, especially to develop and implement the WHO Priority Assistive Products List (APL).

MI imparts professional education in the health care sector to deliver quality rehabilitation care. It enabled research and evidence-based practice and created inclusive policies and programs for the benefit of people with disabilities and the wider community and fostered national and international collaboration, through professional education in the health care sector, in providing quality healthcare professionals in low and middle-income countries.

Today, emerging technologies and the rising needs and expectations are reshaping the way we work with increased awareness. However, AT sector needs further momentum in India, especially considering the emerging need, to align and support our national activities in line with WHO's GATE initiative and 71st World Health Assembly Resolution on Improving Access to AT. We would like to see India become a major powerhouse for the AT sector, for India and outside India.

MI provides affordable healthcare services to improve the health conditions of people with disabilities and prevent avoidable impairment, quality education for children with disabilities through capacity building of teachers, development of teaching and learning materials, suitable livelihood options, nutrition, sanitation, and housing, training, and resources. MI promotes self-help groups and links them with government financial institutions in the communities that we work with.

24 years of changing millions of lives would not have been possible if not for the continuous support we received from the government, donors, sponsors, supporters, civil society organizations, professional bodies, clients, all the stakeholders and friends around the world. Together, we have worked for better healthcare, educational and livelihood opportunities for persons with disabilities.

I would like to extend gratitude and thanks to our Government, Donors, International and National agencies, Professional bodies, civil society organisations, individual sponsors, supporters, clients, volunteers and friends of Mobility India. Special thanks to Governing Body Members for their continued guidance and support and each and every member of the Mobility India team for passionately living the idea of Mobility India on a daily basis.

Mobility India reaffirms its commitment to the cause championed all these years and we look forward to working together to realize the 2030 United Nation Agenda for Sustainable Development and its commitment to leaving no one behind and our driving vision of creating an inclusive world, and ensure the changes we make are sustained long term to reach out to many more people with disabilities and their families.

Warm Regards

Albina Shankar
Director

Rehabilitation and Assistive Technology

Global demographic and health trends increase the need for rehabilitation. Rehabilitation services are necessary for the achievement of SDG goal 3 – Ensure healthy lives and promote well-being for all, at all ages. The world's population is ageing, and the number of people living with non-communicable diseases and the consequences of injuries is on the rise. The population aged over 60 years is predicted to double by 2050, and the prevalence of non-communicable diseases has already increased by 13.7% in the past 10 years. The changing health and demographic trends are contributing to rapid increase in number of people experiencing declining in functioning globally. Hence, rehabilitation needs that are already very high will further increase in the years to come.



Assistive products play an important role in catering to these rehabilitation needs. The products when provided with minimum training have a significant impact on personal well-being by enhancing functioning and independence.

MI follows a multidisciplinary approach and people who need rehabilitation receive quality services to optimise and maintain their functioning in everyday life. The team consists of prosthetists and orthotists, physiotherapists, occupational therapists, technologists and therapy assistants.

Benefits of Play Therapy – Making a Difference

Play therapy is an effective way to help children and adults with disabilities to develop a sense of strength, positive self-esteem, personal competency, and self-reliance. It enables the child to express things at their own pace in a way that they can convey without feeling interrogated or threatened. It helps to enhance the physical abilities, cognitive functional levels.

MI introduced group play therapy for its service users (children and older disabled people) with muscular dystrophy, spinal cord injury, amputation and neurological problems. Play therapy sessions are also conducted for children with cerebral palsy. Sessions with different themes such as chasing endurance, perfect equilibrium, perception, fun yoga, the vibes of body sensation, Activities of Daily Living device etc., are conducted.

The play therapy sessions encourage better self awareness and create a feeling of inclusion and participation. The parents who otherwise have not seen their children participate in playful activities are happy to involve them and share their joy. Adults get a better understanding of the reasons for therapeutic interventions and why and how it could help them to remain active and lead a better life. These sessions help in building the confidence among the service users and integration into the mainstream.



Kerala Floods - Provision of priority assistive products for the devastated region

The state of Kerala had to deal with the worst floods ever after relentless rains. The toll on human life as well as property had been tremendous. The destruction caused by the flood greatly affected the central and southern parts of Kerala.

As always, people with disabilities and older people are the worst-affected and devastated in this situation. They are at the receiving end of intense psychological trauma as they deal with the loss of homes, belongings and loss or damage of their assistive devices. The general health conditions are affected, as they find greater difficulty accessing health care and basic needs.

Assistive devices help maintain human dignity in the aftermath of disaster. MI with the support of ICRC, New Delhi responded to the people affected by providing the priority assistive devices to restore mobility as an immediate solution.

MI reached out to three districts in Kerala and networked with four local organizations to provide immediate rehabilitation relief. 322 persons with disabilities and older people were screened, assessed and provided 228 assistive devices along with care giver education as well user training. MI rehab team along with student volunteers carried out the entire program in three months from September to November 2018.



Partnership with local grassroots organizations

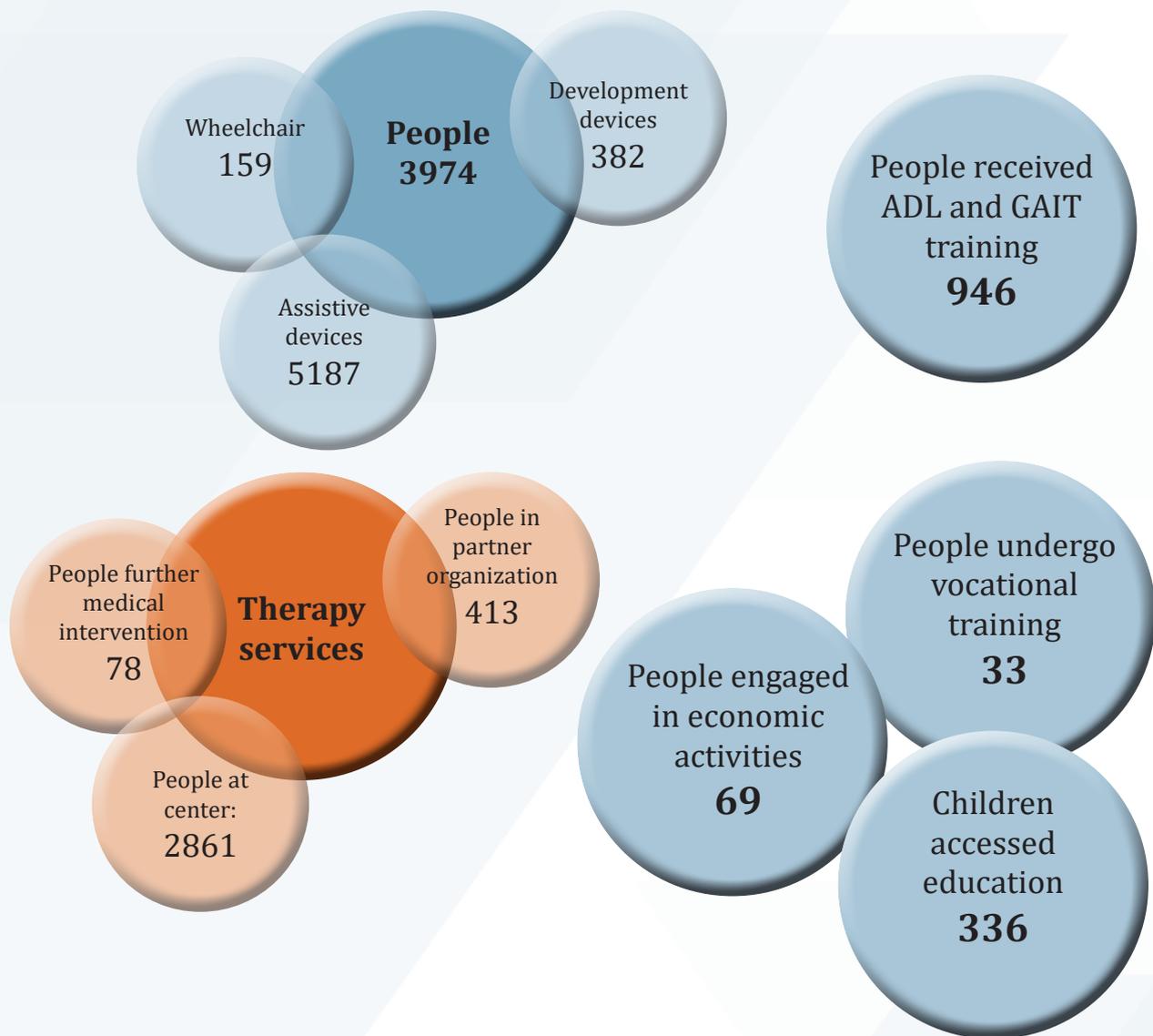
MI partners with local community organizations, grassroot NGOs and key influencers. This is done to create and strengthen the rehabilitation services in the rural areas and promote an approach that includes people with disabilities in their policies and programs.

This increases the reach for making immediate and lasting change possible as well as organizational development of partner organizations.

MI networks with key grass root partners in conducting clinical trials at the local level to validate new assistive devices like the myomechanical prosthetic arm and four bar linkaged prosthetic knee joints for efficacy and feedback.



A Snapshot of Achievements in 2018-19



Hope rekindles

Satyashree, from Thally, Tamil Nadu, a bright 14-year-old student, with an artistic bent of mind. Her parents worked as daily-wage labourers to eke out a livelihood. Two summers ago, they found her to be unusually quiet, and her functionality began declining. Her parents took her to Indira Gandhi Hospital, where she was diagnosed with 'Hereditary Motor Sensory Neuropathy (HMSN). The doctors advised her parents to get her operated and also give shock therapy. Scared of subjecting Satyashree to this line of treatment, her parents took her back home. Her condition worsened and she was confined to her bed. Both Satyashree and her parents were at a loss as to what to do.

In the second week of April 2019, a social worker from Infinite Destiny Foundation heard of Satyashree's plight and brought her to Mobility India. Here, her condition was assessed and she was provided with a customised wheelchair that made her happy as she was mobile once more. Satyashree now has hopes to get back to school and continue her studies.



Education and Research

Assistive Technologies including prosthetics and orthotics services are people-centred and responsive to every individual's personal and environmental needs. Building Rehabilitation Professionals with adequate knowledge and skill set are of high significance for catering to the emerging need of rehabilitation. MI has been developing a workforce in the discipline of Prosthetics and Orthotics and Rehabilitation Therapy at varied levels, since 2002 and the number of trained professionals has increased significantly during the last decade. MI has an international intake as well, so that professionals from essentially all low and middle income countries can be trained and they represent a foundation for extending improved quality prosthetics and orthotics services in their own countries.



Mobility India also conducts short term trainings in Wheelchair Service Training Package for Basic, Intermediate and Manager Levels as well as Training of Trainers. MI is the only Prosthetic and Orthotic school in India to receive ISPO CAT II status. During the year 2018-19, MI received recognition from RCI and RGUHS for conducting Masters in Prosthetics and Orthotics.

Courses Offered

Bachelor in Prosthetics & Orthotics (BPO)

Duration: 4 ½ years

Recognized by Rehabilitation Council of India, New Delhi and affiliated to Rajiv Gandhi University of Health Sciences, Karnataka

Course Syllabus: The theoretical learning includes Anatomy, Physiology, Materials and Applied Mechanics, Biomechanics, Computer Science, Physical Medicine and Rehabilitation, Orthopedic and Amputation Surgery, Electricity and Electronics, Engineering Drawing, Research and Prosthetics and Orthotics Sciences. Apart from theoretical learning, the syllabus also includes six months compulsory clinical practice.

The highlight of this course is compulsory rural placement where students are exposed to different kinds of cases, conditions and ways to deal with them.

Prosthetics & Orthotics (ISPO CAT II)

Duration: 36 months

Recognized by International Society for Prosthetics and Orthotics

Course Syllabus: The theoretical learning includes Basic Life Science, Materials and Applied Mechanics, Biomechanics, Physical Medicine and Rehabilitation, Orthopedic and Amputation Surgery and Prosthetics and Orthotics Sciences. Students will learn designing and fabrication of assistive devices and exercise therapy materials. Students get practical exposure in terms of service user management, working in rural and institutional set ups.

Certificate in Rehabilitation Therapy (CRT)

Duration: 12 months

Recognized by Rehabilitation Council of India, New Delhi

Course Syllabus: Students will have theoretical learning on different disabling conditions like Post-Polio Residual Paralysis, Amputation, Intellectual Disability, Cerebral Palsy, Spinal Cord Injury, Autism, life style diseases and ageing. Core learning for the student is therapeutical intervention. As practical exposure, students will also learn designing and fabrication of assistive devices like self care devices and exercise therapy materials and will get opportunities for working in rural and institutional set ups.

Workshop for Physiotherapy curriculum review committee of Afghanistan

Physical Rehabilitation services of Afghanistan are developing to cover the needs of the population. The key rehabilitation services include physical therapy and prosthetic and orthotic services. Lack of quality rehabilitation professionals is emerging as the key challenge. Hence, the felt need was to review and update the existing curriculum to develop quality professionals in physiotherapy services. A curriculum review committee was formed to review and update the course curriculum. Equipping the review committee with skills of curriculum review process and updating their skills on curriculum development was important. Hence MI with decades of experience in developing rehabilitation service professionals was approached to conduct a capacity building workshop for the review committee members.

Accordingly, 4-days capacity building workshop was organized from 13th - 16th November 2018 at MI.



During the workshop the participants were exposed to the process and methodology of reviewing curriculum and concept of curriculum development. The workshop helped the participants in gaining knowledge and confidence in curriculum review.

State Level Workshop on Assistive Technology

Assistive Technology is an umbrella term covering the systems and services related to the delivery of assistive products and services. There is a huge need for comprehensive, sustainable and multi-sectoral approach in the health sector for provision of assistive products, and to make it accessible and affordable for people in need. To enable improved access to assistive products, it is necessary for the officials and staff working with Health and Family Welfare Department at various levels to be aware of the assistive products and positional devices.



Hence, in order to sensitize and create awareness on the various assistive products and positional devices, a one day State-level Workshop was organized on 30th October 2018 in association with Department of Health and Family Welfare, Government of Karnataka. 40 participants District Health Officers, Reproductive Child Health Officers, Health Supervisors and Senior Health assistants participated in the workshop.

The workshop helped the participants in updating their knowledge on different categories of assistive devices, types of positional device available, its usage and benefits. Experience sharing by service users helped in getting the first hand understanding of the impact of assistive devices in the lives of persons with disability and older people.

Participants expressed that the workshop was very useful and suggested MI to conduct similar workshops and need based surveys at the district level.

Wheelchair Skill Training

Wheelchair is one of the most commonly used assistive devices for enhancing personal mobility, which is a precondition for enjoying human rights and living in dignity. Wheelchairs assist people with disabilities to become productive members of their communities.



Due to lack of prescriptions or fitting standards, often wheelchairs are distributed without cushions or an appropriate seating configuration. Hence, it is necessary for the physiotherapists to be aware of the proper prognosis to provide well fitted wheelchairs

in order to avoid other complications. To address this need, a one day Wheelchair Skill Training Programme was organized for Bachelor students of Physiotherapy of MS Ramaiah Medical College of Physiotherapy on 10th July, 2019.

During the training, participants were familiarized about the features of manual wheelchair, wheelchair service provision, assessment and taking body measurement, prescribing wheelchair, wheelchair mobility skill training as well as eight steps required for wheelchair service provision as per WHO guidelines.

Workshop on Ischial Containment (IC) Socket for Transfemoral Prosthesis

Amputation is done to save the life of an individual from further health complications. After the amputation, an individual requires rehabilitation services to provide her/him with the necessary mobility. There are different technologies used in the developed countries for people with amputation and one such technology is Ischial containment (IC) socket, through which the affected person gets the comfortable device, better gait, and good suspension.



In India, the IC socket is fabricated in small numbers due to shortage of skilled human resources. To address this issue MI, in collaboration with the International Committee of the Red Cross, New Delhi and Human Study, Germany, organized 6 days workshop on Ischial Containment (IC) Socket for Transfemoral Prosthesis from 3-8 September 2018. 10 participants from different states of India participated and gained knowledge on casting, trial and gait training, cast taking and modification.

Continuing Rehabilitation Education (CRE) on Intellectual Disability

Continuing professional development is important for service providers, to maintain, update and further strengthen their competence at all levels. It ensures inclusion of new developments in clinical and technical practices, apart from improving the quality, effectiveness and efficiency of the services. Workshop on 'Intellectual Disability and Assistive Technology' was organized on 13th July 2018. The workshop was facilitated by Dr. Fleur Heleen Boot¹, Department of Psychology, Maynooth University, Ireland. The workshop provided the participants with in-depth knowledge on the importance of assistive devices in relation to persons with intellectual disabilities. It also gave an insight into the priority list on assistive



devices released by WHO and their role in bringing about change in the workplace and policy level.

Comprehensive Course in Spinal Orthotics

Spinal orthosis is a very complicated subject and MI was seeking expert support from ICRC for upgrading their skills on spinal orthosis for a very long time. Hence, ICRC developed a high-level comprehensive clinical course on 'Orthotic Treatment of Spinal Pathologies'. Designed exclusively for the staff of MI, CMC Vellore and ICRC, the course covered theoretical and practical aspects of orthotic treatment of spinal pathologies.

¹ Dr. Fleur Heleen Boot is a qualified Psychologist with expertise in intellectual disability medicine and other aspects of healthcare and assistive technology

Spread over 33 weeks, the blended learning course is conducted in phases, with face-to-face interactions, online lectures, on-site practical sessions and continuous assessments. The first phase of the course has been completed in February 2019. The next two phases of the course are scheduled for June and August 2019.

The course is divided into four parts viz., online theoretical content, 3 workshops of on-site training, clinical case presentations and exams to assess the learning.

Soikat Ghosh Moulic, Sanjoy Singh Oinam, Minakshi and Ram Sagar are participating in the course

A Snapshot of students graduated over the last 16 years

Students graduated **489**

• Male - **280**

• Female - **209**

• PWD - **99**

Capacity Building and Orientation

4894 participants

33 countries

25 Indian States

150 NGOs

29 Private Institutions/Corporates

6 Universities

5 Countries of Ministry of Health, Ministry of Social Welfare Department

Other activities

Prosthetics & Orthotics (ISPO CAT II) was evaluated by Mr. Achille Otou-Essono, Ortho-Prosthetist Managing Foundation Ebenda Patrice, Cameroon and Mr. Claude Tardif, Executive member from International Society for Prosthetics and Orthotics (ISPO). Students wrote their exams in the presence of evaluators. Parameters for the evaluation were quality of the course syllabus, delivery mechanism, documentation, quality of assessment methodology and student's clinical competencies. Based on the evaluation outcome, the affiliation was renewed.

Parents meeting was organized to sensitize the parents on the courses being conducted, the key activities, course affiliation, curriculum followed, recognition for the courses, potential career opportunities for the children. Parents were informed that the children would receive certificate on basic wheelchair service provision as well as an opportunity to get international certification from ISWP.

ISPO evaluated Diploma in Prosthetics and Orthotics for two ISPO Category II schools - School of Prosthetics and Orthotics and Bangladesh Health Professions Institute (BHPI). Ms.Ritu Ghosh, Deputy Director - Training was invited by ISPO to be part of the evaluation team. Based on the report, the schools were recognized during 2018-19.

Ms. Merial Norris, Researcher from Brunel University, London visited MI and explored the possibility of mutual placement of students. Discussion on building in-house capacity of MI on research by Brunel University is in progress.

Vai'uli and Sitanilei – Sailing beyond Shores

Vai'uli Kohinoa and Sitanilei Folau are the only orthotist and prosthetist in Tonga, an Island in the Pacific. Having graduated from MI in 2018, both work at the Rehabilitation Department at the Ministry of Health in Tonga.

Vai'uli Kohinoa and Sitanilei Folau are part of a small group of prosthetists and orthotists who left their homes to pursue their **Bachelors in Prosthetics & Orthotics** at MI. These students were sponsored by the Tongan Ministry of Health with funding provided by the Australian Government.

Recollecting his time in MI Vai'uili says, "The course offered a holistic training on various aspects of prosthesis and orthoses. The six months clinical practice helped in learning the nitty-gritty of making different orthotic devices."

Adds Sitanilei, "The skill and experience I gained from my time in MI has stood me in good stead professionally and I am confident of working independently and making my mark as an orthotic professional."

Both of them are happy that they have been able to communicate well with patients and meet their needs to a great extent. They are grateful to MI for having shaped their careers as well as their lives.



Image: Vai'uli (right) and Sitanilei making a total contact cast shoe. Photo provided by Motivation Australia.

Research and Publication

To improve access to education and training in wheelchair service provision and further develop the workforce, MI integrated content on wheelchair service provision in P&O curricula in 2006. Rajdeep Kumar, Ritu Ghosh, Vennila Palanivelu conducted a cross sectional study to understand the effectiveness of integrated wheelchair service provision education in its P&O courses. 32 alumni graduates of MI from India and developing countries took part in the study. A joint paper on 'Integration of Wheelchair Service Education for Developing Prosthetics and Orthotics workforce' was developed and submitted for publishing.

A position paper on assistive technology policy was developed through a collaborative process for presentation at the Global Research, Innovation and Education on Assistive Technology (GREAT) Summit organized by WHO. Ms. Ritu Ghosh contributed to this paper. The paper outlined some of the key principles that AT policies should address and recognized that AT policy should be tailored to the realities of the contexts and resources available. The paper was published in National Center for Biotechnology Information

Magnusson L, Ghosh R, Randboell Jensen K, Göbel K, Wallen S, Jonsson J, Svensson A, Stavenheim R and Ahlström G, carried out a study in southern India to investigate quality of life among persons with disabilities using assistive products. A research paper entitled 'Quality of Life of Prosthetic and Orthotic Users in India: A Cross-sectional study was published in BMC Health and Quality of Life Outcomes.'

Research Study on GATE-ID: Research study titled Global access to essential Assistive Technologies for people with Intellectual Disabilities (GATE-ID). "What do you think of Assistive Technology?" was conducted by Dr. Fleur Helen Boot in collaboration with MI. The objective of this study was to understand facilitators and barriers for people with intellectual disabilities (ID) to effectively access and use priority assistive products in different resource settings; benefits of GATE program to the people with intellectual disabilities and promoting effective access and use across high, medium and low resource settings.

Inclusive Development Centre - Guwahati, Assam

The North East (NE) region of India is home to 44 million people who live in eight states – Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura. It is an area of enormous ethnic, cultural, religious and linguistic diversity. In each state there are large number of indigenous groups. Geographically, the region is dominated by dense forests, rivers, lakes, and mountains, large parts of the region have a very low population density. The road and rail networks are still very limited. The NE region has been affected by numerous conflicts since decades, which continue to flare up periodically. Assam is the biggest state occupying more than 70 percent of the total population of the region. Significant challenges affect disability and rehabilitation services in the NE. Lack of accessible information about disability and rehabilitation services is another key issue that makes it difficult to understand the gaps and challenges. However, the challenges for disability and rehabilitation services remain enormous.

Promoting sustainable development by building inclusive communities in Dimoria Development Block of Kamrup (M) district, Assam, North East India, MI operates in 35 villages in seven GPs. The project promotes inclusive development where all people are empowered to actively engage for change in their communities. It ensures equal rights through increased access and new opportunities to quality health, education and livelihood services.

MI aims to improve access to quality health care services, contributing to a reduction in the prevalence of impairments that lead to disability. It also creates awareness on promotion of assistive technology, provision of rehabilitation devices and assistive technology services. The project also aims at

- Increasing the number of children with disability accessing inclusive education leading to improved educational outcomes
- Improved access and participation of people with disability in employment, income generation and social activities

- Increased awareness of disability at all levels of society, contributing to a reduction in discriminatory attitudes and practices that perpetuate the cycle of disability and poverty



Awareness and Sensitization Programs

19 Inclusive SHGs with 400 members have been formed in four village Panchayats of Dimoria Block and Focus Group Discussions (FGDs) are regularly held among the group members. Women with disabilities and parents of children with disabilities have been given decision making roles within the groups.

Persons with disabilities and their caregivers, village Panchayat members, women's groups and community members are aware of their fundamental rights and duties and provisions for persons with disabilities under the Rights of Persons with Disabilities Act 2016. On the other hand, awareness creation on voting rights and initiatives of Election Commission for an accessible and barrier-free election has encouraged persons with disabilities to cast their votes during the Panchayat and parliamentary elections. Furthermore, inclusion of persons with disabilities and children with disabilities in Bihu (Assamese New Year) celebration has paved a way for social inclusion. IEC materials in local language (Assamese) created awareness among the community on different health conditions and required interventions, which in turn created a sense of belonging in the community members.

Healthcare and Rehabilitation Services

Persons with disabilities, children with disabilities and senior citizens of four village Panchayats are aware of the rehab services and assistive devices provided and are accessing the same. These services have enabled children with disabilities to attend schools regularly and persons with disabilities have gained confidence to explore different livelihood options.

Engagement in other activities like shopping, home gardening, etc. has elevated their level of social participation. Community-level health workers, ASHA/Anganwadi workers are working with the project team to organize community level sensitization/awareness programs and facilitating persons with disabilities, children with disabilities to access health care services at the Public Health Centers level.

Home-based Therapy

Home-based therapy provides therapeutic and other necessary rehabilitation services to persons with disabilities at their doorstep. Due to geographical and cultural diversities people visiting therapy centres is very negligible. Availing therapeutic and rehabilitation services was absolutely essential in order to improve the quality of their life. To address this, MI initiated home-based therapy where the rehab therapy assistants visits their homes, assesses and provides required therapy services along with minor repairs of assistive devices. The therapy sessions also include imparting information on disability inclusion, their rights, and different government schemes. The home-based inclusive plan was developed for 28 service users.



Repair and Maintenance Workshop

Repair and maintenance of assistive devices is a crucial part of any healthcare and rehabilitation services. Without this, providing assistive devices to a person is not beneficial as he/she might discontinue using the device due to breakdown and lack of repair and maintenance workshops to rectify the devices.

A repair and maintenance workshop has been set-up at MI's office premises at Dhugguri which is accessible for the service users of the project area. Trained Lower Limb Orthotic Technologists, Rehabilitation Therapy Assistants, along with a Physiotherapist are providing rehabilitation services at the workshop with support of the team from Bengaluru.

Efforts towards upgrading the workshop to a full-fledged production and fitment centre of prosthetic and orthotic devices is in progress. Procurement and installation of machinery is underway.



Children with disability accessing Inclusive Education and Therapy Services

Education for persons with disabilities has emerged as a core priority. Sustainable Development Goal 4 (that seeks to 'ensure inclusive and equitable quality education and promote lifelong learning opportunities for all'), Convention on the Rights of Persons with Disabilities, and the Rights to Persons with Disabilities Act of 2016 all posit inclusiveness and equity as the foundations for quality education. Children with disabilities in the age group 6-18 years now enjoy the right to free education. In spite of these empowering legislations, children with disabilities constitute a significant proportion of out of school children in India.

Inclusive education is an important component of Samagra Shiksha Abhiyana (SSA), a Government of India program to promote universal access, equity and quality of education. School teachers and parents of children with disabilities were encouraged for school enrolment and retention of 43 children with disabilities in local government schools. 46 teachers were trained in inclusive education during CBR core committee formation events in four village Panchayats.

Provision of rehabilitation therapy services for children with disabilities through Samagra Shiksha Abhiyan's (SSA) Resource centre has facilitated the



inclusion of children with disabilities in mainstream education. MI approached the Block Elementary Education Officer (BEEEO) for permission to use the place for which the consent was given. MI supported the establishment of a resource centre in one of the schools and provided it with basic therapy equipment. The Rehabilitation Therapy Assistants of MI along with the Speech Therapist appointed by SSA provide regular therapy to children with disabilities in the school. Apart from screenings and referrals, the children are prepared for inclusion into mainstream schooling. Observation of World Hearing Day in collaboration with SSA served as an opportunity to create awareness on ear care amongst school children.

Child Safeguarding and Risk Assessment

Children represent a significant number among the MI's target group and have been addressed on a priority basis. Taking into consideration the increased risk of abuse that children with disabilities face, safeguarding children is a core policy and commitment of MI. At MI child safeguarding policies and procedures are in place and has a wider Code of Conduct that stipulates acceptable and unacceptable behavior of employees and third parties.

Some aspects of the acceptable Code of Conduct include using the 'Two Adult Rule' i.e when interacting with children, ensure that another adult is present or within reach; Ensure physical contact is at all times appropriate and not an invasion of the child's privacy.



Through this, MI promotes a child-safe environment and ensures protection of children from all forms of abuse. This is done by raising awareness, prevention, response and reportage. 145 people were trained and sensitized on child rights and child safeguarding.

During the implementation of project activities, regular review meetings on child safeguarding have enabled the project team to abide by child safeguarding policies and deal with issues related to children during intervention.

Ensuring Livelihood

In the Dimoria block of Assam, the income levels of most of the families of persons with disabilities are low. Though they were involved in activities such as livestock rearing, bamboo and handloom weaving, it merely catered to their personal needs; it was never thought of as a source to enhance their family income.

To promote rural entrepreneurship, MI identified people within the community and SHGs who are skilled in bamboo and handloom weaving, and livestock rearing. Most of the livelihood training was conducted by a local resource person. Wherever possible, the participants were taken on exposure visits to livestock farms where large scale income-generation activity was practiced. This changed the mindset of the community on the manner in which their existing livelihood activity could become their source of income. Persons with disabilities were trained on water hyacinth crafting, bamboo crafting and pig rearing in different phases.

Bamboo crafting: Bamboo grows abundantly in north-eastern states including Assam. Bamboo is an integral part of Assamese culture and there is a huge market for bamboo products. With raw material readily available, MI identified bamboo product making as one of the income generation activities and training was imparted to members on crafting bamboo items such as – Khorahi, Xoda, Bisoni and Tukuri, etc.



Piggery is a popular form of livestock rearing in the region. Four-day training on livestock management was conducted to provide orientation on the basics of pig farming. As part of the training, they were taken to a farm where piggery was carried out on a large-scale. This motivated persons involved in piggery on a small-scale to follow suit in a structured manner.



The livelihood trainings enabled and motivated persons with disabilities to explore livelihood opportunities like water hyacinth crafting, bamboo crafting, banana cultivation, starting a grocery shop/ plant nursery, backyard fish farming etc.

The training programs have created awareness among persons with disabilities/SHG members about different components (definition, principles, characteristics, rules and responsibilities of SHGs, SHG formation, bookkeeping, membership registration, credit and linkages, cash books, ledger and passbooks, leadership, conflict management, human relations, financial management and social & developmental issues) that are necessary to maintain SHGs effectively.

Water Hyacinth – A Sustainable Livelihood Option

A 5-day basic training on water hyacinth was conducted for persons with disability by North East Society for Handicraft Incubation and Livelihood Promotion (NE-SHILP) to make sustainable eco-friendly handicraft products mainly due to the easy availability of raw material.

Participants learnt the process of cleaning, washing and flattening of water hyacinth for making products such as mats, purses, chocolate box, jewelry box, and handbags.



Community Based Inclusive Development - Chamarajanagar

Community Based Inclusive Development (CBID) is a multi-sectorial strategy being implemented through the combined efforts of people with disabilities, their families and communities along with government, civil societies and non government organisations.

MI is implementing CBID program in 210 villages (two taluks - Chamarajanagar and Gundlupet, six hoblis, 49 Gram Panchayats) of Chamarajanagar district, which aims to promote inclusive education and social inclusion to 600 children with disabilities along with early intervention and rehabilitation services.

Liaisoning with different government departments and local governments is an important component of the program and all the activities of the program are being implemented in close coordination with government agencies.

Promotion of Inclusive Education

Inclusive education benefits those children who have learning disability, mild or borderline intellectual functioning and other children with disabilities. All children are enriched and have a positive attitude.

Addressing schools was an important intervention to create an inclusive and supportive environment for children with disabilities. Hence orientation programs were conducted in collaboration with Department of Education, Government of Karnataka for government school teachers on specific issues that children with disabilities face in their lives. Training on creating a barrier-free environment (attitudinal and physical barriers), curriculum design and adaptation as per the child's individual needs etc. was provided. To support teachers in improving learning of children with disabilities, appropriate teaching-learning materials were provided to government schools and their professional skills are developed. Parents are better equipped to deal with their children and the children are better prepared for independent living.

Awareness to promote Inclusive Health

Identifying and making a prompt intervention to support children and their families is done so that issues are tackled before they become more ingrained problems. Early identification and intervention are important right through a child's life and the health and community workers play a pivotal role.

Hence, an awareness program on early identification and intervention regarding different impairments



was organized for ASHA, anganwadi and village rehabilitation workers to upgrade their knowledge on the disability and its causes, need and benefit of assistive products, provision of rehabilitation services. During the awareness program, the participants were motivated to encourage parents of children with disabilities to avail rehabilitation services for their kids.

As a result of awareness programs, changes were observed in children with disabilities, their families as well as community members:

- Awareness created a change in attitude among local community in developing sensitivity towards children with disabilities
- Parents gained knowledge on early identification, need for referrals and scope for therapy for children with disabilities
- Parents sensitized by MI are playing the role of peer educators in creating awareness among other community members on the need for early identification. This has helped in early intervention and disability prevention
- Due to enhanced awareness among ASHA and Anganwadi workers on early identification they are able to identify even minor problems in children between the age group 0-6 years which is crucial for taking effective remedial measures and referring them to suitable service providers

Community Education Centres

Community Education Centres (CECs) have been established and are regularly attended by children – disabled and non-disabled alike. CECs use school or anganwadi premises and run for two hours combining study of the formal curriculum with time for play.



These sessions are led by community education tutors who are recruited from the village where their centre is. Community education is a worthwhile experience for the children. These are the catalysts for children to succeed on the academic front, as well as in extra-curricular activities.

The tutors are trained on the development of language ability among children, preparation of teaching tools and materials suited to the child's needs at individual level and assessing performance levels of children.

Individual Education Plans (IEP) provide a plan to help a student meet individual goals. As not every child in a class has the same learning capacity, IEPs were developed for 10 children in each CEC in discussion with parents and teachers. Progress was monitored every three months and scope for improving teaching methodologies were discussed and implemented.

The CECs have enhanced the participation of children with disabilities in both curricular and co-curricular activities. The changed attitude of teachers is evident in the manner in which they interact and manage the children. This has also increased the involvement of children in class room learning process and co-curricular activities.

CECs have also strengthened peer group support for children with disabilities. The non-disabled children voluntarily take children with disabilities to school thereby reducing the burden on parents and caregivers. These factors have contributed to increased retention rate of children with disability in schools.

Every Monday, Quality Circle Time (QCT) was organized to provide them a space to share their personal feelings and ideas about things that concern them. They were encouraged to express their feelings which enhanced their self-esteem.

Enrolment of children with disabilities as well as academic performance of other children has improved. With increased enrollment, schools made changes to ensure that children with disabilities had access to classrooms and play areas.

No. of CECs	34
IEP plans developed	210
Children in CECs	722 (110 CWDs)

Children's Parliament

Children have a pivotal role to play in creating an inclusive community. They are also entitled to be involved in a wide range of issues that affect them. As they grow and develop, their opportunities for participation should expand from private to public spaces. Hence Children's Clubs or *Makkalasanghas* were formed in all CECs.



Every Saturday, the children club activities are held, various issues relevant to them and their villages are discussed and an action plan was developed to address these issues.

With this empowerment, children participated in Children's Gram Sabhas organized at Gram Panchayat level and voiced their concerns. MI facilitated local Gram Panchayats in organizing Children's Gram Sabhas and ensured the participation of children with disabilities.

Gram Sabhas facilitated	12
Children participated	1360

Disabled People's Organization (DPO)

Chiguru DPO was formed in order to strengthen the voices of persons with disabilities. The focus of the DPO is to provide hand holding support to SHGs for claiming their rights and entitlements. It is also a cohesive group to discuss common problems, share resources and find solutions together.

Chiguru has established linkages with various government departments like Education, Women and Child Welfare, Disability Welfare, Taluk Panchayat, Zilla Panchayat. They discuss the grievances of

persons with disabilities with concerned department at the taluk and district level to resolve them. They also collaborate with various government departments and other organizations in creating awareness on rights of persons with disabilities and on social security schemes such as Ayushman Bharat, health cards etc. They guide and support persons with disabilities in availing such schemes. DPOs have established linkages with various financial institutions and support SHGs with administrative process for availing services from these institutions.



Healthcare and Rehabilitation Services

Assessment programs were organized for children with physical impairment to identify the problems and difficulties faced by children with disability and to provide appropriate assistive devices to support their daily activity and mobility, thereby preventing further deformities in the child. The rehabilitation team assesses the need level and type of devices needed for each individual. Cases where corrective surgeries were needed were referred to medical institutions and professionals.

Children assessed	177
Assistive devices provided	310
Referrals	48



Eyesight is very essential to enable clear vision. Early detection and intervention is vital for preventing visual disability. Hence, eye screening programs were organized for children below the age of 6 years in collaboration with Eye Hospitals. Children with vision problems were provided spectacles and underwent corrective surgeries.

Eye Screening	1916
Referrals	53
Spectacles	74
Corrective Surgery	2

Audiometric assessment was carried out to identify children with hearing loss and provide appropriate hearing aids and speech therapy for the children with hearing and speech problems. Children identified with speech and hearing problems were provided hearing aids.



Children assessed	36
Hearing aids provided	12
Referred for speech therapy	20

Providing assistive products to children has resulted in increased enrollment and retention of children with disabilities in schools. This has resulted in children being more attentive in class.

Retrofitting Homes

To provide easy accessibility for children with disabilities in their daily activities, home accessibility audit was conducted at different places. Based on the audit, home adaptations were done by fixing railings, setting up of standing frames inside and outside the house and ramps outside the house. Toilet adaptations and modified chairs were also introduced to help children with disability to carry out their daily activities independently.

Children with severe disabilities were confined to the house. Providing them with customized positional devices such as twin devices, special chairs have

helped in socializing with people as they gained more mobility than before. This has reduced the burden on parents and helped them to give more attention to their daily activities and livelihood.

Community Therapy Centre

Community based therapy centre was established at the hobli level in Chamarajanagar to provide therapeutic and other necessary rehabilitation services to children with disabilities. Running twice a week, the centre is providing need based therapy services and ADL training for children with cerebral palsy, developmental delay, children with disabilities.

Therapeutical interventions like stretching of tight muscle groups, strengthening of weak muscle groups, upper limb and lower limb coordination exercises and gait training, play therapy sessions are being conducted in the centre. Assessment, fitment and repair services are also provided in this centre. This centre also serves as an information



centre for availing information on disability and assistive products where all the communication and information materials are exhibited.

Children availing service	286
Service sessions conducted for CwDs	1735



Therapy centres are helpful in the following ways:

- Therapy centres at hobli level cover 8-10 villages each. This has lessened the burden of carrying the children from the villages to the cities for therapy services. With the intervention happening at the hobli level, parents are able to bring their children for regular followup without affecting their livelihood
- The centres are providing required maintenance services for the assistive devices which is a crucial part of optimum utilization of the devices
- In addition to providing rehabilitation services, village-level therapy centres are also sensitizing different stakeholders including local Gram Panchayats. This orientation has helped in garnering support from Gram Panchayats who have offered to reach the government programs for the people with disabilities.

Highlights

- Mobility India is the member of SVEEP (Systematic Voters Education And Electoral Participation) committee. MI in collaboration with the Zilla Panchayath and Taluk Panchayat of Chamarajanagar Taluk organized SVEEP sensitization program in more than 30 villages. Due to SVEEP sensitization program 1243 (M712, F531) self help group members voted independently and 13 persons with disabilities voted for the first time.
- Mobility India team played an active role in developing a resource book on inclusive education initiated by Samagra Shikshana, Karnataka. Resource book contains 17 different chapters on concept of inclusive education, 21 disabilities as per new RPD act, process of involving CWDs in learning process, role of parents, community, teachers and education department etc. This opportunity helped in building trust and awareness about MI's scope of work in inclusive education. As a result, MI is invited to be part of every teacher's training program.
- MI is a member of Monitoring Committee of District Balakara Balamandira and Balakiyara Balamandira. MI participates in monthly monitoring committee meetings where the progress of the child, facilities provided for each child, child safeguarding measures, children grievances etc. are discussed and suggestions on child rights protection and child safeguarding issues are provided.

- Block Level Health Committee chaired by Taluk Tahsildar is a committee to plan and implement the Rashtriya Balaswastha Karyakram (RBSK). As a member of the Committee, MI participates in the planning meeting and provides suggestions. It also collaborates in program implementation at the community level through local self-help groups and federations by providing technical support on disability issues.

Unity begets improvement



Bindu, aged six, lives with her parents and brother in Chandakavadi, Chamarajanagar. She has intellectual disability and is also an epileptic. When she was five days old, she had a first epileptic attack. “The doctor prescribed medicines and monitored her continuously for six years, but there was no improvement,” says Bindu’s mother, Shantamani. Her father, Siddaraju, reminisces about Bindu’s early days in the Anganawadi. “She did not mingle with other children; nor did she involve herself in any activities. Until she was three years, she was not even able to identify people.”

Bindu, at six years, was enrolled in first standard, and at this age, she still did not have control over her daily activities. She needs lot of time to capture the concepts taught in the class. Her teacher says, “she often forgets things and does not respond. She wants her brother to be with her all the time”. Her parents and brother are very supportive, as their desire is to see her improve in her health and be independent.

Mobility India identified Bindu and she is provided regular therapy. These regular sessions had helped her to do daily activities on her own, like combing, washing her face and so on. Her teachers are relieved that she is attempting to write and her attention span has increased. She has begun listening to what the

teacher says in class and tries to mingle with her classmates too. Her family has hopes she will become more independent, while integrating with her peers in school.

One step at a time

Mohammed Ghouse, aged 8 has cerebral palsy. He stays along with his parents and elder sister. His father, is a carpenter and earns Rs.15,000/- per month, which barely covers rent, education, groceries and medical expenses, especially that of Mohammed Ghouse.



During a household survey conducted by Mobility India in 2016, Mohammed Ghouse was identified and the therapist did a detailed assessment of his condition. He now undergoes regular therapy and assistive devices are provided to him which helps him in his mobility.

In order to keep the momentum of improvement going, he was enrolled in the Mobility India Community Education Centre (CEC) in 2018. Amidst children of his own age in the CEC, he slowly began improving his balance while in his sitting posture. He started communicating with others in two or three words. He learnt to write letters of the alphabet from A to J. “He has improved to the extent of playing indoor and outdoor games with his friends at the community education centre,” Mohammed’s mother happily says. As his mother was keen for him to study in an English medium school, the MI CBR team referred him to Presidency School, a regular mainstream school and he is admitted in 1st standard, for the year 2019-20. Mohammed Ghouse is eagerly waiting for the school to reopen.

Community Based Inclusive Development - Urban Slums

Since inception, MI is implementing CBID (formerly Community Based Rehabilitation) program in urban slums. MI focuses on inclusive development of people with disabilities through initiatives in healthcare, inclusive education, livelihood, social and empowerment. MI provides assistive devices, therapy services for people with disabilities, builds the capacity of tutors for mainstreaming children with disabilities, conducts vocational training programs to enhance employability of people with disabilities as well as ensures their participation in the mainstream society.

CBID program is being implemented in 38 slums in 10 Bruhat Bengaluru Mahanagara Palike (BBMP) wards of Bangalore Urban District in order to achieve disability inclusion in government programs and policies. Liaisoning with government department and BBMP is an important component of the program and all the activities are being implemented with support from BBMP, government department, local NGOs and DPOs.

Promoting Inclusive Education



Home based survey conducted in three BBMP wards viz., Uttarahalli, Anjanapura and Jaraganahalli revealed that many children with disabilities were not attending school. This was due to lack of awareness and knowledge among the parents. Hence a series of sensitization programs were organized for parents on the importance of education for children with disabilities and were encouraged to send their wards to school.

In order to create a conducive, encouraging atmosphere for learning, teachers and anganawadi workers were sensitized on the special needs of children with disabilities and on inclusive education.

These programs led to more children with disabilities enrolling into schools.

To provide additional teaching support, two CECs each were established in three BBMP wards with support from local BBMP corporator and education department. Two CECs established earlier were continued with support from community. Volunteers were identified within the community to work as CEC tutors and training was imparted on inclusive education and various teaching and learning methodologies. Operating after school hours within the school premises, CECs provided a platform for children with disabilities and learning disabilities to succeed on the academic front and gain confidence to participate in extra-curricular activities.

CECs improved the retention rate in schools, peer support and participation. It contributed to change in the mindset of both teachers and parents towards inclusive education.

Healthcare and Rehabilitation

The socio economic condition of the slum dwellers is generally poor because of the lack of basic social amenities; functional skills, proper education, source of the income, hygiene and health resources. Lack of awareness on maternal health and immunization of children and access to proper healthcare services lead to high risk of disability. Adding to this was the lack of skills among ASHA and anganwadi workers in early identification and interventions. In order to address this gap, a series of awareness programs were organized for parents, ASHA and anganwadi workers, teachers and community members.



- Awareness programs were organized for the community, ASHA and anganwadi workers on early identification and interventions
- Eye screening camps were organized for school children for early detection and in order to prevent visual disability
- Cancer can affect almost any part of the body. In India, it is a major cause of morbidity and mortality. By taking healthy diet, physical activities etc. some cancers can be prevented. To create awareness MI in collaboration with KIDWAI Institute of Oncology organized a one day awareness and screening program on Cancer in Anjanapura Government School. As part of this awareness program, 55 women underwent a check-up of cervical and breast cancer
- Sanitary napkins were mobilized from NGOs working on health especially menstrual hygiene and distributed on a monthly basis to person with disabilities especially those with intellectual disabilities
- Being part of different BBMP health committees, MI has been able to contribute ideas and knowledge towards overall well-being of person with disabilities and their families.

Ensuring Livelihood

In order to improve the socio-economic status of persons with disabilities, as well as their family members, and channelize their knowledge and skills fruitfully, MI is focusing on vocational training and job placement.

The prospective companies in and around the project area are identified and approached for need assessment pertaining to jobs. Based on the interactions, persons with disability and their family members are referred to training institutions that provide them the requisite skills. After the training, need based placements are done.



Disabled People's Organization (DPO)

To strengthen the voices of persons with disabilities, DPOs were formed in different BBMP wards. Through advocacy and network, DPOs are accessing different government schemes and facilities from BBMP and Government departments. They are also playing a role in influencing policy and advocacy. In addition to providing support to persons with disabilities in their area, they are also extending support to people from neighbouring areas.



CBID - Peri Urban (Jigani & Attibele)

Mobility India is implementing CBID program in Attibele and Jigani Hobli, Anekal Taluk, Bangalore Urban District since 2008. MI focuses on inclusive development of people with disabilities through initiatives in healthcare, inclusive education, livelihood, social and empowerment.

To strengthen the voices of persons with disabilities, Snehajeevi Anghavikalara Samanvaya Okkuta, a DPO and Janapriya Anghavikalara Sangha were formed in order to achieve disability inclusion in government programs and policies. MI provides assistive devices, therapy services for people with disabilities and builds the capacity of Disabled People organizations (DPOs). CBID program in Jigani and Attibele are being implemented in collaboration with DPOs.

Where there's a will, there's a way

Tabrez Pasha, aged 35 lives in Illyaznagar, Bangalore with his parents, wife and two children. He has five sister, who are all married. When Tabrez was six months old, he had an attack of polio. With a large family to take care of, his father was able to educate Tabre only upto his secondary school.

During the house-to-house visits in 2003, Mobility India team identified Tabrez Pasha and motivated him to continue with his studies. With enthusiasm, Tabrez enrolled for higher education, and successfully completed his graduation. Armed with a B.Com degree, he joined a private company and worked for three months.

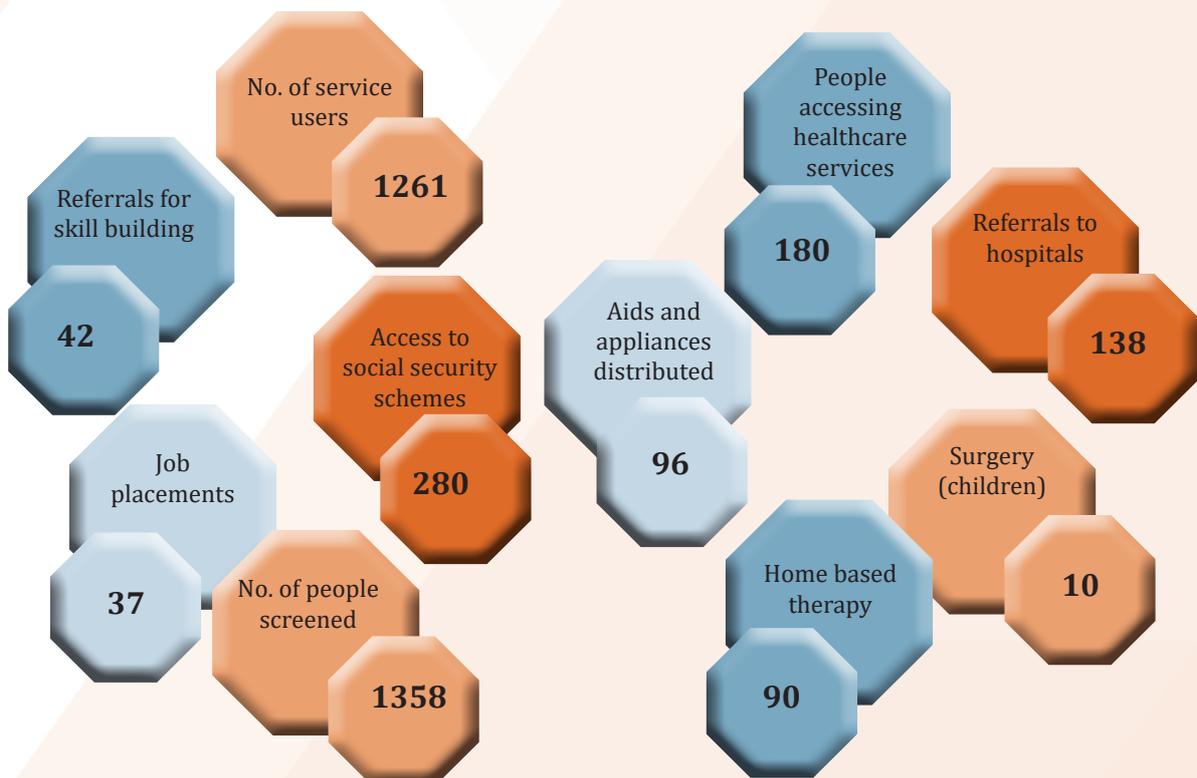
"I wanted to work independently, and start a business of my own, thus, I quit my job," says Tabrez Pasha.

Tabrez began working as an agent, to get passports, driving licenses and insurances of vehicles done. As an active member of the Disabled Peoples Organisation (DPO), and the treasurer of the Mahasangha, Tabrez decided to avail of a loan from the Mahasangha, and opened a Mobile Sales and Service store. With the business taking off on a good note, Tabrez started a second store. Tabrez now takes care of the he medical needs of his father ,who is paralysed, and mother undergoing treatment for blood cancer.



"The responsibility of getting my sisters married rested on me; so I had to think of ways to increase my income. I Thank Mobility India and the Mahasangha for helping me to find a way of doing so, and thus turning my life for the better, " Tabrez gratefully declares.

A Snapshot of Achievements in 2018-19



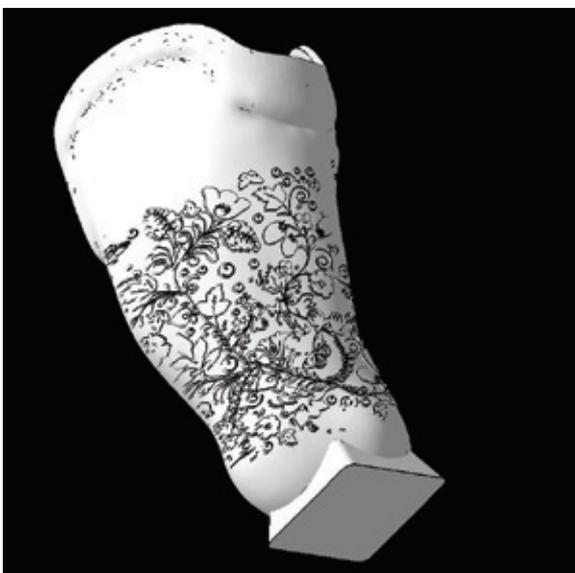
Development and Promotion of Appropriate Technology

With extensive clinical and practical experience, MI has been providing quality prosthetic and orthotic services suited to various needs. Design and development of appropriately priced, light-weight, user-friendly and quality prosthetic and orthotic components as well as relevant machinery and tools has been the hallmark of MI since its inception. As a contribution to the 'Make in India' campaign, MI has indigenously designed and developed many prosthetic, orthotic components, assistive products, tools and equipment that have wider user acceptance.

As a result of its intensive work with the community, MI has deeper, practical insights into the design elements that need to be incorporated in assistive devices. This has helped MI to complement the technical know-how of leading institutions like IIT Madras, BETiC lab in IIT Bombay, IISc, VIT, SBMT (DEBEL,DRDO) etc. In addition, it also supports these institutions in conducting clinical trials of the assistive devices and its components developed by them, to ensure the efficacy and functionality of the products.

Digital Transformation and 3D printing of Transtibial Prosthetic Sockets

Digital transformation and 3D printing have of late been applied to the healthcare sector. Hence, it is important for rehabilitation professionals to be aware of the expanding range of available digital tools. Awareness about new technologies being applied in the disability sector is necessary to keep up with developments in the sector.



MI has been working since 2 years on the 'proof of concept' to establish the possibility of designing and 3D printing a transtibial prosthetic socket via digital mode. Successful efforts were undertaken to establish collaboration with the technology organizations who are experts in this field. Few bench prototypes were developed to prove the concept.



To disseminate the concept and open up the technology to a wider professional forum, a first of its kind, a 3-day national workshop on 'Digital Transformation and 3D printing of Transtibial Prosthetic Sockets' was organized in Bengaluru from 22-24 Nov 2018 with support from ICRC New Delhi, India. The workshop exposed the participants to the functioning of 3D scanning and printing and how 3D scanning can reduce the time taken for measuring, checking and final fitting of the prosthesis. Experiments on prototyping of digital-based prosthetic and orthotic devices were shared by different researchers.

3D Print Trans Tibial Socket - Prototyping

Prototyping of 3D Print Trans Tibial weight bearing socket was initiated in January 2019 by a multi-disciplinary team. The purpose of this trial is to find out and check the feasibility of 3D printing technology in our Indian context. The concept of digital transformation and 3D printing could be the next generation technology in the field of assistive technology, however there is a need for further pilot studies and long duration clinical trials.

Clinical Trials

Polycentric knee joint

Rehabilitation Research and Device Development Lab (R2D2) in Indian Institute of Technology Madras (IITM) developed a polycentric knee joint with high toe clearance, greater knee stability and affordability to suit the conditions of Indian users and uneven terrain. Made out of locally available materials like stainless steel, aluminum, and nylon, the joint is designed with enhanced stability features and better geometric locking of the knee centre.



MI conducted the user trials of the joints (19 units) to find out the functionality and effectiveness of the same in various environments. The trials conducted in three phases followed various protocols, outcome measures and test methods. The final report of the clinical trials has been shared with IIT Madras and SBMT DEBEL.

Outcome of the clinical trial

- Users were satisfied using the joint indoors and outdoors
- Repair and maintenance has been minimal
- The joint appears to be appropriate for persons of age less than 50 years with ideal stump and muscle power more than 4 (MRC grade)
- User is confident enough to do his/her daily activities independently such as climbing up and down the stairs, walking on uneven surfaces, walking during inclement weather.

PURAK upper extremity prostheses

Indian Institute of Science, Bengaluru developed 'PURAK', an affordable and fully functional myoelectric controlled upper extremity prostheses for amputation below the elbow level.



During 2017-18, MI conducted the clinical trial for 5 prototypes to ensure the efficacy and functionality of the design. Specific inputs provided by MI helped the research team in design improvements. Certain iterations were incorporated to make prescriptions to wider range of persons affected with below elbow amputations. During 2018-19, MI conducted pan-India clinical trial in 7 to 8 different locations of 45 PURAK upper extremity prostheses and the results are being finalized by the PURAK team.

Evaluation of Twin Device

Evaluation of the effective use of the Twin Device was carried out by ICRC New Delhi, India team. Two-member team from ICRC New Delhi, India office visited MI to understand the effective usage of the twin device. The device is being used effectively after doing certain iterations and has shown good outcomes. ICRC New Delhi, India could support mass production of the device components and various parts. Mass production of the parts could help reduce the cost and have better control of uniform quality, making it more useful and to explore the possibility of scaling-up to cover the larger region.

MI has submitted the design patent for the device.



National standardization of products - BIS Certification

Rider 1 wheelchair was introduced by MI to suit the rural and rough terrain environment. Rider 1 is a locally developed rough terrain wheelchair for outdoor mobility. Apart from being average-weight, foldable, stable and durable features, it has additional



adjustable features like seat width, depth, brake lever, foot rest and back rest.

A high quality stainless steel Standard Orthotic Knee Joint developed by MI is affordable and has the added feature of 130 degrees of knee flexion compared to 100 degrees of the regular version. This is the first design of its kind that has been developed in India.

Draft standards for both the products were developed and submitted to Bureau of Indian Standards (BIS). This ensures the quality of the product by providing Indian Standardization (IS) number to the product. The BIS committee has approved granting of BIS certification to both the products viz., Rider 1 Wheelchair, Standard Orthotic Knee Joint. The standards for the products have been sent for publication.



Networking and Collaboration

MI'S networking activities are spanned across international, regional, national and state levels. MI actively participated in several seminars, conferences and professional events at national and international level, held consultations/ organized clinical and other training programs involving Indian and foreign experts, received professionals and trainees from other organisations coming on study/ facility visits, offered internship opportunities for students and collaborated with external agencies on research projects dealing with subjects of topical interest.

The current year witnessed a further expansion in MI's institutional networking and collaboration efforts through active participation in several seminars, conferences and professional events in India and overseas. MI collaborates with colleges, universities and external agencies and offers internship and learning opportunities on community and research projects dealing with subjects of topical interest.

ISPO Global Educators Meeting (GEM)

The Global Educators Meeting (GEM) is an international collaboration of Prosthetics and Orthotics Educators for the purpose of ongoing exchange, professional development and supportive learning.

Conducted once in four years, The ISPO Global Educators Meeting (GEM) took place between 17-21 September 2018, at PFH University, Göttingen, Germany. Ms. Ritu Ghosh, Deputy Director – Training participated in the meeting. During the meeting, she presented a paper titled 'Integration of wheelchair service education for developing Prosthetics and Orthotics workforce in MI.



One of the main highlights of the meeting included an exclusive presentation on the new ISPO Education Standards, with an interactive discussion on how these will be applied practically in the accreditation process before its go public.

Staff participation at National Conferences

- WHO REHAB 2030 - Call for Action, a South-East Asia multi-stakeholder meeting was held from 16-20 April 2018 at Ramaiah Medical College, Bengaluru. During the meeting various aspects of rehabilitation and strategies for better implementation of rehabilitation in the SEARO region were discussed. Ms. Albina, Director participated in the meeting.
- Two days National Level seminar cum CRE on 'Role of Assistive Technology in Disability' was held in Patiala Punjab on 5-6 May 2018. The seminar was organized by Red Cross's District Disability Rehabilitation Centre Patiala in association with Indian Association of Assistive Technologists. Mr. Soikat Ghosh Moulic, Assistant Director-Technical participated in the seminar.
- All India Institute of Local Self Government in association with Centre for Rural Technology-IIT Guwahati organized the '1st Rural Dialogue 2018' on 6-7 July 2018 at Guwahati. The program was a platform to exchange experiences and good practices on issues related to innovation in rural areas and provide awareness on various potential solutions. Mr. Anand and Ms. Riniti attended the event.
- International conference on 'Fostering Excellence through Inclusive Education' was held in New Delhi on 28-30 November 2018. Ms. Albina Shankar, Director and Mr. Anand SN, Senior Programme Manager attended the workshop and presented a paper on 'Embracing Inclusive Education through CBR at Chamarajanagar'
- Medical Device Innovation Camp (MEDIC) 2018 was organized by BETiC – Biomedical Engineering & Technology incubation Centre of IIT Bombay on 28 Sep - 2 Oct 2018 highlighting and focusing on the 'Role of Assistive Technology and Devices in Healthcare Solutions for Developing Countries'. Mr. Soikat Ghosh Moulic, Assistant Director-Technical participated in the event.
- Cognitive Neuroscience Lab, Department of Biological Sciences, BITS, Pilani and School of Biomedical Sciences at Leeds University jointly organized a two-day workshop on Data Sharing for Open Innovation in CBR' on 28-29 September 2018 at BITS Pilani, Goa. Mr. Soikat Ghosh Moulic, Assistant Director-Technical participated in the event.
- Indian Association of Physiotherapists organized a National Physiotherapy conference '57th IAPCONBANGALORE 2019' on 1-2 February 2019 in Bangalore. Four Therapists- Mr. Sama Raju, Ms. Soumya, Ms. Vennila and Mr. Riyaz participated in the conference. Therapists presented three papers viz., 'Provision of Priority Assistive Devices at Kerala flood relief program', 'Pilot Study on Clinical Learning Curves for Physiotherapy Interns at MI' and 'Accelerating Core Competencies of Rehabilitation Professionals for Effective wheelchair service Provision in India-A project report'.
- Swami Vivekanand National Institute of Rehabilitation Training and Research in association with Indian Association of Assistive Technologists organized a national conference 'IAAT-NC 2018' on 22-23 December 2018 at Bhubaneswar. Theme of the workshop was 'Assistive Technology – Empowering Ability'. Ms. Albina, Director, Mr. Soikat Ghosh Moulic, Assistant Director-Technical and Mr. Rajdeep Kumar, Manager P&O Training attended the conference. Mr. Soikat and Mr. Rajdeep shared the knowledge on appropriate wheelchair service provision as per WHO guideline.
- 'Interdisciplinary Design Thinking Hackathon' was organized jointly by Cognitive Neuroscience Lab, Department of Biological Sciences, BITS Pilani and Leeds Business School of University of Leeds at K K Birla Goa Campus from 15-17 March 2019. Mr. Soikat mentored a group of students during the hackathon event for assistive devices development where 6 groups participated from all over India.
- Mr. Soikat was invited by Villgro, a Chennai based incubation centre for medical device development to assess the request for grant for Neo motion, a company launched by IIT Madras alumnus. Neo motion is developing mobility devices like clip on wheelchairs which are power driven.

Big Thank You

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RECEIPTS & PAYMENTS ACCOUNT FOR THE PERIOD APRIL-2018 TO MARCH-2019

(Amount in ₹)

31-Mar-18	RECEIPTS	31-Mar-19	31-Mar-18	PAYMENTS	31-Mar-19
	To Opening Balances		375,63,859	By Personnel Costs	404,37,565
1,33,316	Cash on hand	77,878	98,71,866	" Administrative Costs	55,04,442
134,22,060	Cash at bank	167,33,627	199,02,220	" Rehabilitation Services	83,94,223
251,61,511	" Fixed Deposits	-	62,43,638	" Capacity Building, Partnership and Seminar	7,01,558
	Grants			" Design & Development of Orthotics & Prosthetics Components	64,92,243
63,51,324	- CBM	46,13,389	62,34,071	" Human Resource Development in Disability & Rehabilitation	63,80,949
-	- MIBLOU	12,43,678	87,52,639	" Community Based Rehabilitation Programmes	158,04,770
17,50,016	- World Learning	11,75,356	72,15,901		
107,15,736	- World Vision			" Capital Expenditure	10,03,346
7,74,930	- Zurich Community Trust(UK)		61,76,376	" Advances & others	17,30,735
3,14,327	- Management Science for Health		62,13,948	" Fixed Deposits	52,00,509
-	- International Committee of the Red Cross - New Delhi	43,45,499	213,29,873		
3,03,821	- Northern Operating Service Private Limited	7,87,500		" Closing Balances	
27,15,598	- World Health Organisation	7,74,155		- Cash on hand	46,662
5,25,000	- Azim Premji Philanthropic Initiatives Pvt Ltd.		77,878	- Cash at bank	49,41,223
93,985	- Handicap International	3,18,513	167,33,627		
104,77,300	- Allergan International Foundation	6,99,250			
-	- CAE Simulation Technologies Private Limited	2,00,000			
5,18,900	- Centre for Industrial Consultancy & Sponsored Research (IC&SR)	2,11,079			
-	- Mitsubishi Hitachi Power Systems India Pvt Ltd				
2,11,130	" Donation	97,65,952			
6,00,000	" Education Programme	143,36,411			
191,50,400	" Orthotics & Prosthetics	129,30,390			
252,60,293	" Bank / FD Interest	203,20,918			
162,10,264	" Misc Income/ in Kind	16,64,234			
74,64,287	" Advances & Others	64,40,394			
30,87,152					
10,74,547					
1463,15,897	Total	966,38,224	1463,15,897	Total	966,38,224

For Shankar Sridhar & Mukundh
Chartered Accountants
Firm Reg No.: 007273 S

Mukundh S
Membership
No : 202437



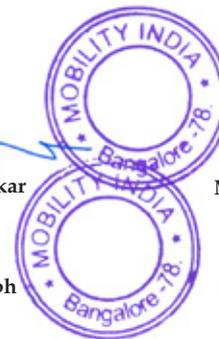
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Ms. Albina Shankar
Director



Place - Bangalore
Date - 2nd September, 2019

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