
Enabling Inclusion[®] Model and App

Navamani V

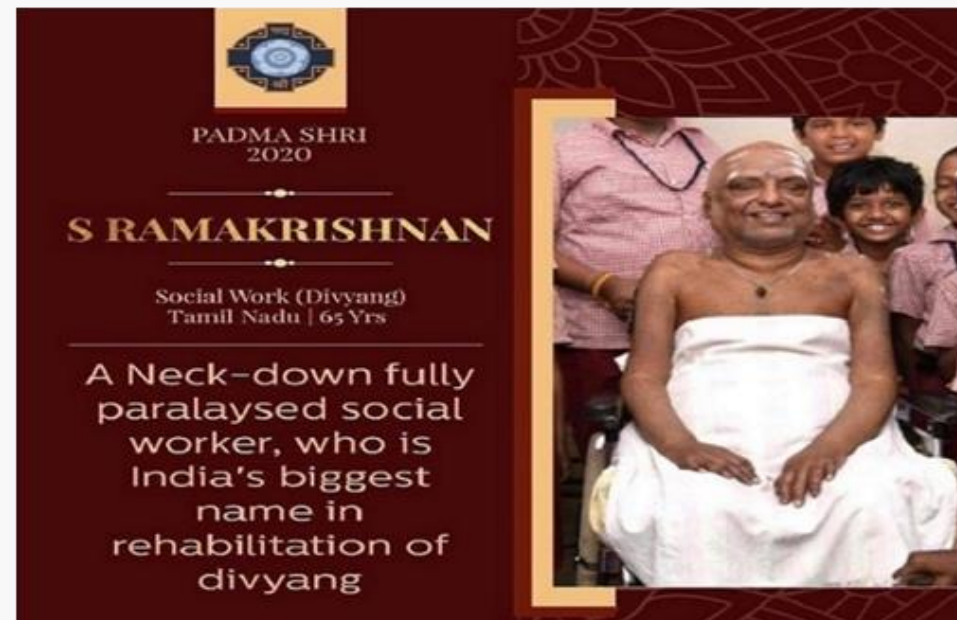
Lead- Implementation and Capacity Building

Amar Seva Sangam, Ayikudy

10 January, 2025

Introduction – Amar Seva Sangam

Leadership



**Padma Shri* S Ramakrishnan
(Founder President)**

Paralyzed from neck down (when he was a fourth year Engineering student), Mr. Ramakrishnan did not lose hope, but founded a centre to educate & rehabilitate poor rural disabled children.



**CA S. Sankara Raman
(Hon. Secretary)**

A chartered accountant and a wheelchair user due to muscular dystrophy, heard about Amar Seva Sangam and joined Mr. S. Ramakrishnan in the year 1992.

We aspire to build a **Valley for the Disabled** and establish a Rehabilitation and Development Centre and developing models for self-help initiatives by integrating the disabled individuals with the society and improved living conditions.

**We build on the premise that disability is not a constraint but only a condition
We believe that disability is a matter of perception**

Developmental Disabilities -Status in India

Incidence of Developmental Delay and Disability in India

- 2.21 % of population has disability.
- There are 30.38 million Persons with Disabilities in India as per time adjusted figures of 2011 census.
- Prevalence of developmental delay and disabilities- 1.5 to 2.5 %
- From birth to 18 years, there are about 7.8 million children with developmental delays and disabilities.



Current Sales Trends:

- 66% of Children With Disabilities have No Access to EI Therapy
- 72% of 5 year- old children in India with disabilities have never attended any educational institution- UNESCO's State of the Education Report for India 2019

Our Objective is to develop an innovative evidence-based service delivery model for providing early intervention and rehabilitation services in LMICs with the following guiding principles:

- Community-based rehabilitation (CBR), as a strategy, aims to enhance the quality of life for CWDs by meeting basic needs and facilitating participation and social inclusion.
- The WHO's International Classification of Functioning, Disability and Health (ICF) provides a framework to guide clinical practice for optimizing health, function, participation, and environmental and personal factors.
- The family-centred approach (FCA) recognizes the interrelated development of the child and family well-being.



Our Solution is



Enabling Inclusion Model



Enabling Inclusion App

Enabling Inclusion Model



CBR Program

- Community Based Rehab Model leveraging and strengthening local resources and services

Features

- Staff structure- Block wise geographical teams
- Training - Induction and on the job
- Therapy visits - weekly
- Community, School and Women's Awareness
- Parents training and empowerment
- Screening
- Medical camps
- Assistive Technology
- Referral and linkages
- Collaboration and partnership

Enabling Inclusion App



User Name

Password

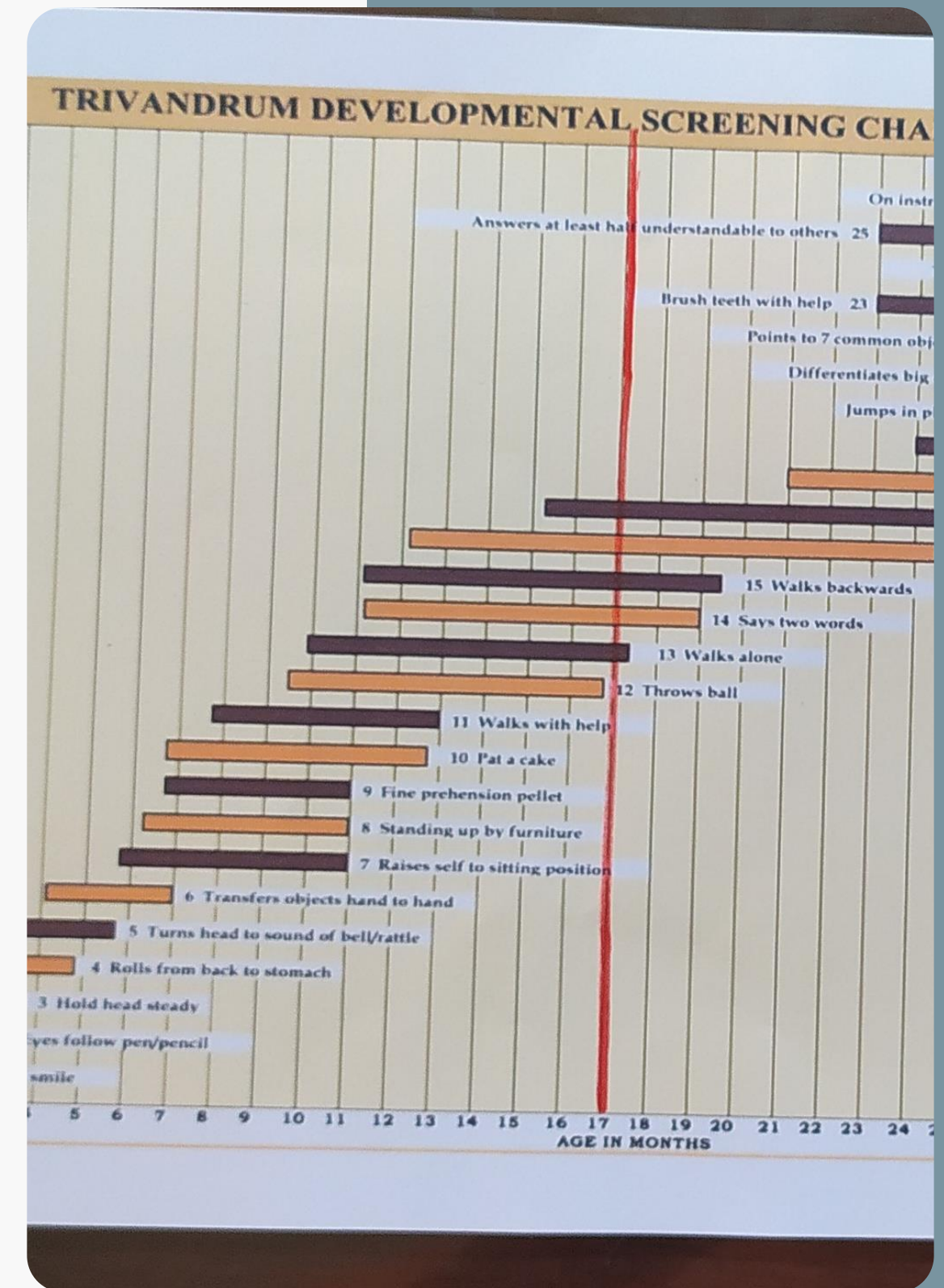
LOGIN

Documentation and Monitoring

- Web and Mobile app
- Cloud server
- Therapy visits monitoring
- Staff activity monitoring
- Program Monitoring
- Children/Service users Monitoring

Developmental Screening

- Tools used- Trivandrum Development Screening Chart and UNICEF Washington Child Screening tool
- Program summary - Location, Date and Time, How many children screened and identified with Developmental delay
- Demographic data and screening details
- Opportunity to convert children screened positive into service user



Goal Setting

- Involving Parents and caregivers for goal setting.
- Using Canadian Occupational Performance Measure
- Functional Goal setting



Process Flow

ICF Framework for Assessment and Intervention



Intervention Module

- Intervention plans based on validated drop-down options
- Based on the selected goals, intervention plan are chosen by the rehab team
- Custom intervention if required
- Can be given as printout for parents/caregivers (or accessed via parent login)
- Videos for certain intervention

The screenshot displays the 'Intervention Module' web interface. The top navigation bar includes 'Home', 'Master', 'Screening', 'Activity', 'Service User', 'Programs', 'Intervention', 'Dashboard', 'Reports', and 'Resources'. The user is logged in as 'TTS2'. The main header is 'Service User' with a back arrow. Below this is a sub-header 'Interventions' with a back arrow and an 'INTERVENTION EVALUATION' button. The main content area is a form with the following fields:

- Demographic Data**: Category (Below 6 years), Disability (Autism), Assessment (Speech & Language Assessment), Classification (Speech).
- Status**: Created. A 'CLOSE INTERVENTION' button is visible.
- Problem**: Three checkboxes are present:
 - Eye contact - Unable to look at the trainer
 - Attention and Concentration - Unable to focus on table top activity
 - Attention and Concentration - Unable to focus on fine motor activities
- Goals**: A list of goals with checkboxes:
 - I shall not through pointing - Unable to identify body parts
 - Attention and Concentration - Unable to attend to the trainers speech --> To attend to the trainers speech
 - Labelling through pointing - Unable to identify body parts --> To identify body parts
 - Labelling through pointing - Unable to identify vegetables --> To identify vegetables
 - Labelling through speech - Unable to say body parts --> To say body parts
 - I shall not through speech - Unable to say body parts --> To say body parts
- Interventions**: A list of interventions with checkboxes and video links:
 - To attend to the trainers speech --> Face the child and train them follow the instruction --> <https://youtu.be/Gj1PaGalfc0>
 - To identify body parts --> Using picture cards and real time visual cues -->
 - To identify vegetables --> Using flash cards, models and real objects --> https://youtu.be/Cp_FkDyAn04?si=5VuzCkomiWmuV82zP
 - To say body parts --> Using flash cards, models and real objects -->

At the bottom, there is a numbered list of 12 items, each with a checkbox and a video link or 'no video' status:

- 1 Face the child and train them follow the instruction --> [video link](#)
- 2 Using picture cards and real time visual cues --> no video
- 3 Using flash cards, models and real objects --> [video link](#)
- 4 Using flash cards, models and real objects --> no video
- 5 Using flash cards, models and real objects --> no video
- 6 Request using gestures pictures cards --> no video
- 7 Request using real time visual cues --> no video
- 8 Teach tactile- auditory cues --> no video
- 9 Using picture cards and real time visual cues --> no video
- 10 group play activities and turn taking activities --> no video
- 11 Teach tactile- auditory cues --> no video
- 12 real time visual cues and picture cards --> no video

Attachment Section

- Medical reports
- Assessment from other service providers
- UDID and other required documents can be attached and retrieved at our convenience

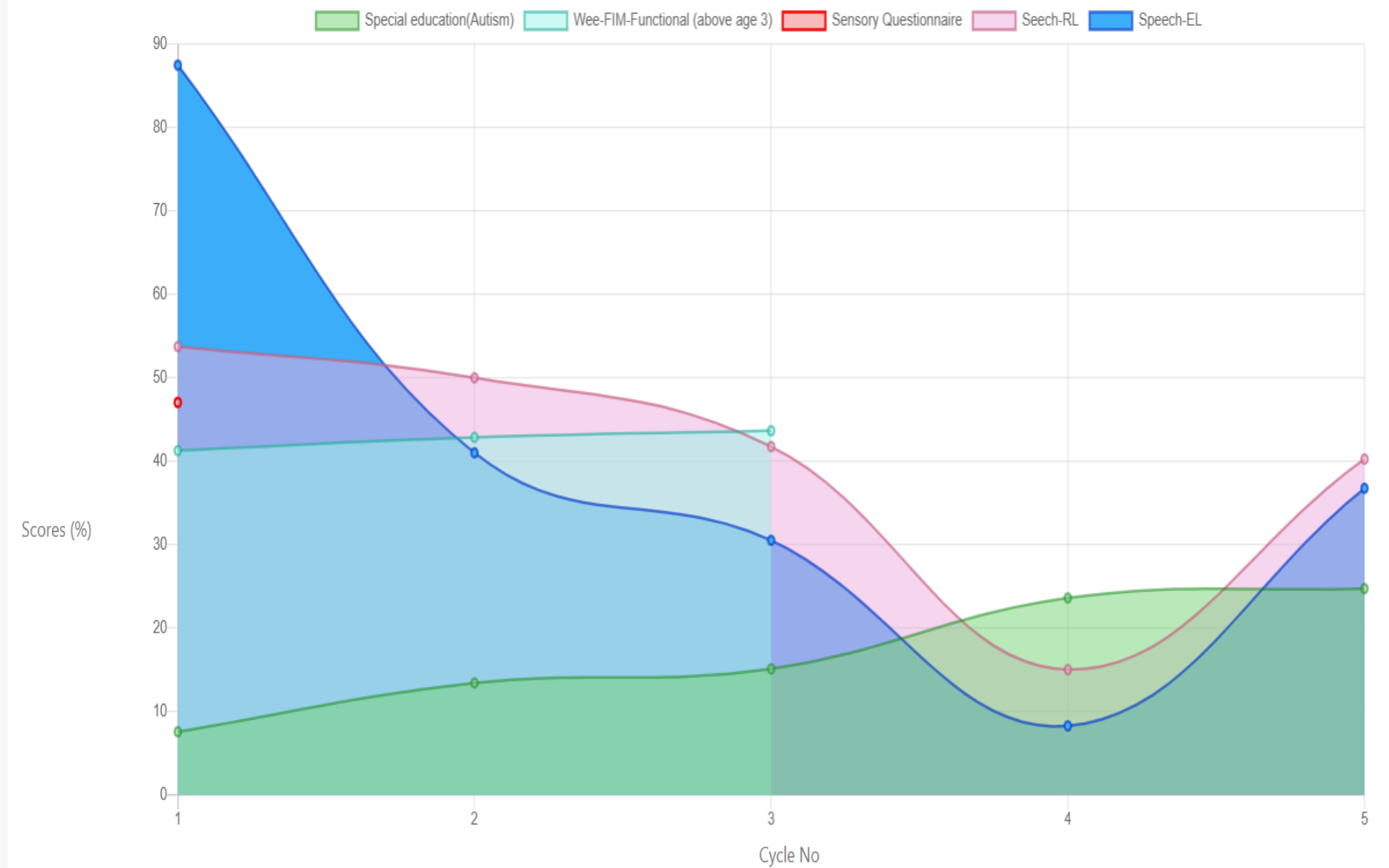
The screenshot displays a web application interface for a 'Service User'. The top navigation bar includes links for Home, Master, Screening, Activity, Service User, Programs, Intervention, Dashboard, Reports, and Resources. The 'Attachments' tab is selected, showing a table of attachments. The table has columns for ID, URL, Recid, Created By, Created Date, Last Modified By, and Last Modified Date. A single entry is visible, with a URL starting with 'serviceuser/attachments/SUA93280422123158292-1688469828502.jpeg'. The interface also includes a search bar, a 'Show entries' dropdown set to 10, and pagination controls showing 'Showing 1 to 1 of 1 entries'.

ID	URL	Recid	Created By	Created Date	Last Modified By	Last Modified Date	
AHA450040723165348746	serviceuser/attachments/SUA93280422123158292-1688469828502.jpeg	SUA93280422123158292	Punitha FTL	2023-07-04	Punitha FTL	2023-07-04 04:53:48 pm	

Outcome measurement

- Outcome tools for various domains in app - Standardized tools (from NIEPID and other institutions) and ASSA developed tools.
- Periodical evaluation of children to evaluate progress and reset intervention pplans
- Graphical representation of scores

Progress Report Graph



Feedback by caregiver

- Caregiver feedback module included
- Periodical feedback taken on caregivers strain and empowerment, communication and engagement with the child and general satisfaction about the services.

Service User

Demographic Data Assessments Evaluations Interventions **Feedback** Attachments ATPs Chart Status Progress Report Audit

Feedback

Caregiver Outcomes

Feedback Taken From Date: 07-01-2025

Gender
 Male Female Third Gender

Family Empowerment Scale (1)**	Not true at all=1 Mostly not true=2 Somewhat true=3 Mostly true=4 Very true=5
1. When problems arise with my child, I handle them pretty well	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
2. I feel confident in my ability to help my child grow and develop	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
3. I know what to do when problems arise with my child	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
4. I feel my family life is under control	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
5. I am able to get information to help me better understand my child	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
6. I believe I can solve problems with my child when they happen	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
7. When I need help with problems in my family, I am able to ask for help from others	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
8. I make efforts to learn new ways to help my child grow and develop	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
9. When dealing with my child, I focus on the good things as well as the problems	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
10. When faced with a problem involving my child, I decide what to do and then do it	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
11. I have a good understanding of my child's disorder	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
12. I feel I am a good parent	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
Total Score:	<input type="text" value="0"/>

Modified Caregiver Strain Index (2)**	No=0 Yes, sometimes=1 Yes, on regular basis=2
1. My sleep is disturbed (For example: the person I care for is in and out of bed or wanders around at night)	<input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2
2. Caregiving is inconvenient (For example: helping takes so much time or it's a long drive over to help)	<input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2
3. Caregiving is a physical strain (For example: lifting in or out of a chair; effort or concentration is required)	<input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2
4. Caregiving is confining (For example: helping restricts free time or I cannot go visiting)	<input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2

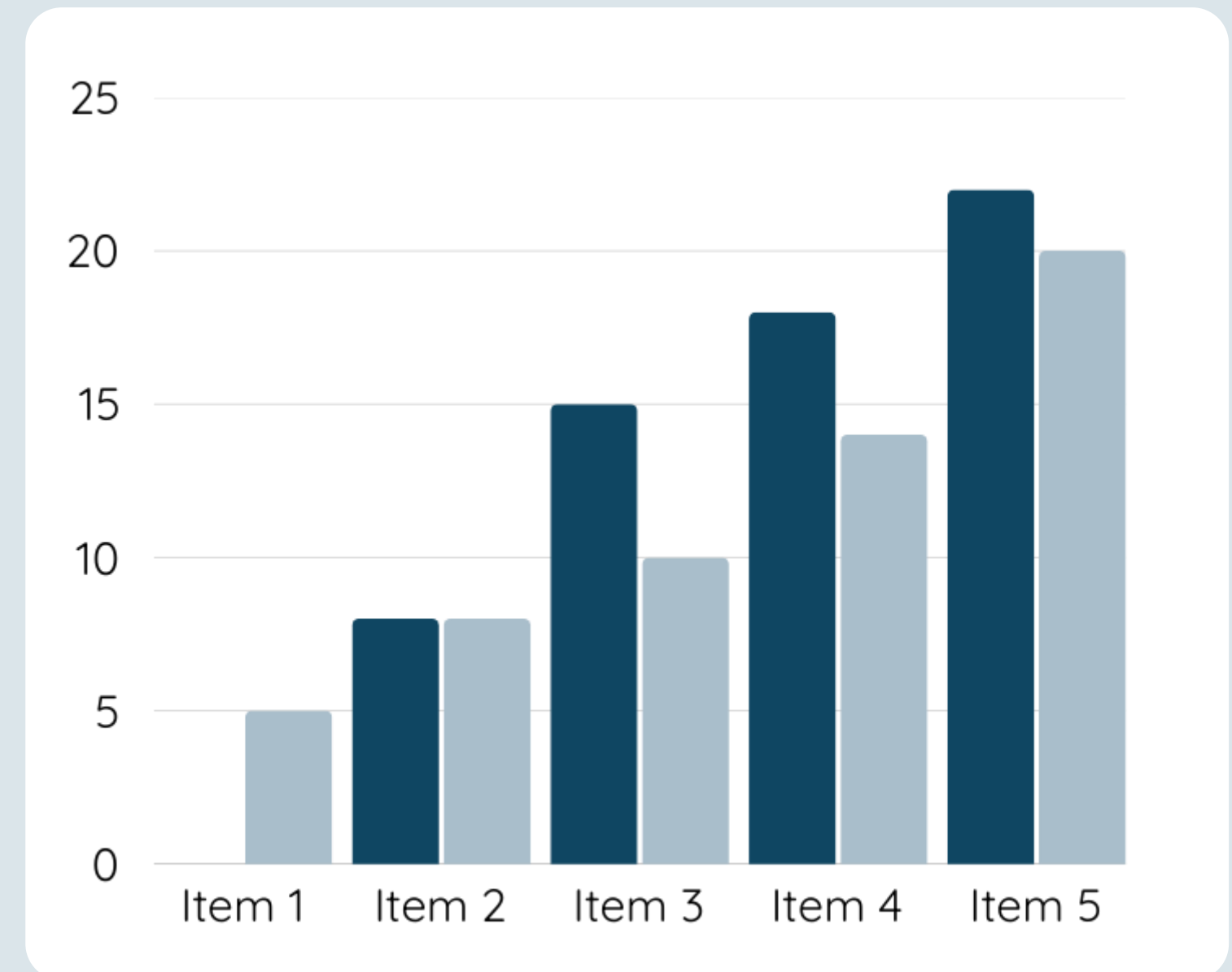
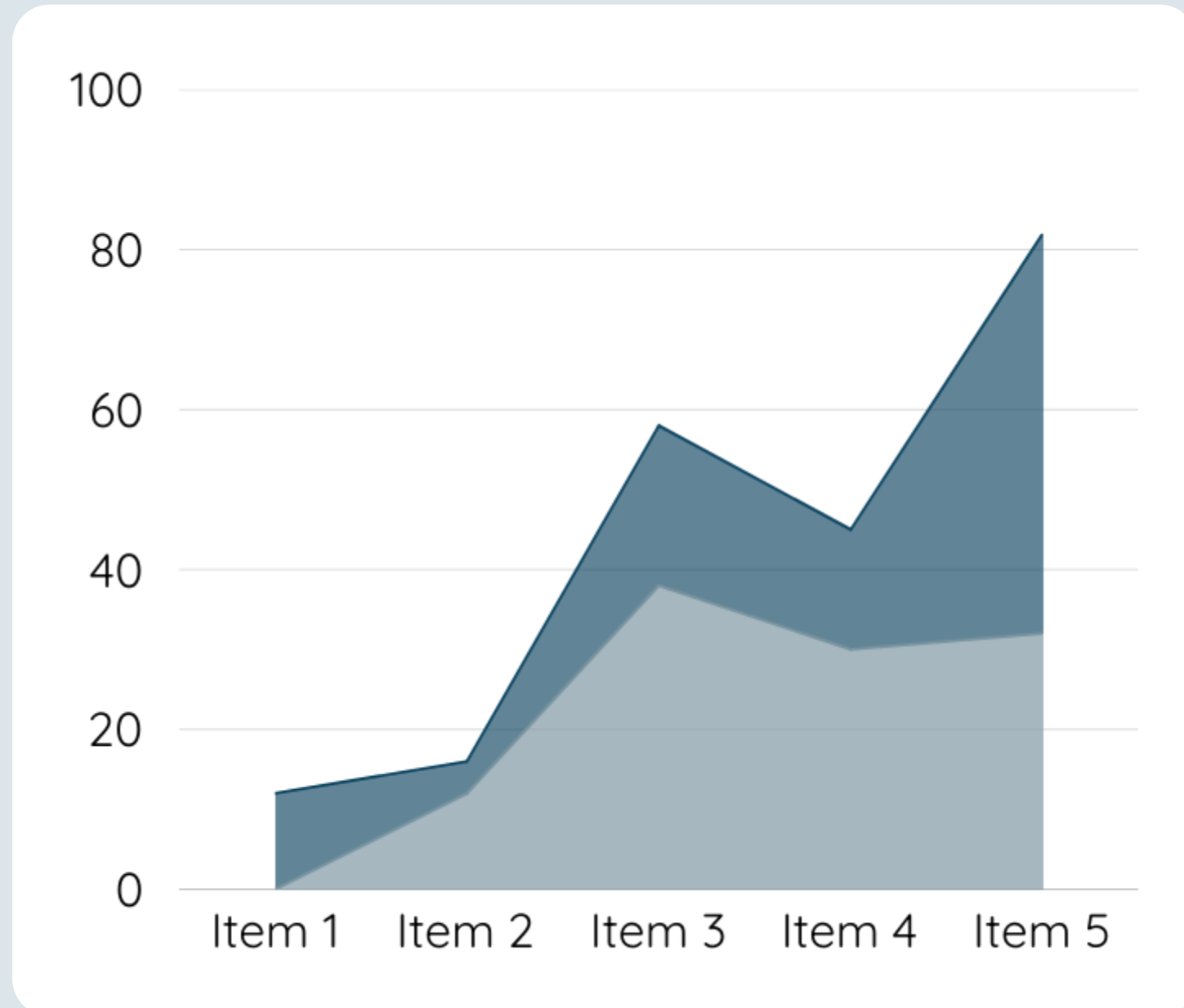
Dashboard -Program Output in a glance

Service user - Age, Gender, Disability wise, Location wise

Therapy visits - Daily and monthly target and achievements

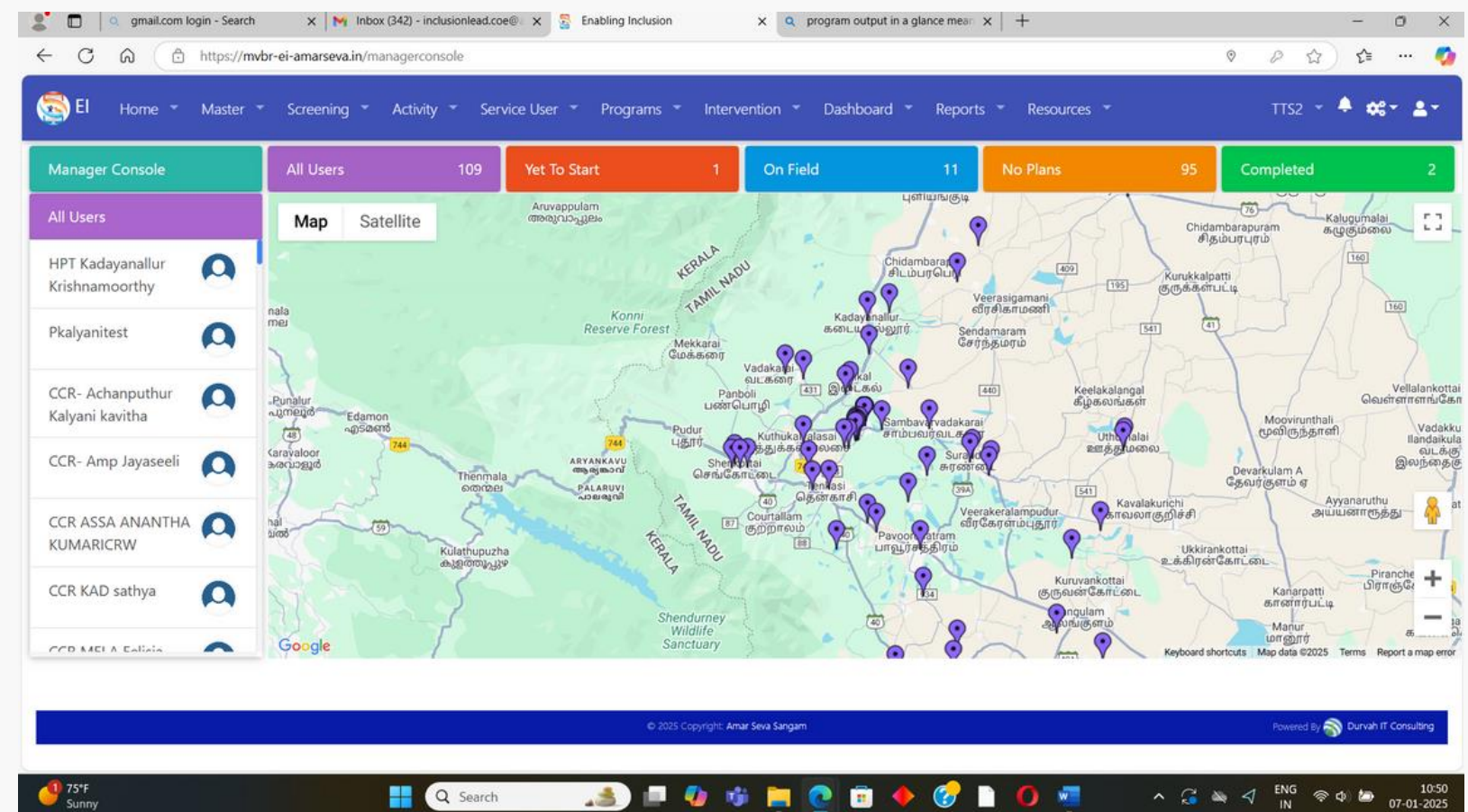
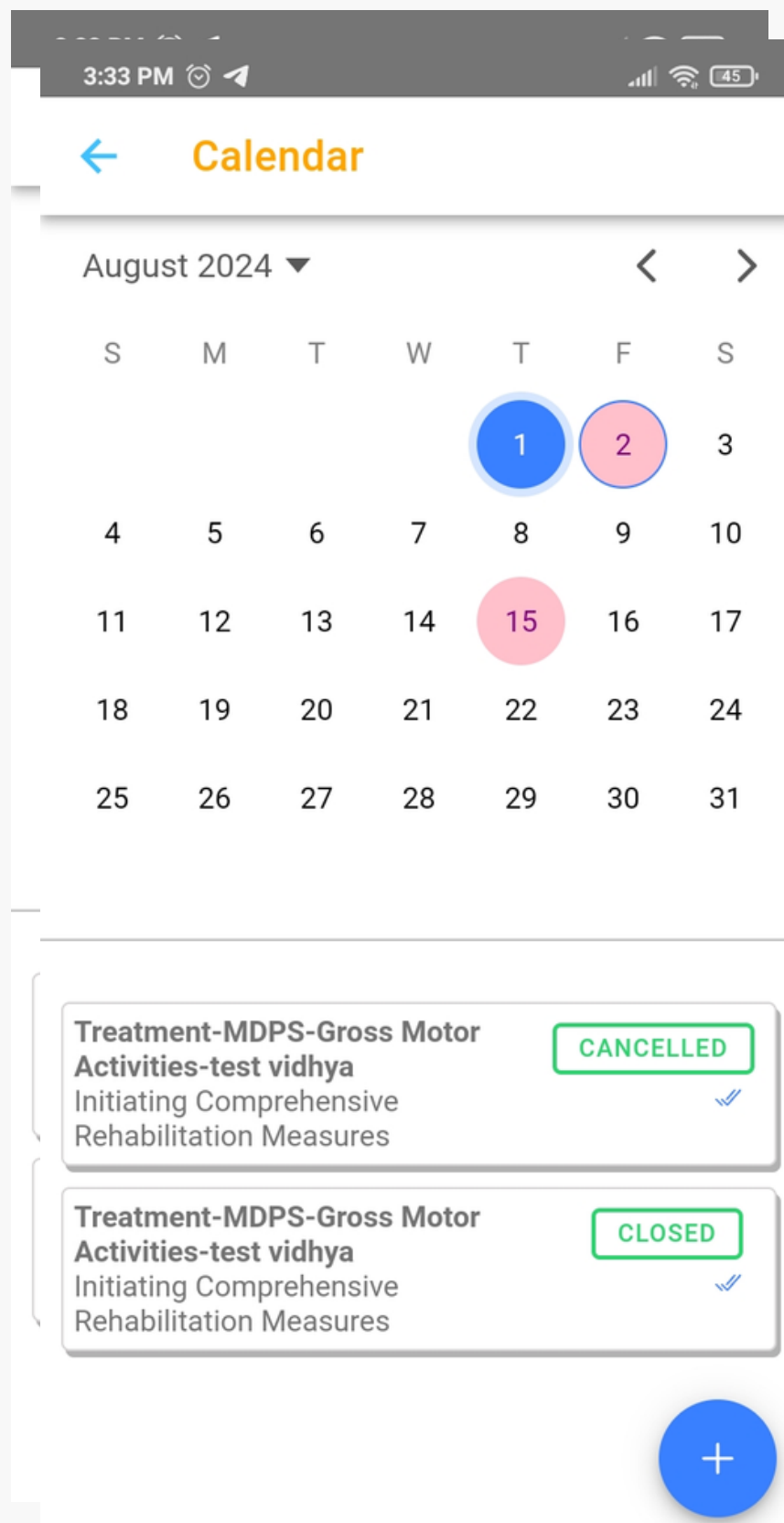
Staff and service user ratio block wise

School admission and any other program outputs and outcomes



Staff Monitoring

- Monthly and Daily Work Plan in calendar
- Attendance monitoring
- Check in and check out for each work completion with location and duration through GPS location technology



















Programs and Events

- Awareness Program
- Training Program
- Medical camps and any other special programs
- Documented with location, participant details, test results if any and duration

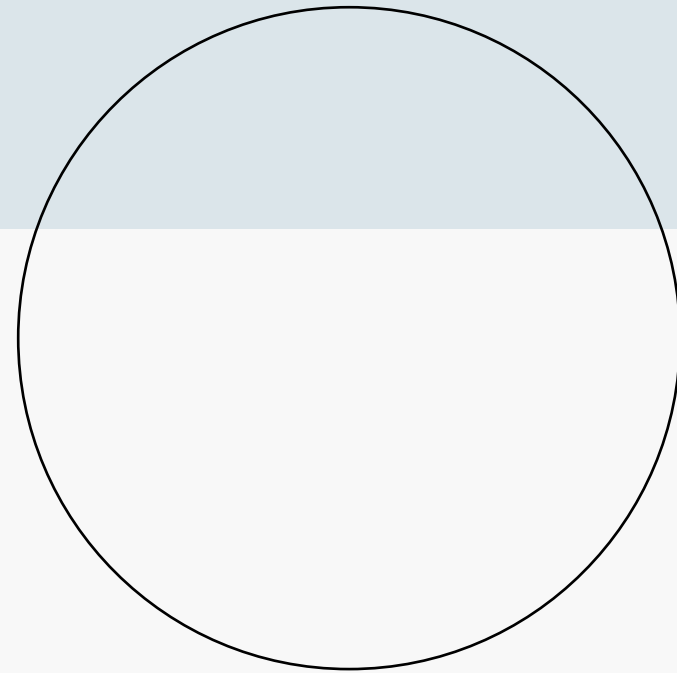


Therapy Visits Planning

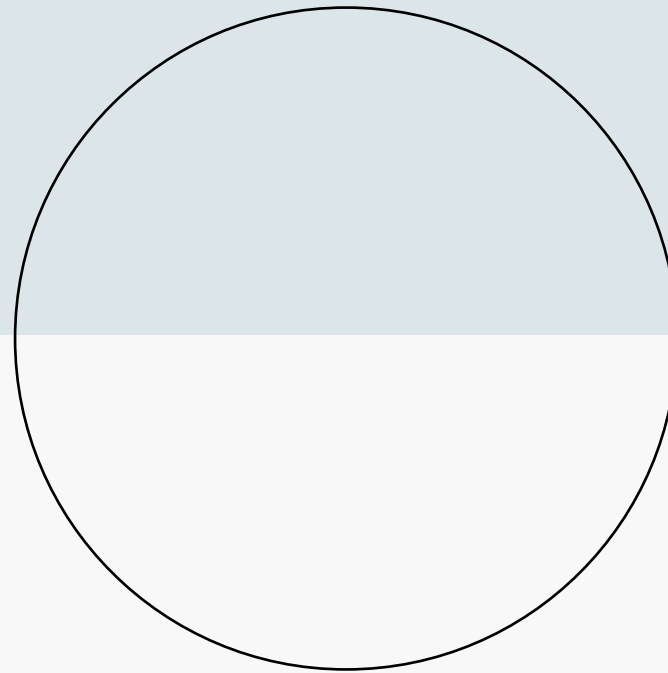
- No of visits required the child required, staff attending the child can be planned
- Date wise planning
- Taken as targets and goes in to staff calendar

 <p>testchild12345 Amarseva, Amarseva Cerebral Palsy</p> <p>Treatment OnGoing OP No : OP-A4420240726132131</p>	    
 <p>test 11 Activity Village, Activity Panchayat</p> <p>Created OP No : OP-A4420240729174366</p>	    
 <p>test uday Activity Village, Activity Panchayat</p> <p>Down Syndrome Dwarfism</p>	  

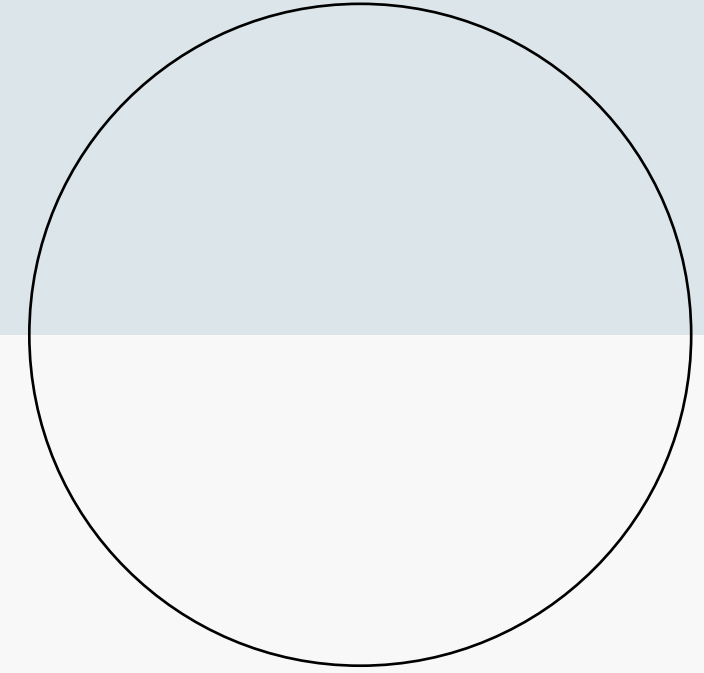
Parents Login



**Child assessment and
goals**



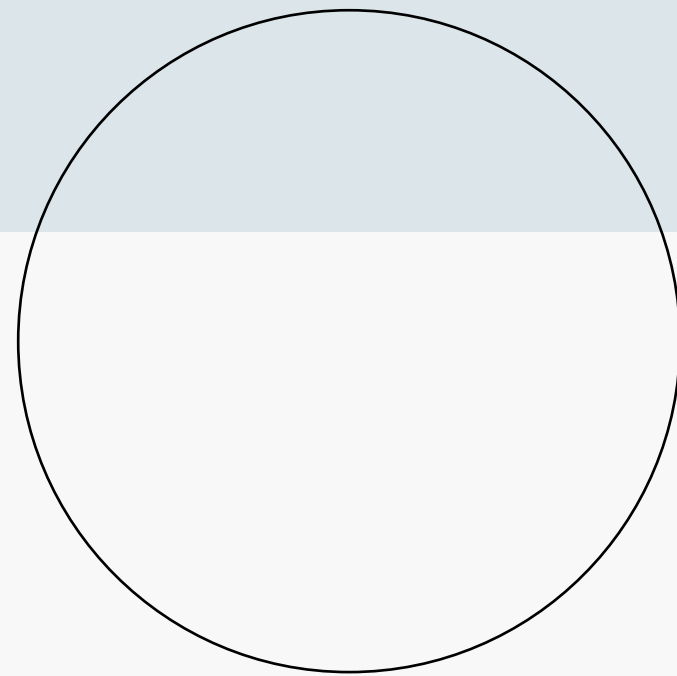
**Therapy plans and
videos**



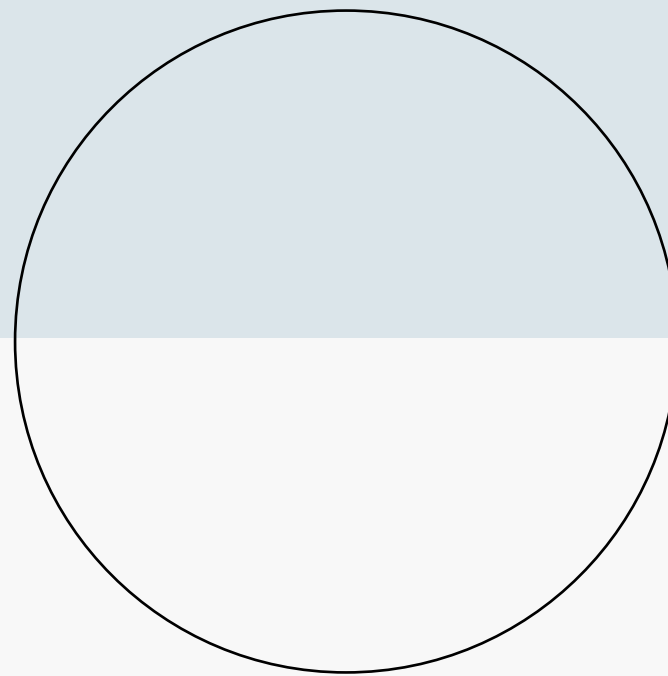
Progress reports



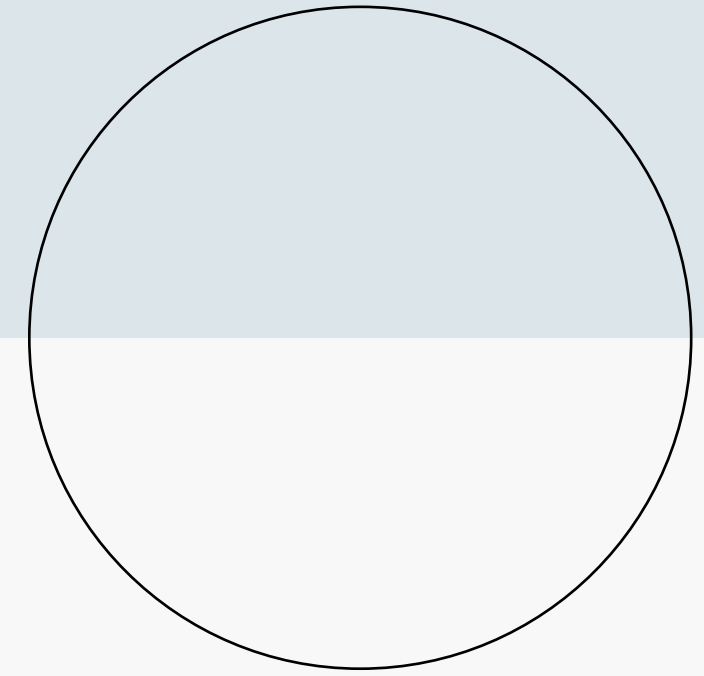
Parents Login



**Calendar for therapy
schedule**



**SMS reminders of
appointments**



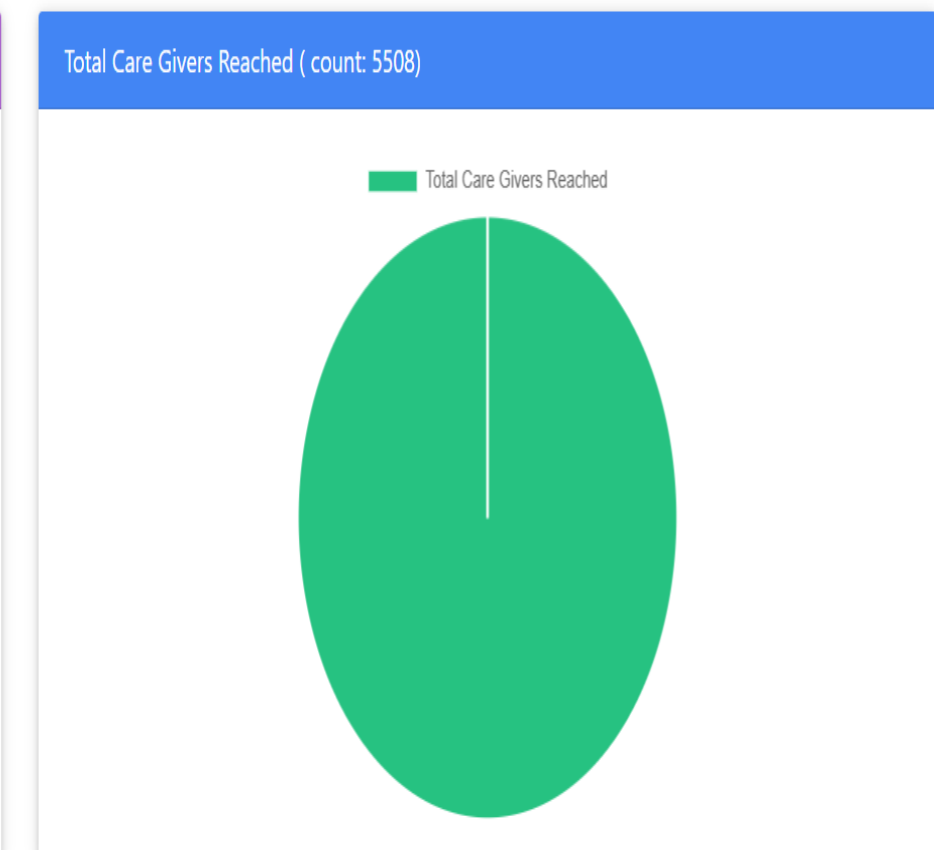
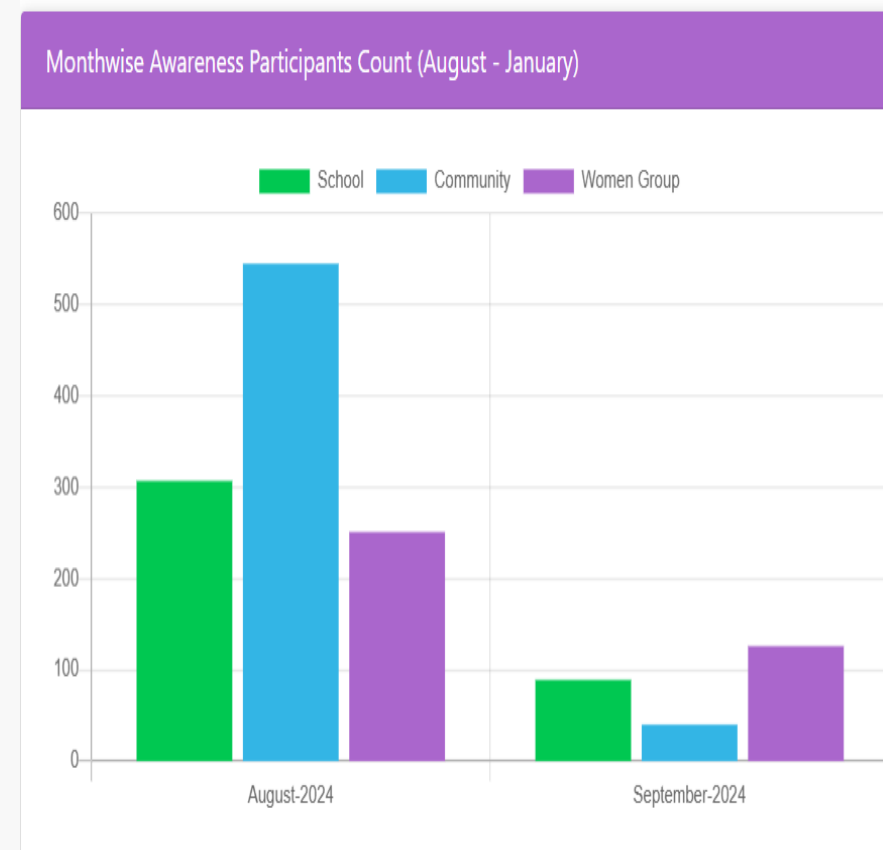
**Parents provide scoring
and feedback on
therapy sessions**



Reports

- Reports on various parameters used in the program can be taken
- Can be customized to various management and donor needs. For ex: how many caregivers trained, progress of children, number of goals achieved, number of therapy visits completed, etc
- Daily, Weekly, Monthly, Quarterly reports can be taken
- Real time data
- Login and View permission

Disability	Count
ADHD	104
Autism	273
Blindness	5
Cerebral Palsy	480
Cerebral Palsy- GMFCS Level I	16
Cerebral Palsy- GMFCS Level II	20
Cerebral Palsy- GMFCS Level III	27
Cerebral Palsy- GMFCS Level IV	28
Cerebral Palsy- GMFCS Level V	21
Cerebral Palsy with Intellectual Disability	63



Research

- Appropriate data can be collected
- Real time data
- Support research activities
- Give perspectives for future research and intervention areas - For ex: Location and type of disability, Caregiver economic status and engagement level
- All aspects of Program documentation

frontiers | Frontiers in Public Health | Sections | Articles | Research Topics | Editorial board | About journal

Rapid-Cycle Evaluation in an Early Intervention Program for Children With Developmental Disabilities in South India: Optimizing Service Providers' Quality of Work-Life, Family Program Engagement, and School Enrollment

Dinesh Krishna^{1,2,3*} Sankar Sahayraj Muthukaruppan¹ Aravind Bharathwaj¹
Ramasubramanian Ponnusamy¹ Bala Murugan Poomariappan¹ Sathiya Mariappan¹
Ayesha Beevi¹ Janna MacLachlan^{2,3} Zoé Campbell³
Chamila Anthonypillai³ Marie Brien^{1,3} Cathy Cameron² Marina Flatman³
Leslev Perlman³ Stephanie Seilman^{2,3} Abhinavaa Jevapraash^{2,3}

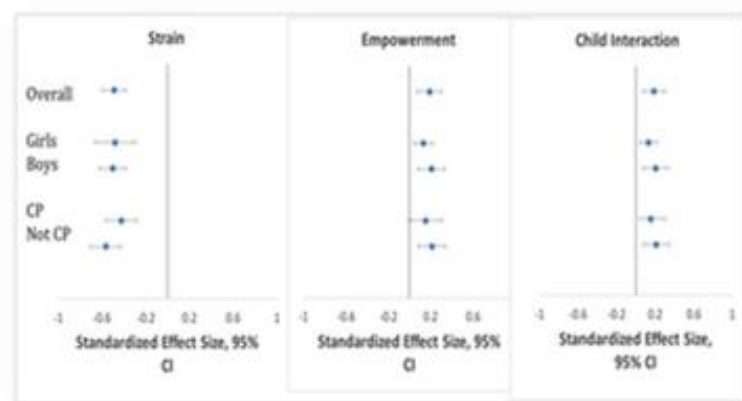
Research in Developmental Disabilities
Volume 154, November 2024, 104829

Motor development trajectories of children with cerebral palsy in a community-based early intervention program in rural South India

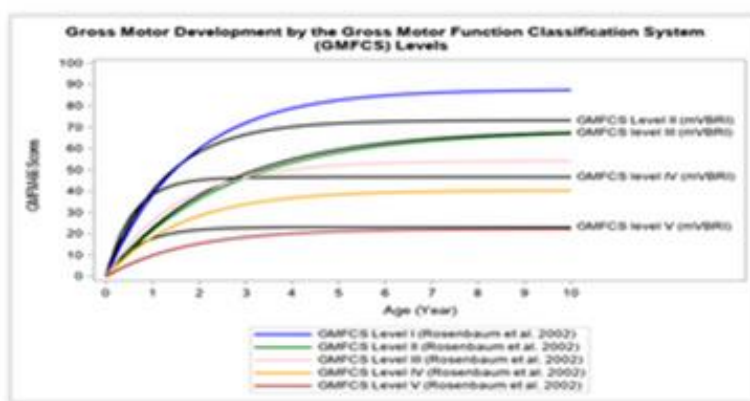
Marie Brien^{a b 1 2} , Dinesh Krishna^{a b 2 3 4} , Ramasubramanian Ponnusamy^{a b 2 5} ,
Cathy Cameron^{b 6 7} , Rahim Moineddin^{c 6 8} , Franzina Coutinho^{a b d 2 9 10}

Partnership

Proven Outcomes



- Parents:**
- Decreased Strain
 - Increased Empowerment
 - Improved Child Interaction



Improved Child Development

NEWS TODAY
11/02/2020
Page # 03

'School enrollment rate of special children up'

♦ Early intervention therapy helps them, says study
♦ Govt to inaugurate Amar Seva Sangam's conference 14 Feb

UNT Baramulla
Chennai, Feb 11

The school enrollment rate of children with special needs improved from 60 per cent to 85 per cent when they received early intervention therapy, finds a study by Amar Seva Sangam, Anand, Tamil Nadu, a private non-profit organization, in the field of disability management.

According to a press release, the study was conducted in association with the University of Toronto and McGill University, Canada as the outcome of ANA's Village Based Early Intervention & Rehabilitation Program that served 1,312 children with special needs. ANA's study found that the severity of disability and the lack of early intervention were the two primary reasons that prevent the children with special needs from attending schools. The lowest enrollment was seen with children with cerebral palsy (CP), particularly those with more severe severity and cognitive impairment. Children with higher early intervention programme attendance levels had higher rates of achieving school enrollment, the release said.

In order to share its experience in early intervention, and to highlight other successful early intervention models and interventions from across the world, ANA is organizing an international conference on 'Early Intervention for children with special needs' in Chennai. The two-day conference will be inaugurated by Governor Pinarayi Perachi 14 February. There will also be two pre-conference workshops 13 February on the topics - 1) Designing, implementing, monitoring and scaling up early intervention programme

for children with disabilities, and 2) Home-based early intervention for children with developmental disabilities and cerebral palsy. A faculty-oriented interdisciplinary approach.

The international conference will have guest speakers from more than 30 experts on a wide range of themes such as early identification, early intervention, inclusive education, and social security schemes, among others.

About 200 participants, including the members of non-governmental organizations, physiotherapists, occupational therapists, special educators, audiologists, doctors and senior government officials from different parts of the country and the world are expected to attend the workshop and the international conference, the release said.

4 x the impact

If programs are currently supporting 50 children, with EI app and model you can support 200 (with the same implementation cost).

75% Decreased Caregiver Strain and increased parent empowerment

Regular support and therapy services reduced caregiver strain / stress / burden

60 → 95% Programme Engagement

High level of family engagement improved child development in all domains.

<30% → 85% School Enrollment Increase

Rehabilitation services improved school enrollment and integration.

Center on the Developing Child
HARVARD UNIVERSITY

McGill
UNIVERSITY

UNIVERSITY OF
TORONTO

Krishna D, Sankara Raman Srinivasan SR. Rapid-cycle evaluation in an early intervention program for children in South India: optimizing service providers' quality of work-life, family program engagement and school enrollment. *Frontiers in Public Health*. 30 November 2020
<https://doi.org/10.3389/fpubh.2020.567907>

Muthukaruppan SS, Srinivasan SR, et al. Impact of a family-centred early intervention programme in South India on caregivers of children with developmental delays. *Disability and Rehabilitation*. Received 28 Aug 2019, Accepted 08 Oct 2020, Published online: 25 Oct 2020.
<https://doi.org/10.1080/09638288.2020.1836046>

Awards and Recognitions



2023 Zero Project Award for Independent Living
presented at United Nations (Vienna, Austria)



The Spindle's 2020 Most Inspiring Digital Innovation
(Netherlands)



2020 Project Management Institute Award
(India)



2020 Zero Project Inclusive Education Award
(Vienna, Austria)



2019 World Cerebral Palsy Day Major Award: Medical/Therapeutic
(Australia)



2019 MIT Solve Award for Early Childhood Development
(New York, USA)



2019 Microsoft Equal Opportunities Award
(India)



2016 Vodafone Mobile for Good Award
(India)



2022 ATF Award for Best Assistive Technology Initiative for NGOs
(India)





Thank you

