D4N 2025 Delivering for Nutrition in South Asia
Towards Impact at Scale

Mazboot Bunyad: Early Outcomes of Pakistan's First Digital Nutrition Registry for Malnutrition Management

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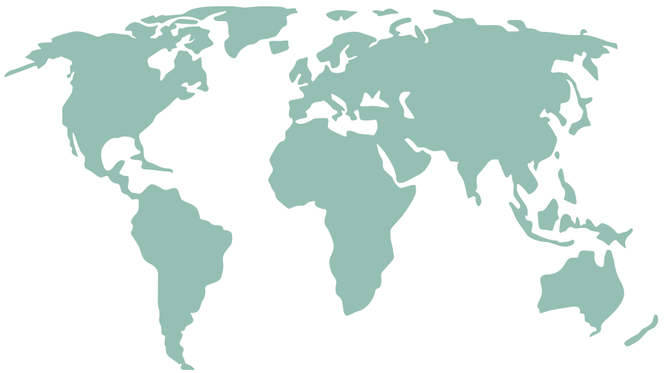
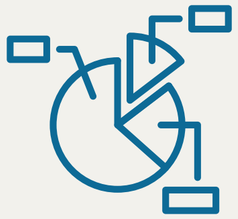
Background

Malnutrition refers to deficiencies or excesses in nutrient intake, imbalance of essential nutrients, or impaired nutrient utilization. It encompasses **stunting, wasting, underweight,** and **overweight**. (WHO)



- **165 million malnourished children** under five years **around the globe**. (WHO)
- Malnutrition accounts for at least **half of all childhood deaths worldwide**. (WHO)
- It is only a problem in **developing and underdeveloped countries**, with the highest prevalence in **Africa and South Asia.** (WHO)

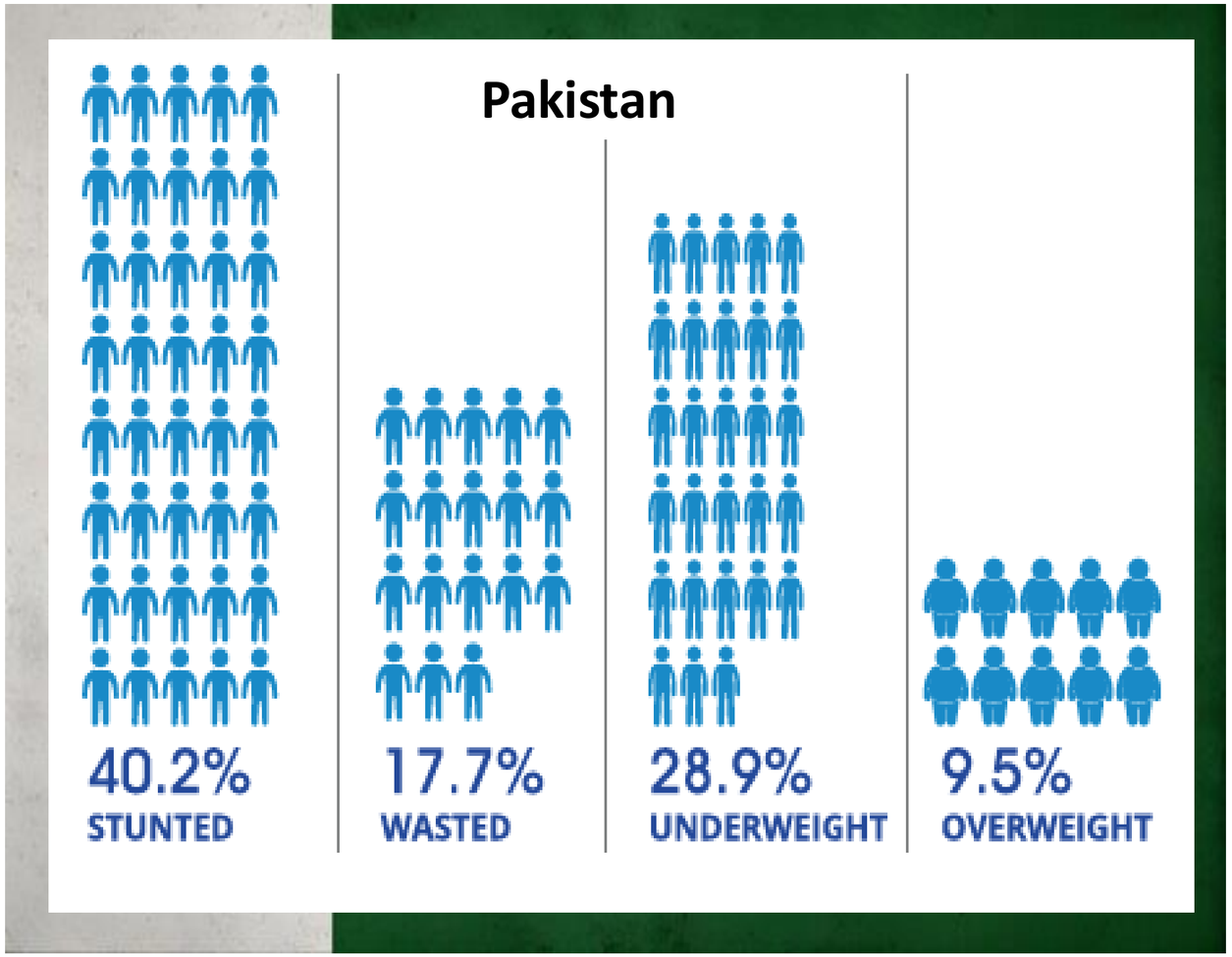
50%



50% malnourished children in South Asia reside primarily in Pakistan, Bangladesh, and India. (WHO)

(WHO) WHO. Malnutrition, Organization WH. Malnutrition Key Facts, (2024).

Background



UNICEF GoPa. *National Nutrition Survey* 2018.

Sindh

- **Stunting (45.5%) –** Nearly half of children are too short for their age, indicating chronic malnutrition.
- **Underweight (41.3%) –** Four in ten children have low weight for their age.
- **Wasting (23.3%) –** Almost one in four children suffer from acute malnutrition.

Sindh Bureau of Statistics PaDD. *The Sindh Multiple Indicator Cluster Survey*. 2019.

Rationale:
Urban Immunization-Nutrition Integrated Model through Public Private Engagement-Karachi

- Rapid **migration and urbanization** in Karachi have created underserved, densely populated slums and settlements remains a significant concern
- Limited government **health infrastructure** and lack of private sector involvement.
- Gaps in childhood **vaccination coverage** in Karachi's urban slums – especially in High-Risk Union Councils (HRUCs) – inequitable coverage rates below 50% in some of these areas

Intervention Model

- Co-designed by Government and partners
- Integrated immunization and nutrition services
- 33 private provider clinics to serve catchment populations in eight high-risk urban areas of Karachi
- Each clinic features child-friendly RI-integrated service corners staffed by two vaccinators and a female counsellor providing immunization, nutrition screening, and counselling on breastfeeding, balanced diet, and WASH (Water, Sanitation, and Hygiene)

Process – 2023-2024

AKU co-designs initiative with Government with support from Gates Foundation

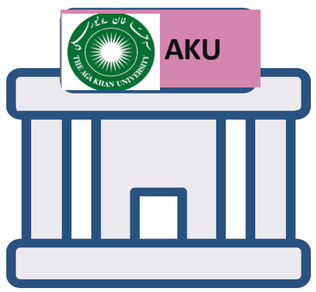
Government identifies priority Union Councils

AKU identifies private sector providers in priority Union Councils

Establishment of 33 Immunization – nutrition corners in established private sector sites supported by Gates Foundation.

Supply and Demand Side Urban Model of Immunization-Nutrition Integration

Private Provider



Distrct Authorities

EPI-Integrated Corner Setup

HR
1- Social Councilor
2- Vaccinators

Third Party Managing Payroll

Supplies

Data Reporting tools

Supply Side

Vaccination

Outreach

Health Session

Nutritional Screening

Nutrition Management

Demand Side

Community Engagement Activities

Health Mehfils

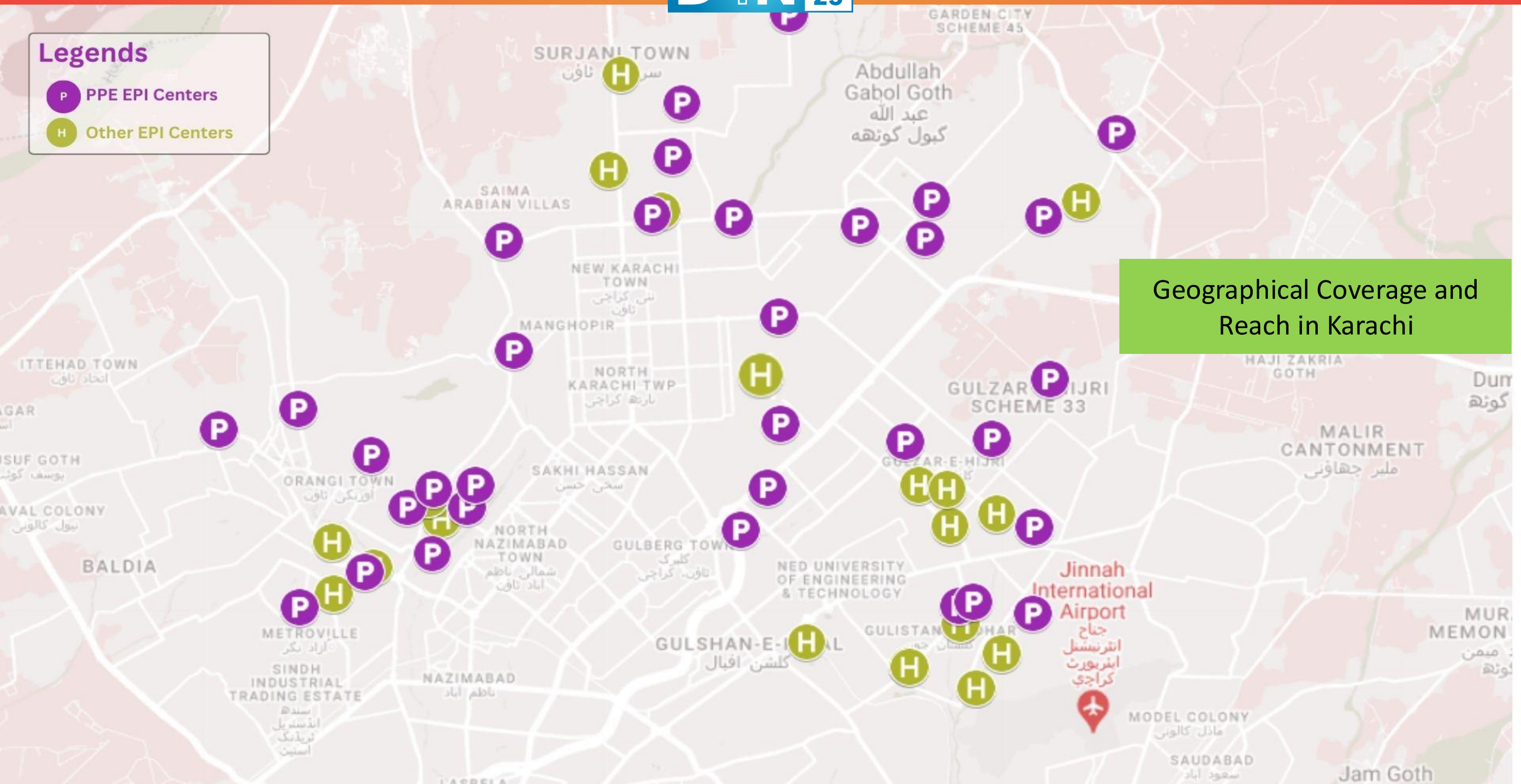
Health Baithak

Birth Attendant

Digital Communication

WhatsApp Broadcasting to disseminate EPI information and promotional content

Digital Marketing to support private providers in promoting their services

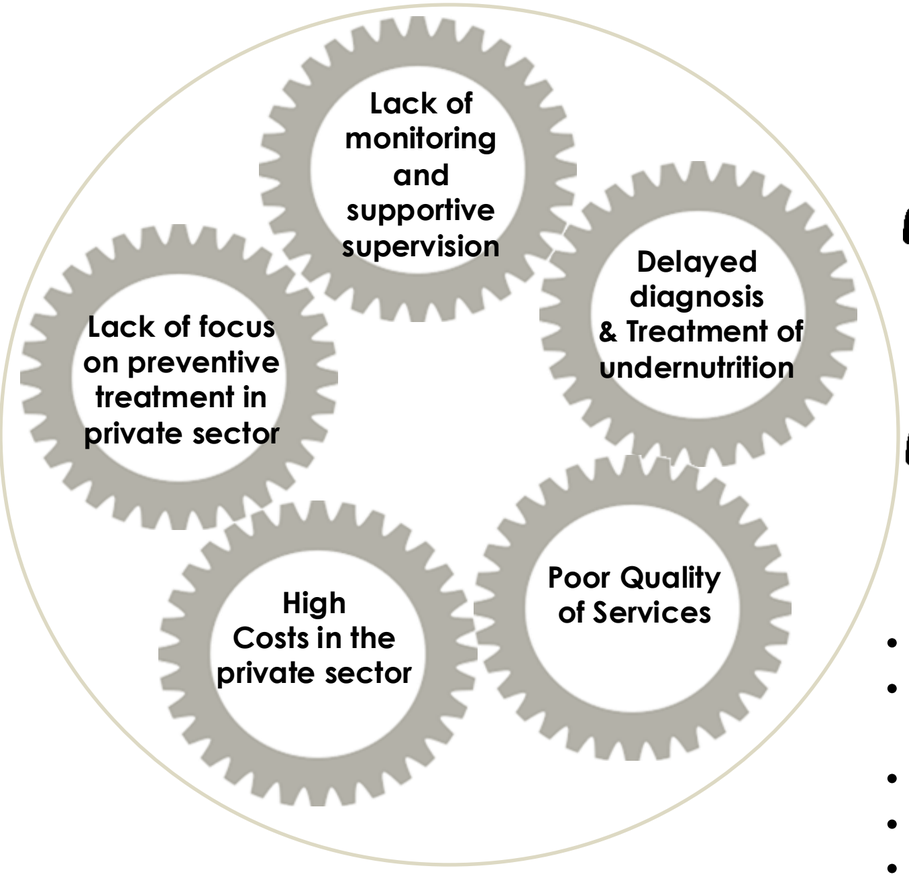

Legends
PPE EPI Centers
Other EPI Centers
Geographical Coverage and Reach in Karachi
SURJANI TOWN
Abdullah Gabol Goth
GARDEN CITY SCHEME 45
SAIMA ARABIAN VILLAS
NEW KARACHI TOWN
MANGHOPIR
NORTH KARACHI TWP
ITTEHAD TOWN
ORANGI TOWN
SAKHI HASSAN
NORTH NAZIMABAD TOWN
GULBERG TOWN
BALDIA
METROVILLE
SINDH INDUSTRIAL TRADING ESTATE
NAZIMABAD
GULSHAN-E-IQBAL
NED UNIVERSITY OF ENGINEERING & TECHNOLOGY
Jinnah International Airport
GULISTAN-E-JOHAR
GULZAR-E-HIJRI SCHEME 33
HAJI ZAKRIA GOTH
MALIR CANTONMENT
MODEL COLONY
SAUDABAD
Jam Goth

Integrated Nutrition Services

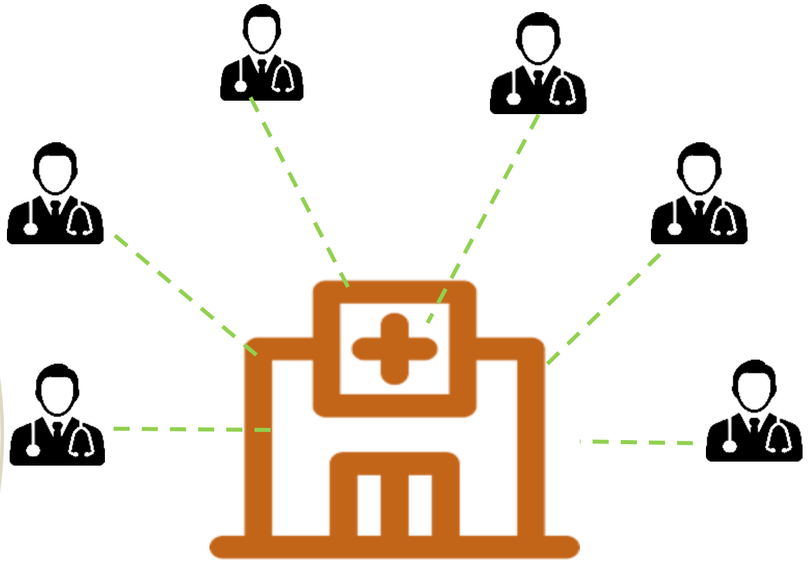
Service	Counseling	Nutrition Screening	Management of Malnourished Children
Description	Breast Feeding, Weaning, Balanced Diet, EPI, WASH & ORS	MUAC (6-59 months), Weight (0-6 months)	Providers trained, MNP for moderate, RUTF for severe, Referral mechanisms, Digital registry

Nutrition Registry

Identified Market Barriers



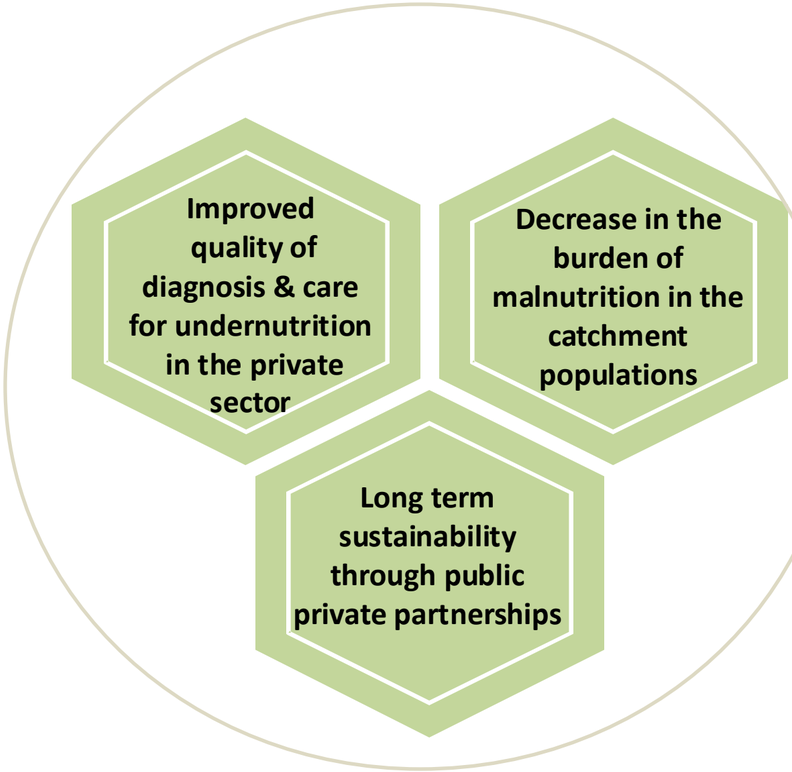
Intervention: *Immunization and nutrition* integration



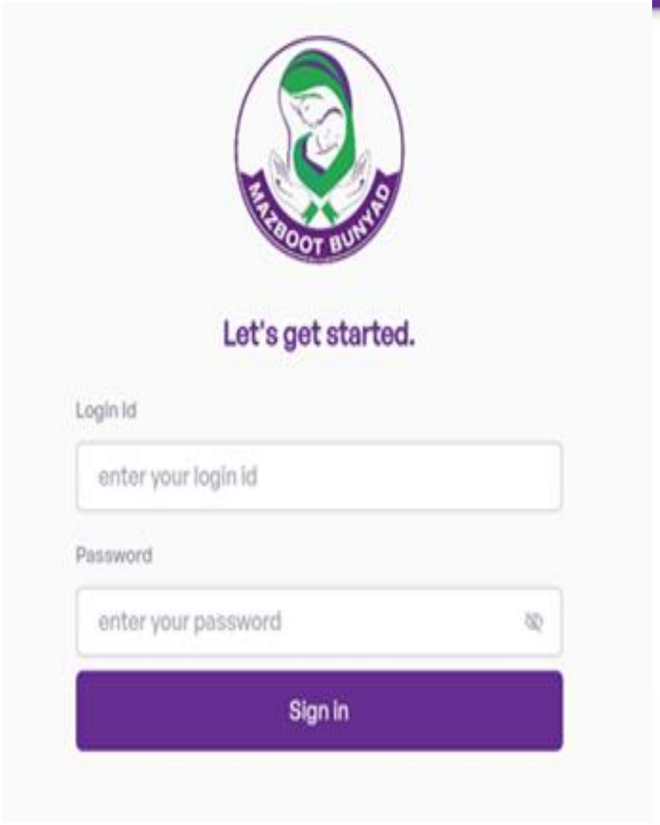
Private Provider Center

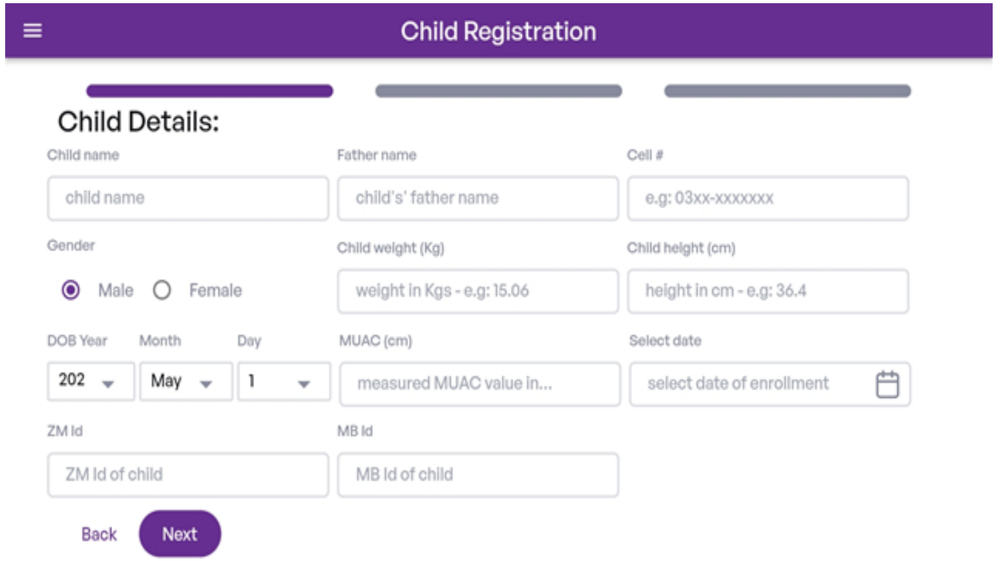
- Assessment by a trained nutrition counsellor
- For complicated cases assessment by a certified physician
- Counselling by nutrition counsellor
- RUTF and MNP given to SAM/MAM cases
- Rigorous follow-up mechanism
- Referrals from nearby providers

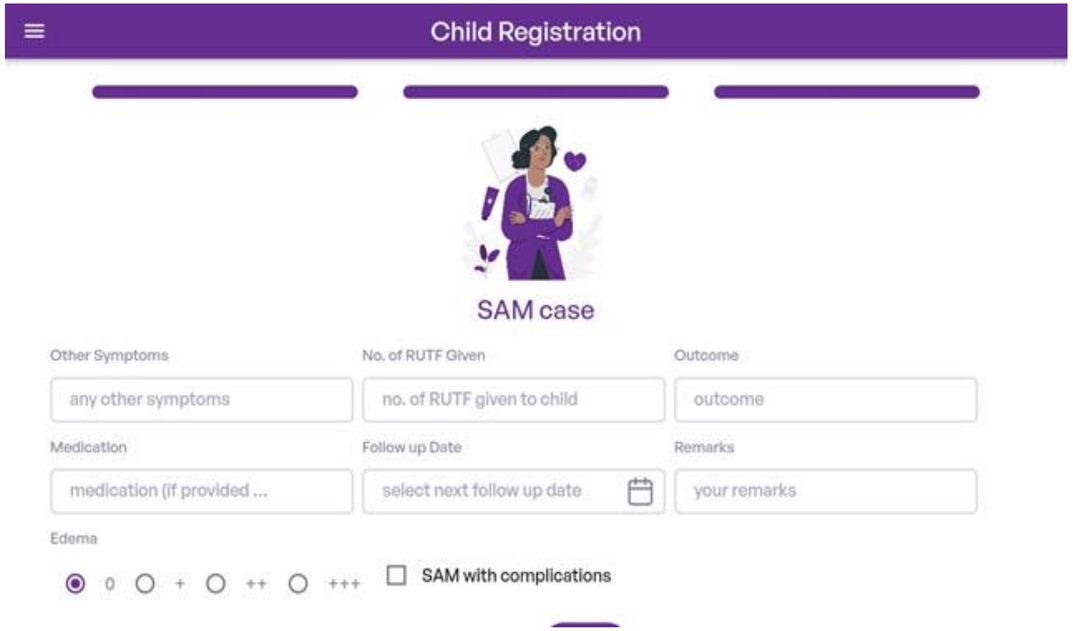
Expected Impact



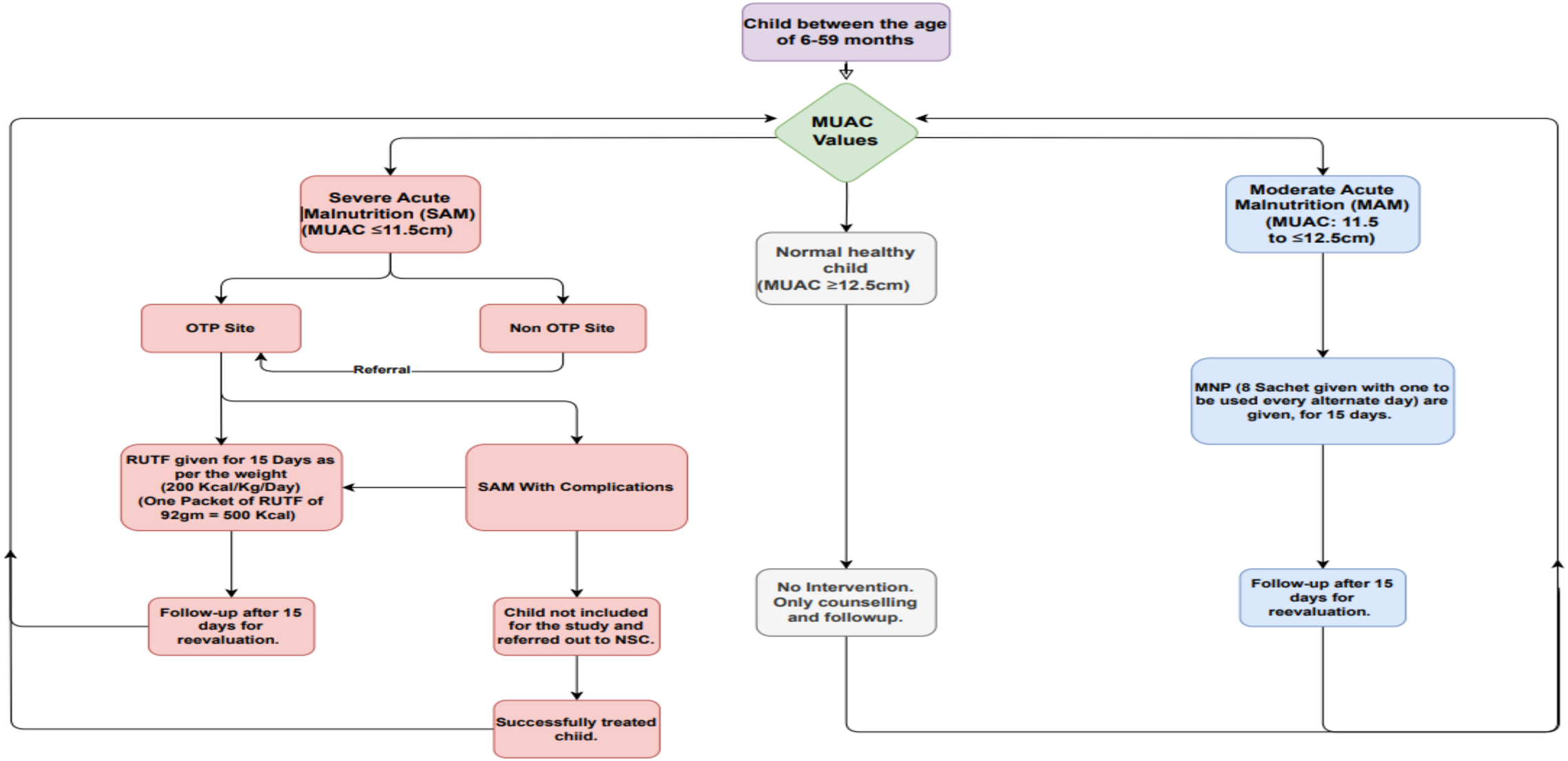
Mazboot Bunyad- How does it work?







Mazboot Bunyad- screening algorithms

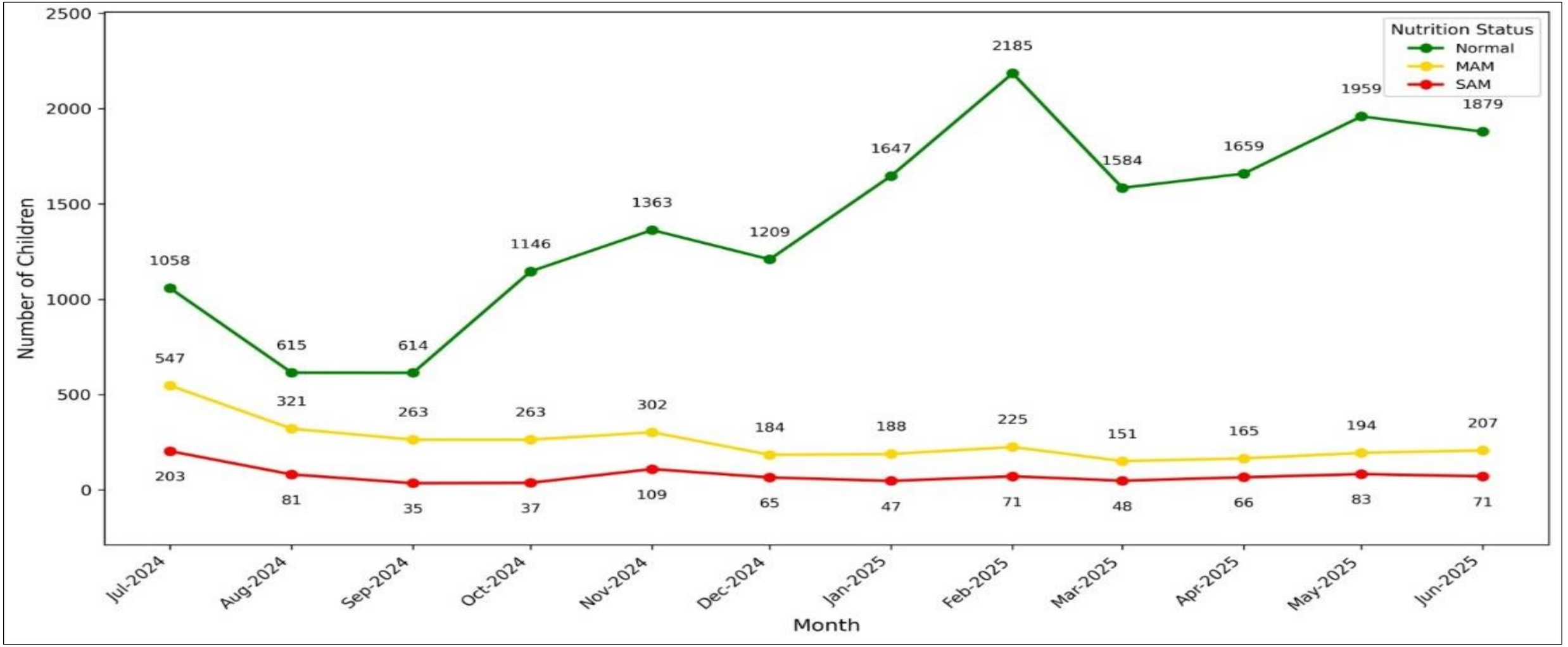


Results

Table 01. Demographic characteristics of children aged 0-59 years presenting in private provider clinics in Karachi, Pakistan, from July 24- June 25. (n=22,443)

Variables		n	Percentage
Gender	Male	12,003	53.5%
	Female	10,440	46.5%
Age Group	06-11 months	1,917	8.5%
	12-23 months	9,002	40.1%
	24-59 months	11,524	51.4%
District	East (15 Clinics)	11,245	50.1%
	West (18 Clinics)	11,198	49.9%

Results



Monthly enrolment trend for digital nutrition program from July 2024 to June 2025.

Table 2. Nutritional Status of children aged 0-59 years presenting in private provider clinics in Karachi, Pakistan, from July 24- June 25. (n=22,443)

Nutrition Status	Male		Female		Total	
	n	Percentage	n	Percentage	n	Percentage
Normal	9,925	44.2%	8,242	36.7%	18,167	80.9%
Moderate Acute Malnutrition (MAM)	1,608	7.1%	1,651	7.4%	3,259	14.5%
Severe Acute Malnutrition (SAM)	470	2.1%	547	2.4%	1,017	4.5%
Total GAM (SAM+MAM)	2,078	9.3%	2,198	9.7%	4,276	19%

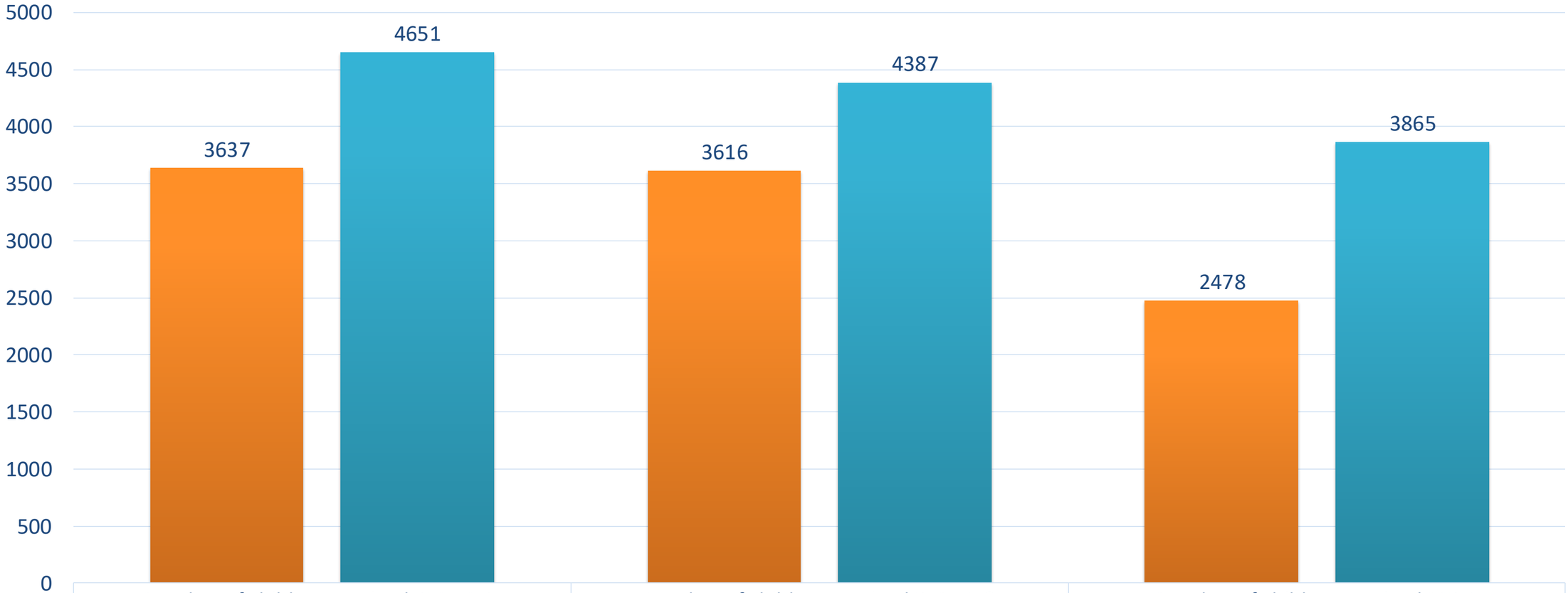
Table 3. Transition of nutritional status of children aged 0-59 years from MAM on follow up Visits

Visit Status	1st Visit n (%)	2nd Visit n (%)	3rd Visit n (%)	Lost to Follow Up n (%)
MAM	3,259 (100%)	-	-	238 (7.3%)
MAM → Normal	-	769 (23.5%)	417 (12.7%)	
MAM → MAM	-	1,206 (36.9%)	621 (19.1%)	
MAM →SAM	-	7(0.2%)	1(0.03%)	

Table 4. Transition of nutritional status of children aged 0-59 years from SAM on follow up Visits

Visit Status	First Visit n (%)	2nd Visit n (%)	3rd Visit n (%)	Lost to Follow Up n (%)
SAM	1,017 (100%)	-	-	46 (4.5%)
SAM → SAM	-	410 (40.2%)	266 (26.1%)	
SAM → MAM	-	122 (11.9%)	108 (10.6%)	
SAM → Normal	-	37 (3.6%)	28.2.7%)	

Mazboot Bunyad- Estimated effect on immunization uptake



	Number of childern received PENTA-1	Number of childern received PENTA-3	Number of childern received MR-1
Pre-integration (Jan-June)	3637	3616	2478
Post-Integration (July-Dec)	4651	4387	3865

Implication for scaling and policy

The Mazboot Bunyad registry demonstrates early success in identifying and managing childhood malnutrition in private sector of Karachi, Pakistan.

These findings support the registry's potential scalability and highlight the importance of digital tools in addressing malnutrition in resource-constrained settings.

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Delivering for Nutrition 2025 Conference funders

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