

# Using the Key Informant Methodology to identify children with disabilities and plan appropriate rehabilitative healthcare services to meet their needs



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MEDICINE



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# Outline

1. Introducing the Key Informant Methodology (KIM)
2. KIM in Bangladesh
3. Results of KIM in Bangladesh
4. Role of KIM within the Bangladesh Health System
5. Conclusion



# Introducing the Key Informant Methodology (KIM)

Previously validated as an approach to identify and treat children with specific impairments or health conditions using trained volunteers from the community

- ✓ Community based
- ✓ Participatory
- ✓ Capacity Building
- ✓ Awareness Raising





## Current, CBM-Funded project:

Four year study of KIM as a method of identifying severe physical, visual, hearing impairments and epilepsy in Bangladesh and Pakistan

- Principal Investigator : Dr. GVS Murthy (ICED)
- Research Assistant: Islay Mactaggart (ICED)



Child Sight Foundation (Bangladesh)



Comprehensive Health and  
Education Forum (Pakistan)

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# 10 Steps in implementing KIM

1. Mapping social networks
2. Networking and sensitisation
3. Organising a local group of key informants
4. Key informant training
5. Communication and case finding (inc. normative cohort)
6. Supporting key informant activities
7. Planning and organising the clinical examination day
8. Clinical Examination days
9. Documentation
10. Referral

Plus: Validation of results via household survey, one year follow up and qualitative reports



# KIM in Bangladesh

Country: Bangladesh

Region: Rajshahi

Districts:

- Sirajganj
- Natore
- Bogra

Sample Population: 1,000,000

KIs Trained: 1,510

	PWD	Others	Total
Male	38	997	1035
Female	15	460	475
Total	53	1457	1510



# Key Informant Identification, Training and Role

In each Upazilla (Sub-district):

-Half day workshop

-1 KI per village (aprox 25-30  
villages per Upazilla)





### মুক্তর পা শিশু

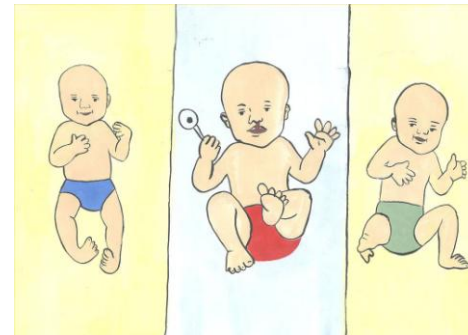
- যে শিশুর জন্ম থেকেই তার পায়ে অসামঞ্জস্যতা আছে
- যে শিশুর এক বা দুই পা ভেতরের দিকে বাকানো থাকে
- অন্য শিশুদের পা থেকে আলাদা থাকে এবং খুঁড়িয়ে খুঁড়িয়ে হাটে সাধারণত শিশুরা মুক্তর পা নিয়ে জন্মগ্রহণ করে

### কাটা ঠোঁট ও কাটা তালু

- যদি কোন শিশুর উপরের ঠোঁট এক বা একাধিক কাটা থাকে
- যদি কোন শিশুর ঠোঁটের পাশাপাশী ভেতরের তালু কাটা থাকে যার ফলে তার কথা বলতে অসুবিধা হয়
- অন্যান্য শিশুদের থেকে দেখতে আলাদা হয় এবং কথা জড়িয়ে যায়
- সাধারণত শিশুরা কাটা ঠোঁট ও কাটা তালু নিয়ে জন্মগ্রহণ করে

### অন্ধহীনী

- যদি কোন শিশুর জন্ম থেকে শরীরের কোন অংশ ছোট বা না থাকে
- যদি শিশুর হাত পা অথবা অন্য কোন অংশে অসামঞ্জস্যতা আছে বা ক্রটি আছে
- ধরনের শিশুরা সাধারণত অন্ধহীনী বা ক্রটিপূর্ণ অঙ্গ নিয়ে জন্মগ্রহণ করে থাকে



- Specific messages related to clinical criteria for different diagnoses e.g.
  - CP
  - Hydrocephalus
  - Cataract
  - Epilepsy
- General messages on identifying severe impairments and epilepsy
  - Duration more than 6 months or from birth if younger
  - Not able to easily carry out daily living activities (dressing, self care, sight moving about etc)
- Discussions/sensitization on childhood disability in the community



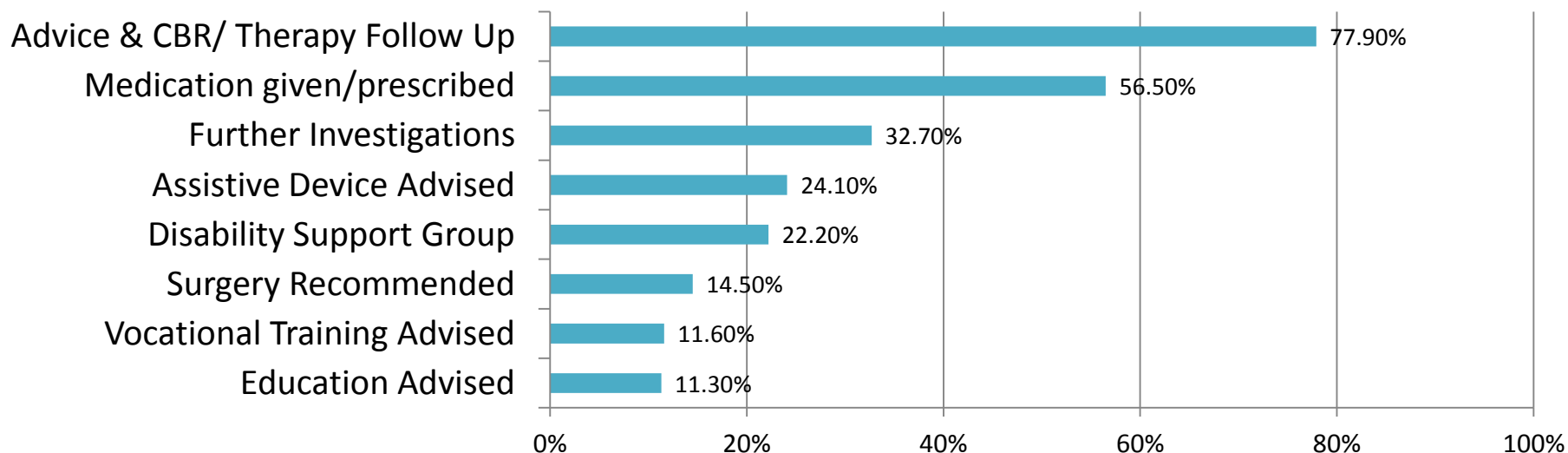


<b>Type of Severe Impairment*</b>	<b>N (corrected for 31.6% non-attendance)</b>	<b>Prevalence per. 1000 total population (95% CI)</b>
<b>Physical</b>	<b>2192.29</b>	<b>2.19 (1.28 – 3.1)</b>
- Cerebral Palsy	1240.89	1.24 (0.55 – 1.93)
Cerebral Palsy only	875.07	0.88 (0.3 – 1.46)
Cerebral Palsy and Epilepsy	163.17	0.16 (0 – 0.41)
Cerebral Palsy plus other severe Imp	202.65	0.20 (0 – 0.48)
- Club foot	113.17	0.11 (0 – 0.32)
- Cleft Lip/Palate	63.16	0.06 (0 – 0.21)
- Hydrocephalos	32.90	0.03 (0 – 0.14)
- Polio	32.90	0.03 (0 – 0.14)
- Other Phys	709.27	0.71 (0.19 – 1.23)
<b>Epilepsy</b>	<b>297.39</b>	<b>0.30 (0 – 0.64)</b>
<b>Visual</b>	<b>186.86</b>	<b>0.19 (0 – 0.46)</b>
<b>Hearing</b>	<b>639.53</b>	<b>0.64 (0.15 – 1.13)</b>
<b>Multiple (not CP)</b>	<b>210.54</b>	<b>0.21 (0 – 0.49)</b>
<b>TOTAL</b>	<b>3526.61</b>	<b>3.53 (2.39 – 4.67)</b>



Sensitivity (Proportion of true positives correctly identified as such)	99.5%
Specificity (Proportion of true negatives correctly identified as such)	27.8%
Positive Predictive Value (PPV) (proportion of test positives that are true positives)	62.1%
Negative Predictive Value (NPV) (proportion of test negatives that are true negatives)	98.0%

## Referrals for children identified with severe impairments



## Role of KIM within the Bangladesh Health System

	National Prevalence	Average Cost per Child (£)	National Cost (£million)
<b>Physical</b>			
- Cerebral Palsy			
Cerebral Palsy Only	124,500	95	11.8
Cerebral Palsy and Epilepsy	23,200	167	3.90
Cerebral Palsy and severe visual imp.	4,900	159	0.8
Cerebral Palsy and severe hearing imp.	13,900	140	1.9
Cerebral palsy plus multiple impairments	10,100	165	1.7
- Club foot	16,100	88	1.4
- Cleft Lip/Palate	9,000	156	1.4
- Hydrocephalos	4,700	107	0.5
- Polio	4,700	33	0.2
<b>Epilepsy</b>	<b>42,300</b>	<b>72</b>	<b>3.1</b>
<b>Visual</b>	<b>26,600</b>	<b>64</b>	<b>1.7</b>
<b>Hearing</b>	<b>91,000</b>	<b>111</b>	<b>10.1</b>
<b>Multiple (not CP)</b>	<b>30,000</b>	<b>165</b>	<b>4.9</b>
<b>TOTAL</b>	<b>401,000</b>		<b>43.4</b>



## Role of KIM within the Bangladesh Health System

### Caveats:

- Does not include estimates for non treatable conditions
- Does not include estimates for unavailable treatments/services

### To maximise functionality:

- Account for multiple impairments/referrals
- Account for mild/moderate impairment referral costs
- Establish division of costs
- Encourage KIs to provide ongoing referral information and mobilise communities



# Conclusion

- High number of children with severe, moderate and mild impairments identified by KIs and in need of rehabilitative services
- Referral service mapping and costing for available and missing services
- Planning of appropriate rehabilitative services to meet the needs of children with disabilities
- Need to account for multiple impairments/referrals, and ensure sustainability of funding of rehab services



# Thanks!



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