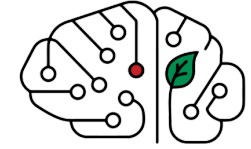




THE AGA KHAN UNIVERSITY



Brain & Mind Institute
from neuron to neighbourhood
Kenya | Pakistan

Project mPareshan

A digital intervention to reduce anxiety & depression at community doorsteps in rural Pakistan through frontline workers: Lessons for LMICs

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Background – Global, LMIC & Pakistan Context

World Mental Health Report 2022, WHO

- **13%** of the global population is living with mental disorders
- **82%** are from LMICs
- LMICs face several gaps in public mental health service delivery including governance, resources, & research gaps

Sindh Mental Health Report 2017

- **10%** of all suicides in Sindh occur in Badin
- According to a 2018 HRC report, the causes are:
 - *lack of necessities of life,*
 - *lack of peace & political instability,*
 - *unemployment, poverty & homelessness*
 - *family disputes*

GAP: Lack of specialized care, & under-prioritization of mental healthcare

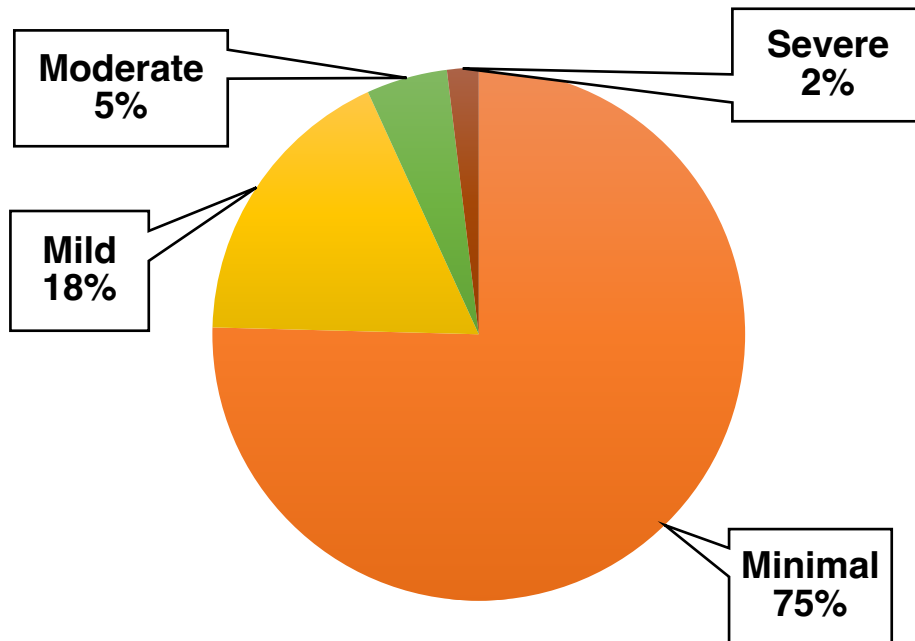


mPareshan: Data Collection Methods

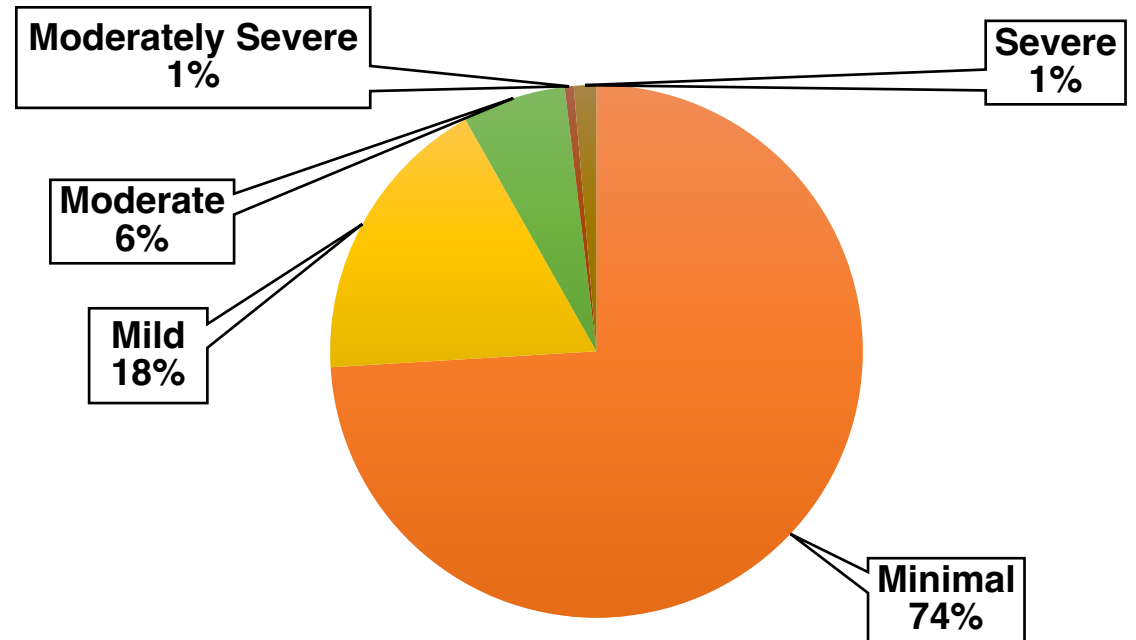
Project Phase	Phase 1: Pre-intervention		Phase 2: Intervention	Phase 3: Post-intervention		
Data collection	Qualitative data	Quantitative data		Intervention Rollout	Qualitative data	Quantitative data
Research Question	FGDs & KIIs	Household Survey: PHQ-9, GAD-7 & UCL LS-10	mhGAP based training	Feedback received through mPareshan App on regular basis	FGDs & KIIs	Endline: PHQ-9, GAD-7 & UCL LS-10
WP1: What is the point prevalence of anxiety and depression among a sample of rural households?		✓				
WP2: Is it feasible to implement an mHealth strategy executed through LHWs and their Supervisors?	✓				✓	
WP3: Is there a change in LHW knowledge and skill in assessing, diagnosing, and managing depression and anxiety because of the intervention?			✓			
WP4: Is there any change in anxiety and depression scores of community participants because of mPareshan App?						✓

Work Package 1: Point Prevalence of Anxiety & Depression (n=366)

Anxiety Categories (GAD-7)



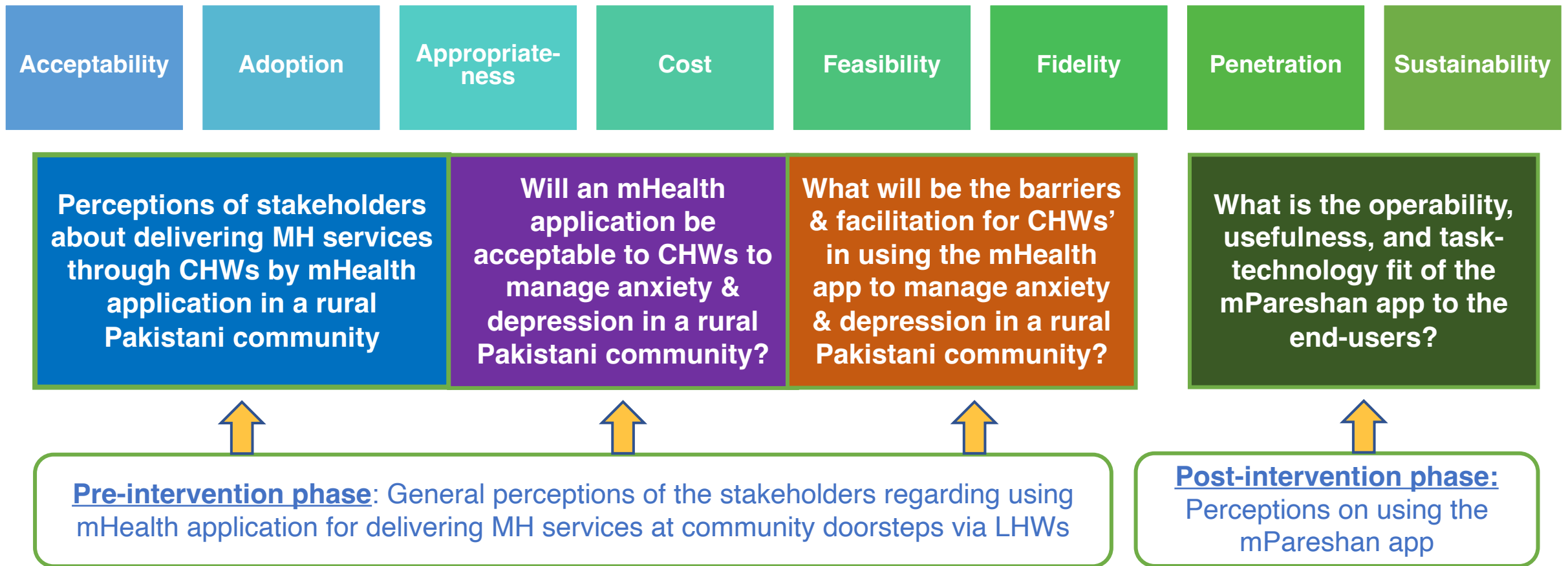
Depression Categories (PHQ-9)



Participants with mild & moderate symptoms of anxiety & depression (n = 98)
Eligible for mPareshan Intervention

Work Package 2: Feasibility, Operability, Usefulness, & Task-Technology Fit of mPareshan app for Delivering Mental Health Services by CHWs in Rural Areas of Pakistan

Implementation Outcomes: Re-AIM Framework

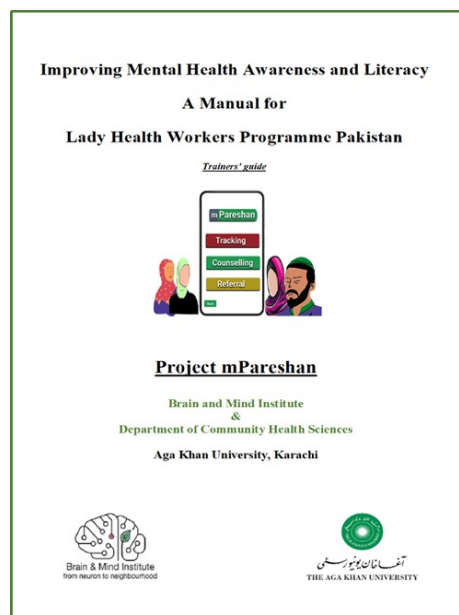


Work Package 3: Pre- and post Knowledge & Skills Assessment of CHWs

- Purpose was to enable LHS/LHW to:
 - Recognize the symptoms of anxiety & depression
 - Improve communication and counselling skills.
 - Make appropriate referrals

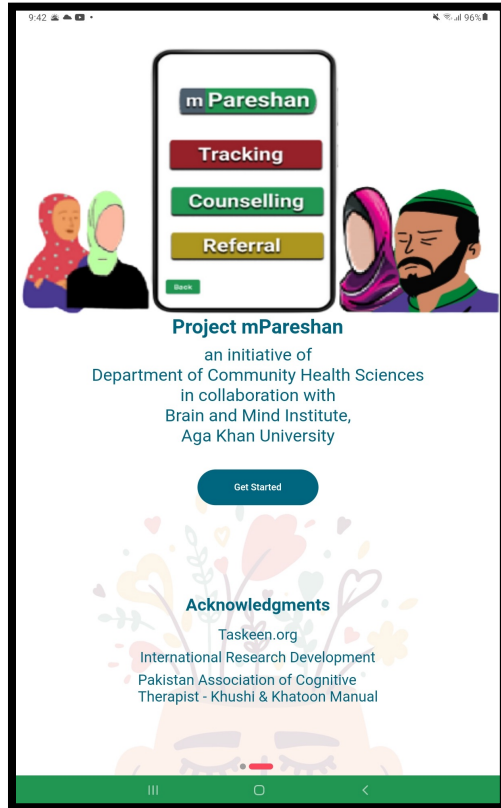
Difference between knowledge and skill's score of CHWs after capacity-building training

Content adapted from mhGAP 2.0



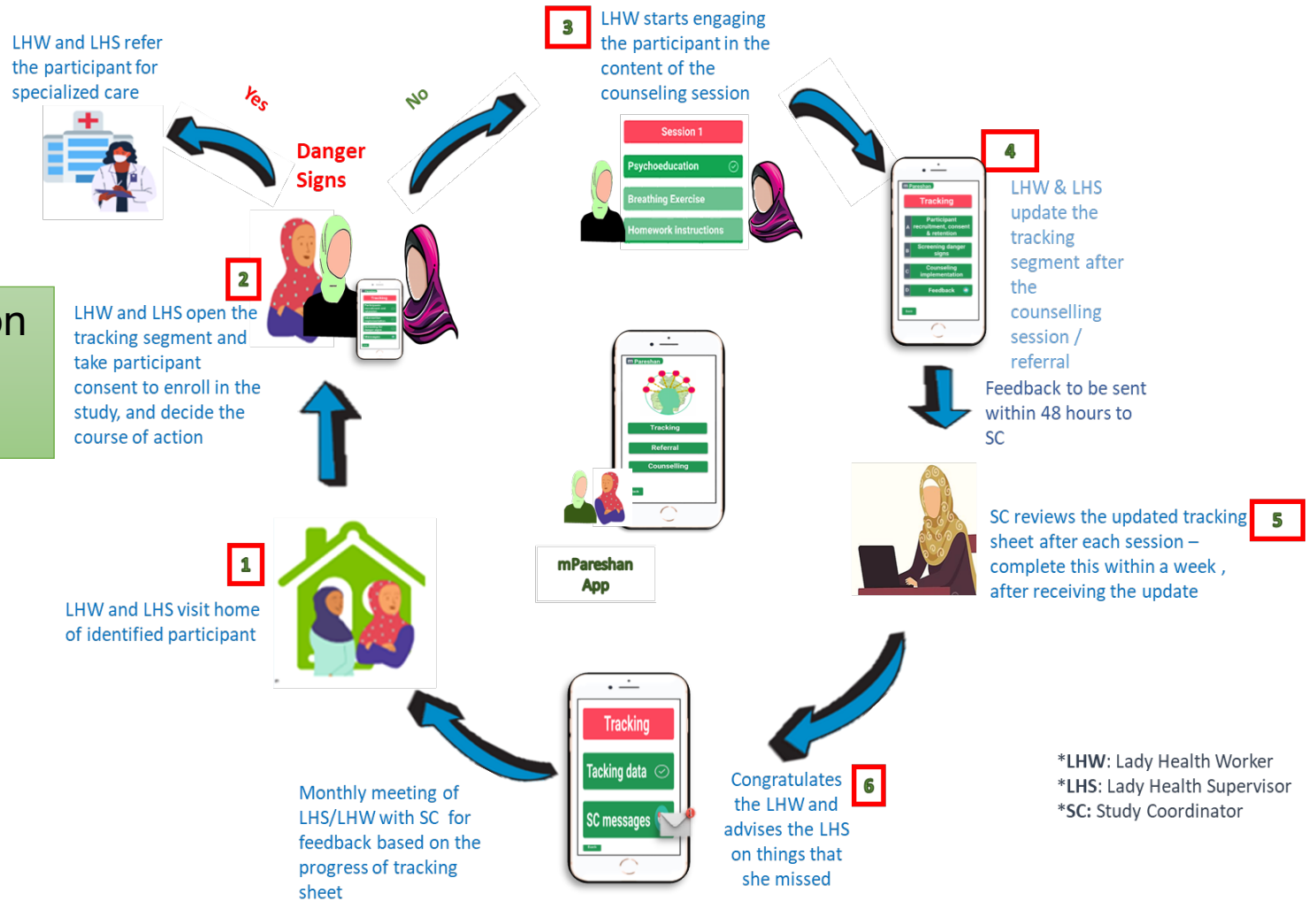
GROUP	VARIABLE	PRE-TEST MEAN (SD)	POST-TEST MEAN (SD)	DIFF (P-VALUE)
OVERALL (N=69)	Knowledge	4.36 (1.42)	8.17 (1.44)	3.81 (<.01)
	Skill	8.25 (2.17)	9.84 (.63)	1.59 (<.01)
LHS (N=33)	Knowledge	4.60 (1.51)	8.27 (1.32)	3.66 (<.01)
	Skill	8.18 (2.49)	9.96 (.17)	1.78 (<.01)
LHW (N=36)	Knowledge	4.14 (1.31)	8.08 (1.55)	3.94 (<.01)
	Skill	8.30 (1.86)	9.72 (.84)	1.41(<.01)

mPareshan Intervention



Real look of the App

Implementation Rollout Flow Diagram



Work Package 4: Change in Scores of Anxiety & Depression

Change in anxiety and depression scores post-intervention (n=92)*

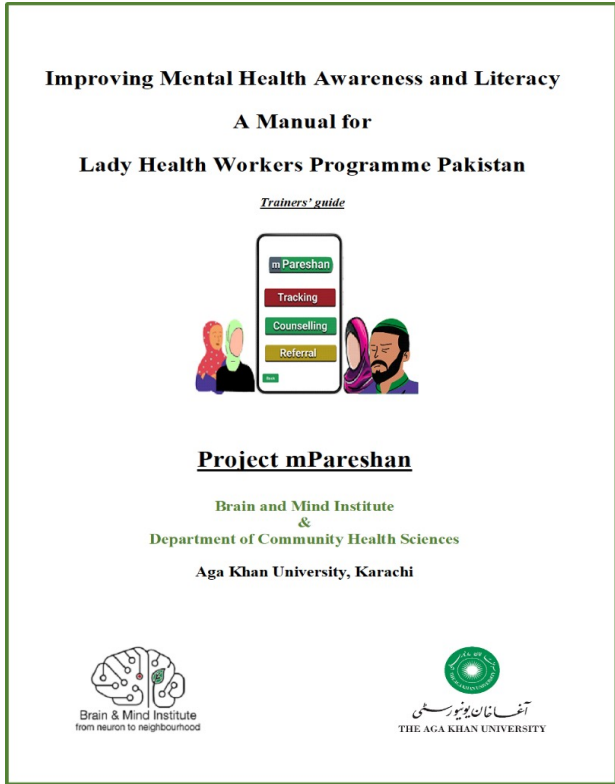
	Pre-intervention	Post-intervention	Pre-post change in scores		
	Mean (SD)		Mean Difference (SD)	Test statistic, t (df)	p-value
GAD7 total score	6.6 (3.0)	2.1 (2.3)	4.5 (3.5)	12.2 (91)	< .001
PHQ9 total score	7.5 (3.1)	2.6 (2.2)	4.9 (3.4)	14.1 (91)	<.001
	N (%)		Pre-post change in frequencies		
			Test statistic (χ^2)	p-value	
GAD7 categories					
Minimal Anxiety	17 (18.5)	80 (87.0)	55.7	<.000	
Mild Anxiety	59 (64.1)	10 (10.9)	39.1	<.000	
Moderate Anxiety	16 (17.4)	2 (2.2)	**	<.000**	
PHQ9 categories					
Minimal Depression	11 (12.0)	78 (84.8)	65	<.000	
Mild Depression	60 (65.2)	13 (14.1)	37.1	<.000	
Moderate Depression	21 (22.8)	1 (1.1)	**	<.000**	

* Pre- and post-intervention paired data available for 92 out of 98 SPs.



AKU launches the mPareshan Training Manual

Project mPareshan: Research & Policy Impact



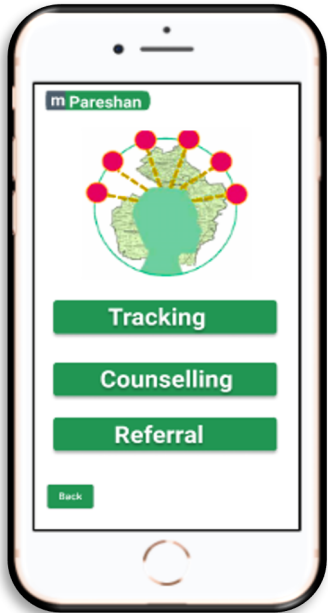
First ever Mental Health Curriculum for Community Health Workers



LHW imparts counseling using Android app at community doorsteps

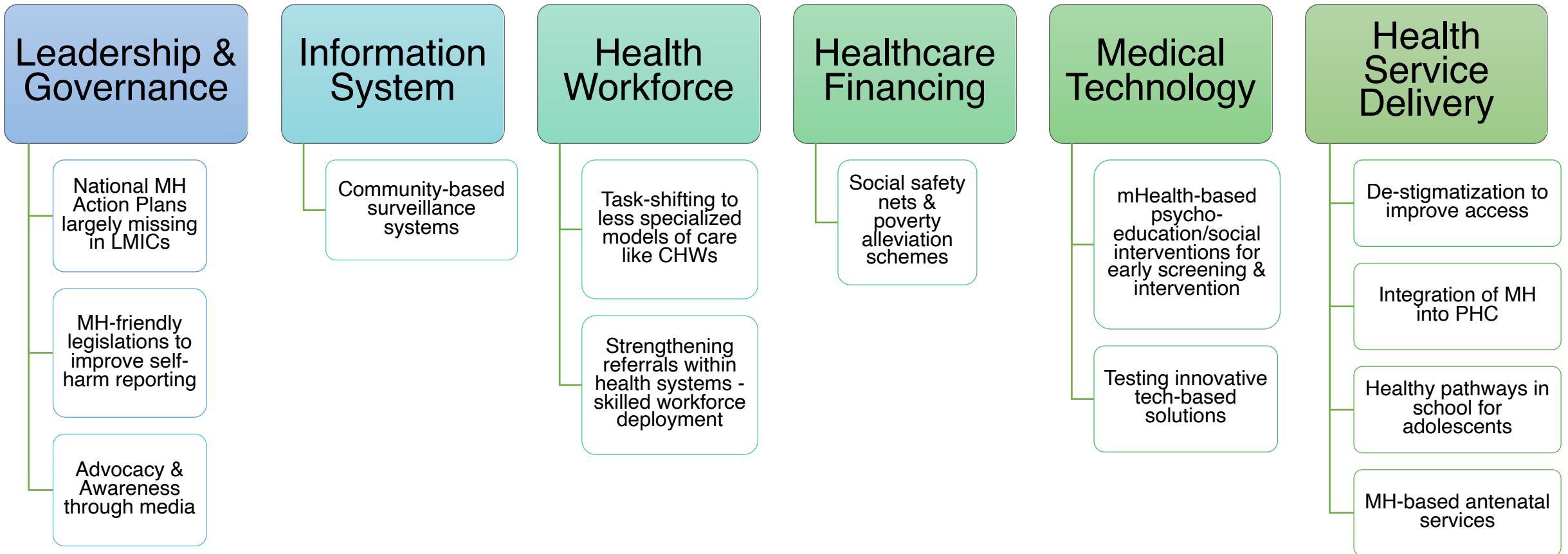


Collaboration with Government: Minister Health endorses mPaeshan Trainer's Manual for provincial scale up



mPaeshan Digital App

Lessons for LMICs: Lens of WHO Building Blocks



Project mPareshan Video

https://www.youtube.com/watch?v=KRSv5Ko_7yg



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