CRH
Centre for Research in Health systems

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

MhiNT
MENTAL HEALTH INTEGRATION PROGRAMME

Integration of Mental Health at PHC Level of Care and Referral Pathways

- **Prof Zamasomi Luvuno & Prof Inge Petersen (on behalf of Mental Health CRH team)**



Why pay attention?

Background

South Africa has a growing NCD burden and one of the highest MLTC prevalences across LMICs[1]

- **1 in 5** with MLTCs[2]
- **33.9%** with hypertension[3]
- **10.2%** with diabetes[3]
- **18.2 %** with HIV
- **1 in 3** with mental health conditions



1. *Afshar S, Roderick PJ, Kowal P, et al. Multimorbidity and the inequalities of global ageing: a cross-sectional study of 28 countries using the world health surveys. BMC Public Health 2015; 15.*
2. *Nguyen H, Manolova G, Daskalopoulou C, et al. Prevalence of multimorbidity in community settings: a systematic review and meta-analysis of observational studies. J Comorb 2019;9:2235042X1987093–15.doi:10.1177/2235042X19870934pmid:http://www.ncbi.nlm.nih.gov/pubmed/31489279*
3. *Johnson LF, Kassanjee R, Folb N, Bennett S, Boulle A, Levitt NS, et al. A model-based approach to estimating the prevalence of disease combinations in South Africa. BMJ Global Health. 2024;9:e013376. https://doi.org/10.1136/bmjg 2023-013376*

RC1

A model-based approach to estimating the prevalence of disease combinations in South Africa

Disease combination	Updated
Hypertension + arthritis	**8.7% (5.2-12.1%)**
Hypertension + diabetes	8.0% (6.1-10.3%)
Hypertension + HIV	5.2% (4.3-6.2%)
Hypertension + depression	4.2% (2.6-6.6%)
Hypertension + ischaemic heart disease	4.0% (2.8-5.5%)
Arthritis + depression	**3.2% (0.8-8.8%)**
Hypertension + heart failure	**3.2% (0.3-5.9%)**
Arthritis + diabetes	2.2% (0.8-5.1%)
HIV + depression	2.0% (1.2-3.1%)
Hypertension + asthma	1.9% (1.2-2.8%)
Arthritis + heart failure	**1.9% (0.2-3.9%)**

Slide 4

RC1 [@Yonela Gasela] can you assist with the formatting of this, Lara says it needs some formatting, sorry only got feedback now

Robyn Curran, 2026-03-25T08:51:14.139

Common configurations of MLTCs

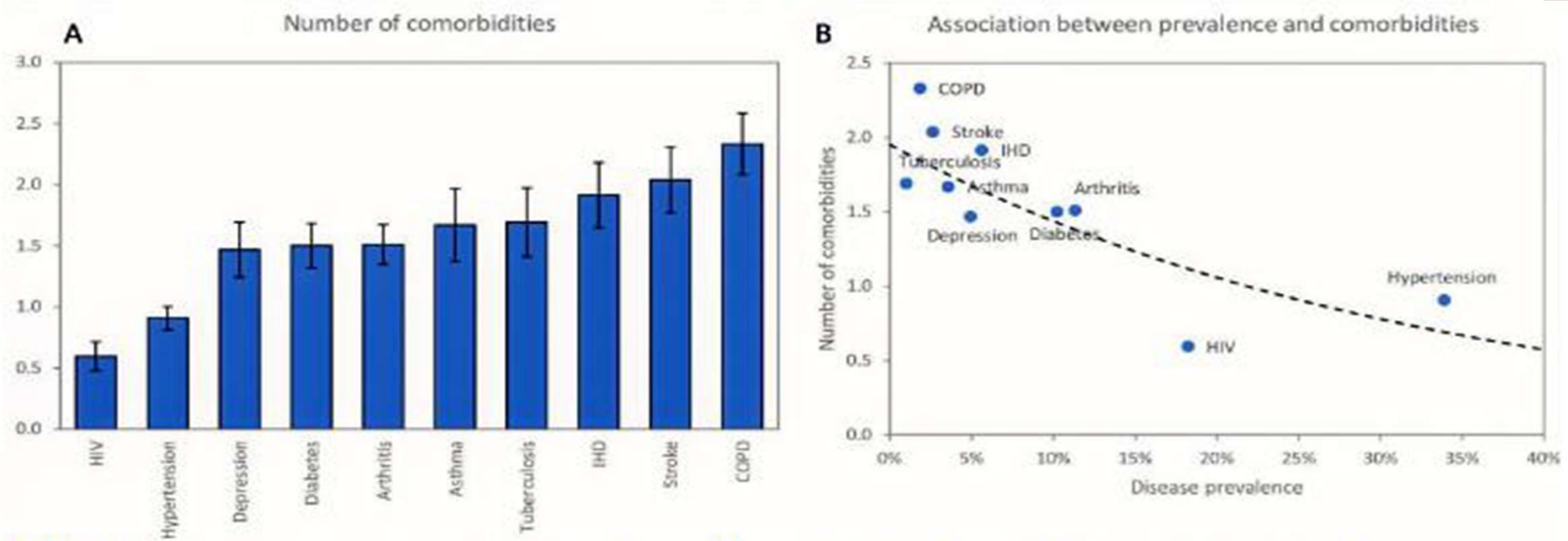


Figure 4 Average number of comorbidities in patients with each index condition. COPD, chronic obstructive pulmonary disease; IHD, ischaemic heart disease.

Johnson LF, Kassanjee R, Folb N, Bennett S, Boulle A, Levitt NS, et al. A model-based approach to estimating the prevalence of disease combinations in South Africa. BMJ Global Health. 2024;9:e013376. https://doi.org/10.1136/bmjgh-2023-013376

RC1

Depression modelling findings (2024)

- Depression prevalence in SA: 4.5%
- % of adults who have ever experienced depression: 70.6%
- 3.84 million new episodes of depression
- Only 443 000 people initiated antidepressants
- Private sector: 11.0% of adults using antidepressants
- Public Sector 0.9% of adults using antidepressants

https://www.spotlightnsp.co.za/2026/03/25/well-over-three-million-people-in-sa-develop-depression-every-year-researchers-estimate/

NIHR 201816

Slide 6

RC1 Dinky suggests placing on slide 5

Robyn Curran, 2026-03-23T13:12:15.873

Linkages to the National Policy Frameworks

The NSP(2023-28) elevates the visibility of mental health within the disease-specific domains of HIV and TB, its alignment with the broader **National Mental Health Policy Framework and Strategic Plan (NMHPFSP)** creates a unified primary health care (PHC) approach:

- **Task-Sharing Models:** Both frameworks emphasise leveraging non-specialist cadres, such as primary care nurses and Community Health Workers (CHWs) utilising tools like the mhGAP and community mental health guidelines, to bridge the severe human resource gap.
- **Primary Health Care (PHC) Re-engineering:** The NSP relies on the structural backbone of PHC re-engineering (such as Ward-Based Primary Health Care Outreach Teams) to deliver integrated, decentralised mental health and chronic care directly at the household and community levels.
- **Collaborative Care Packages:** The strategic linkages operationalise collaborative care models, such as integrating depression and anxiety care into routine chronic disease clubs and ARV/TB treatment lines at primary care facilities, ensuring patients do not have to navigate fragmented, vertical "silo" services.

The Treatment Gap Crisis

92%

National Mental Health Treatment Gap

Specialist Shortages

Severe scarcity of registered mental health professionals.

Hospital Concentration

Services locked in tertiary institutions rather than primary care.

Stigma & Underfunding

Prevalent social stigma and poor financial investment.

Docrat, S., Besada, D., Cleary, S., Daviaud, E., & Lund, C. (2019). Mental health system costs, resources and constraints in South Africa: a national survey. Health policy and planning, 34(9), 706-719.

MhINT model for closing the treatment gap

IP1

Slide 9

IP1 This could rather be “MhINT model for closing the treatment gap”
Inge Petersen, 2026-10-28T07:27:35.758

Background

Evidence on effective task sharing innovations to improve access to mental health services in low- and middle-income countries (LMICs) abounds

Implementation and scaleup of these initiatives in real-world settings remains a challenge, with a focus on early-stage implementation outcomes[1,2]

CRH applies a learning health system and task sharing approach to improve penetration, sustainability and quality of mental health care within routine primary health care in KwaZulu-Natal, South Africa

1.Murphy JK, Maulik PK, Dobson K, Govia I, Lam RW, Mahlke CI, et al. Advancing Implementation Science Measurement for Global Mental Health Research. Can J Psychiatry. 2022;67(6):428-31.
2. Wagenaar BH, Hammett WH, Jackson C, Atkins DL, Belus JM, Kemp CG. Implementation outcomes and strategies for depression interventions in low- and middle-income countries: a systematic review. Glob Ment Health (Camb). 2020;7:e7. Epub 2020/04/30. doi10.1017/gmh.2020.1.

History

2012 PRIME Formative & Piloting

2014 - 2016 PRIME Evaluation

2015 - 2017 PRIME/ COBALT Trials

2017 - 2020 Implementation through MhINT

2018 - 2022 Evaluation of MhINT using implementation science

2023 - date MhINT Scale up beyond the learning site

2022 - date MhINT Recovery

2024 - date MhINT Child



DFID

PRIME programme for improving mental health care



NIH

PRIME programme for improving mental health care

CobALT



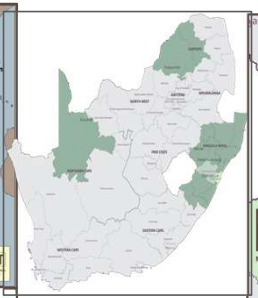
CDC

MhINT MENTAL HEALTH INTEGRATION PROGRAMME



NIH

SMhINT Southern African Research Consortium for Mental health INTegration



DoH

ANOVA



NIH

vliruos



CMI

SAMRC

Petersen, I., et al. (2016). Integrating mental health into chronic care in South Africa: the development of a district mental healthcare plan. Br J Psychiatry, 208 Suppl 56, s29-39. doi: 10.1192/bjp.bp.114.153726

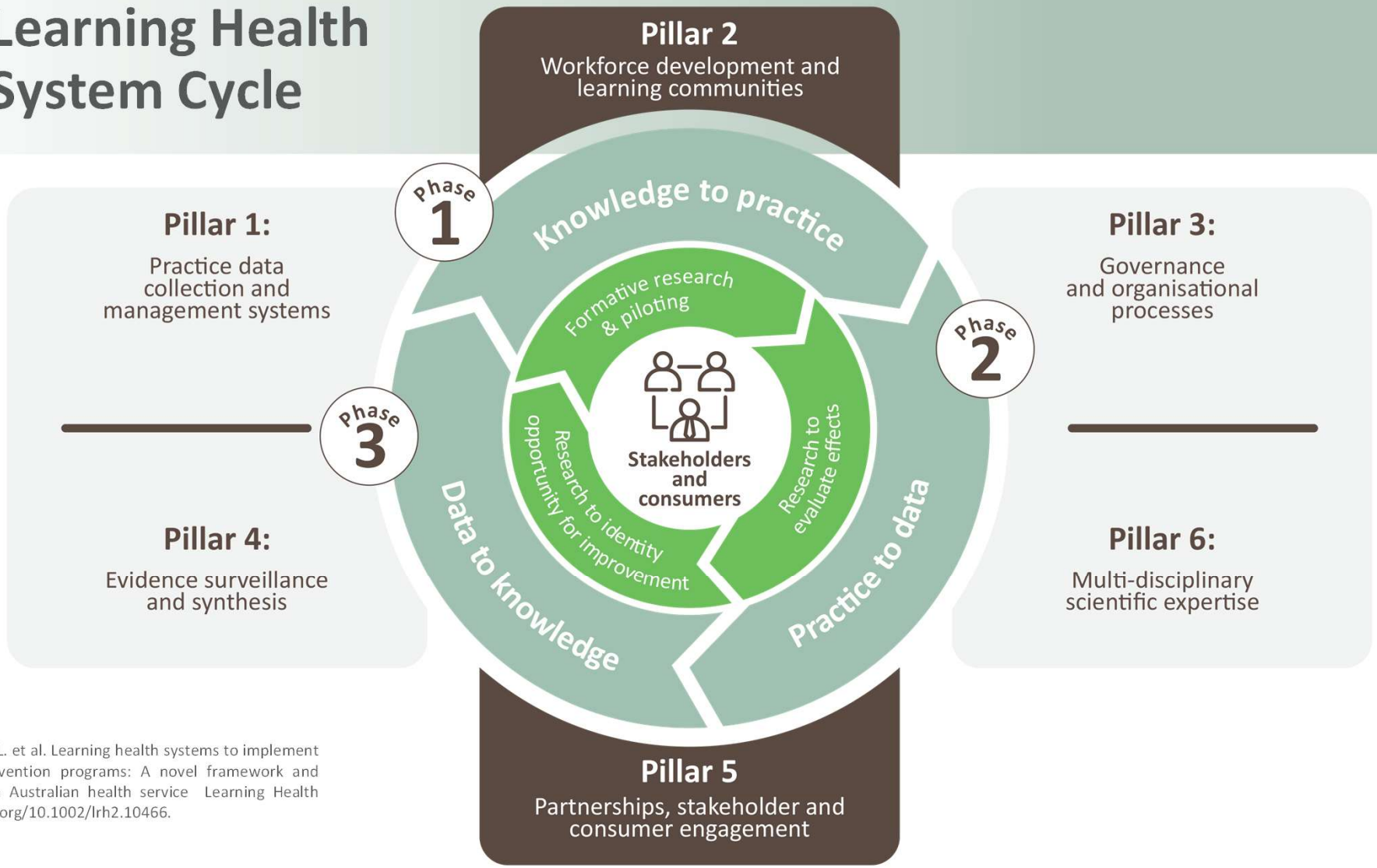
Petersen, I., et al.. Evaluation of a collaborative care model for integrated primary care of common mental disorders comorbid with chronic conditions in South Africa. (2019). BMC Psychiatry, April; doi: https://doi.org/10.1186/s12888-019-2081-

Fairall, L., (2018). Collaborative care for the detection and management of depression among adults receiving antiretroviral therapy in South Africa: study protocol for the CobALT randomised controlled trial. Trials. https://doi.org/10.1186/s13063-018-2517-7

Petersen I, Fairall L, Zani B, et al. Effectiveness of a task-sharing collaborative care model for identification and management of depressive symptoms in patients with hypertension attending public sector primary care clinics in South Africa: pragmatic parallel cluster randomised controlled trial. J Affect Disord. 2021;282:112-121

Petersen I, Kemp CG, Rao D, et al. Implementation and Scale-Up of Integrated Depression Care in South Africa: An Observational Implementation Research Protocol. Psychiatr Serv. 2021: doi/10.1176/appi.ps.202000014

Learning Health System Cycle



Source: Wolfenden, L. et al. Learning health systems to implement chronic disease prevention programs: A novel framework and perspective from an Australian health service Learning Health System. shttps://doi.org/10.1002/lrh2.10466.

Establishment of Provincial MH Learning collaboratives

Provincial Primary Health Care Transformation Committee
(PHC Policy & Guidelines)

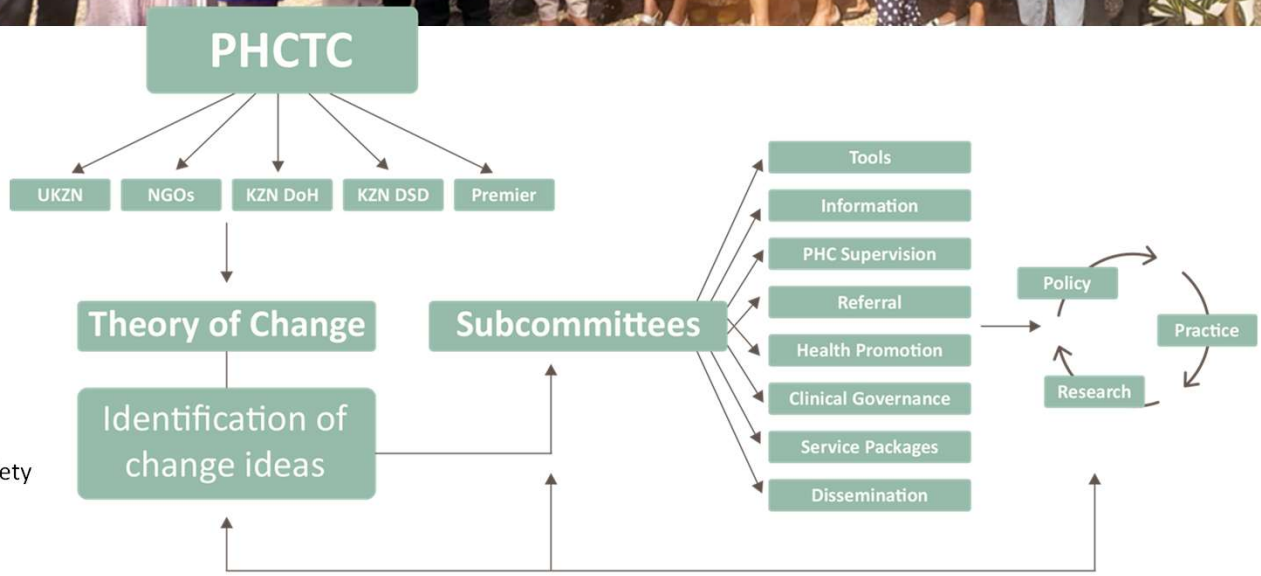


Objectives

- To develop a community oriented, people-centered, PHC health system in KZN
- To enable healthy, self-reliant, empowered communities in KZN

Participants

- Chief Director: District Services (Co-Chair)
- Chief Directors: Hospital Services, Strategic Programmes, NCDs
- Directors: PHC Services, M&E, Strategic Planning, Mental Health
- Programme Managers (NCDs, MCH, Mental Health, HAST)
- District Directors
- UKZN Academics
- Representatives of the Office of the Premiere, DSD, DOE, Civil Society



Establishment of Provincial MH Learning Collaboratives

Provincial Primary Health Care Transformation Committee *(PHC Policy & Guidelines)*

Provincial MH Learning Collaborative *(MH Policy, guidelines, SOPs, targets)*

HD1



Participants

Provincial Mental Health Directorate
District Mental Health Coordinators
CRH, UKZN

HD1 These are also editable now

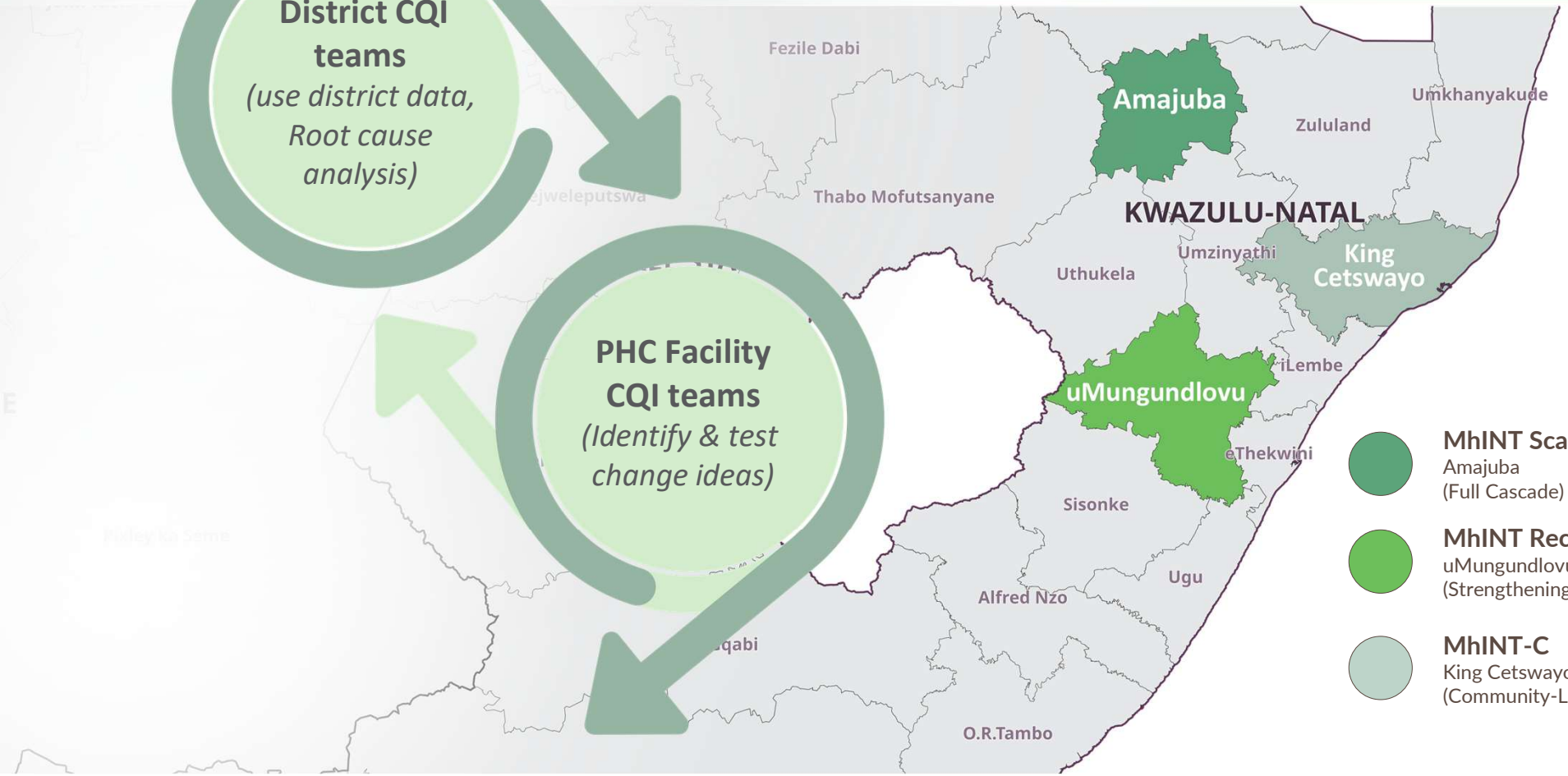
Helena D'Offizi, 2025-08-04T10:01:39.298

IP1

Establishment of District and PHC Facility Learning Collaboratives

District CQI teams
(use district data, Root cause analysis)

PHC Facility CQI teams
(Identify & test change ideas)



Slide 15

IP1 Take out the diagram of all the multilevel learning collaboratives. Replace with a diagram replicating what you have in the previous slide at a provincial level showing only the district CQI teams and PHC Facility teams. Change the position of the two circles and arrows so that the PHC Facility teams are beneath the District CQI teams (so that they are in the same position of the provincial MH learning collaborative in the previous slide) as feed information to the District CQI teams.

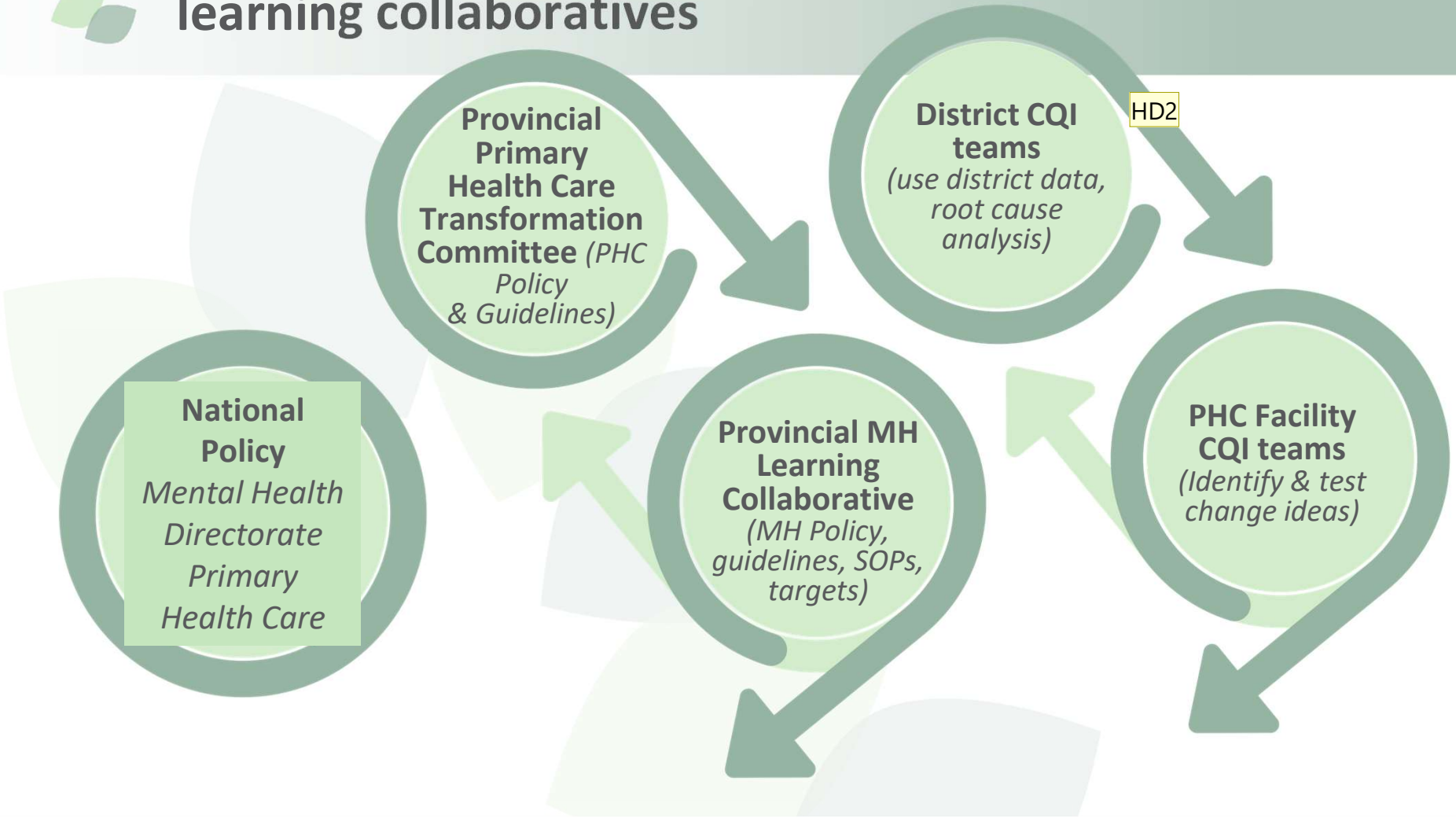
Inge Petersen, 2025-08-03T04:30:46.107

HD1 0 Done

Helena D'Offizi, 2025-08-04T09:34:31.608

IP1

Establishment of multi-level learning collaboratives



Slide 16

IP1 As requested on the previous slide, change the position of the PHC Facility teams to show this circle feeding up to the District CQI teams which feed up to the provincial MH Learning collaborative which feed up to the Provincial Primary Health Care Transformation Committee. This was how it was depicted in the original diagram sent to you. Please also include feedback loops down as the process goes up and down

Inge Petersen, 2025-08-03T04:34:08.756

HD1 0 Done

Helena D'Offizi, 2025-08-04T09:51:57.953

HD2 Editable text

Helena D'Offizi, 2025-08-04T10:02:02.361

IP1

Assess the context

Tool

Situational Analysis

Inner

Socio Demographic: Population

Economic Indicators Literacy | Sanitation | Water Supply | Electricity Supply

Health Indicators
Life Expectancy | Mental Health Data Top ten causes of morbidity | Infant Mortality | Top ten causes of mortality | Mental Health Risk Factors | Common Mental Health | Disorders

Priority Areas
Mental Health Organization | Hotspots – Liquor

Outreach Teams
Impoverished Wards | Mental Health Outreach Teams | Support Groups

Inner-Data
Mental Health Data Indicators Substance Abuse

Inner Provincial
Sec1: Bed Analysis | **Sec2:** Hospital Stats | **Sec3:** Child and Adolescent **Sec4:** MH Review Board | **Sec5:** Hospital PSR Program | **Sec6:** Provincial - Reporting Structure

Inner Personnel
MH – Human Resources | MH Provincial Data | District – Reporting Structure

Processes

Mental Health Plan
Existing Referral Pathways
Mental Health Training in PHC
Mental Health Treatments in PHC

Outer

Mental Health Resources - External
Private Hospitals
MH – Private Human Resources

MH – NGOs

Substance Abuse

Individual

Focus on Specific Areas of Interest

Assistance in Specific Areas of Interest

Interacting domains in implementation research

Outer Setting

Economic, social and political contexts

Inner Setting

Context within the organization implementing the intervention – culture, structure, networks etc.

Intervention

Individuals Involved

Individuals who have a role to play in the implementation process – health care providers, managers, policy makers, beneficiaries.

Process for Implementation

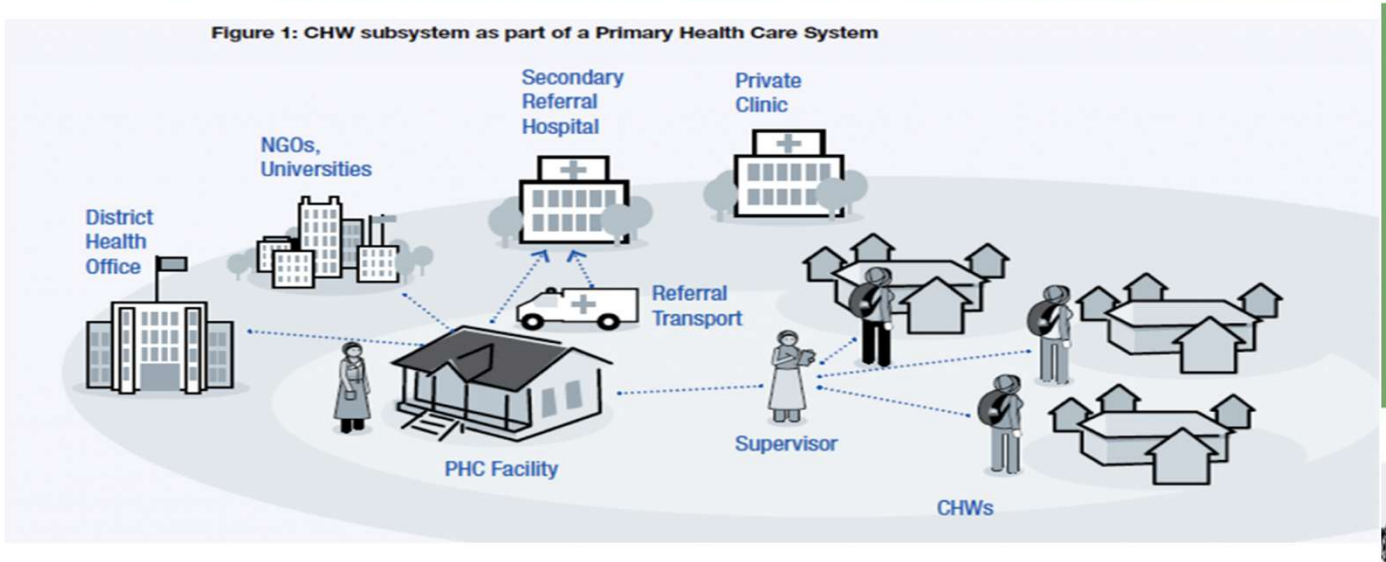
Methods used to facilitate adoption of the intervention at all levels (planned and emergent strategies and activities)

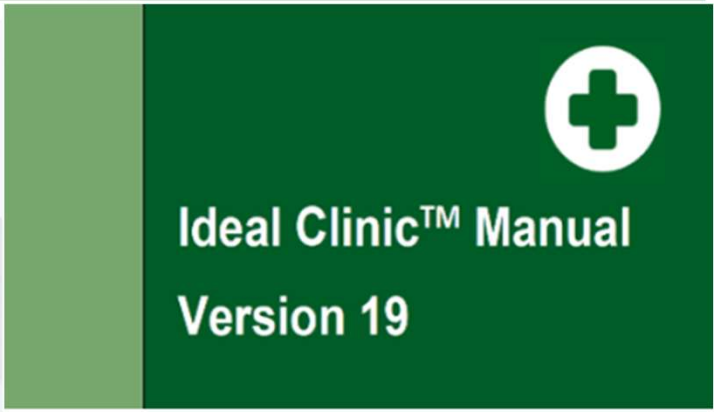
Slide 17

IP1 Please take out the Covid-19 box
Inge Petersen, 2025-08-03T04:36:38.190

HD1 0 Done
Helena D'Offizi, 2025-08-04T08:43:26.618

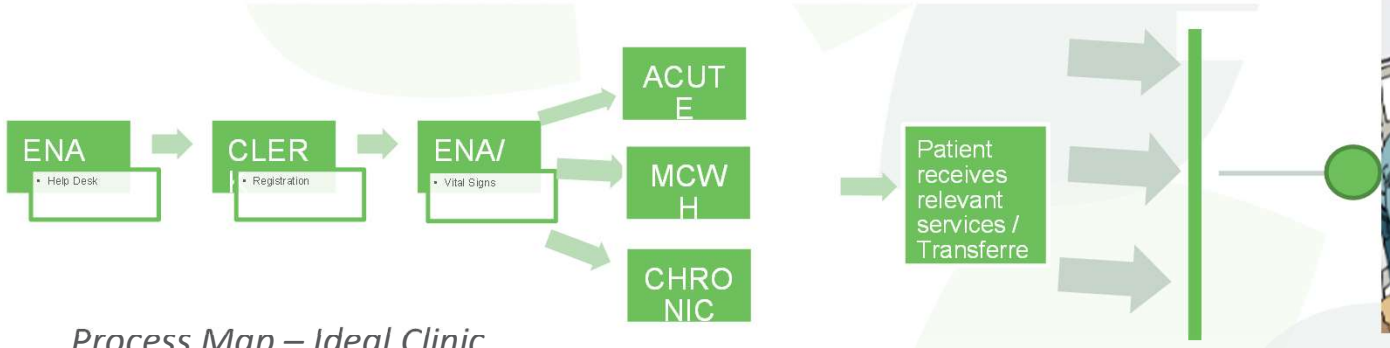
Assess the Context: Existing Policies





Integrated Clinical Services Management Manual

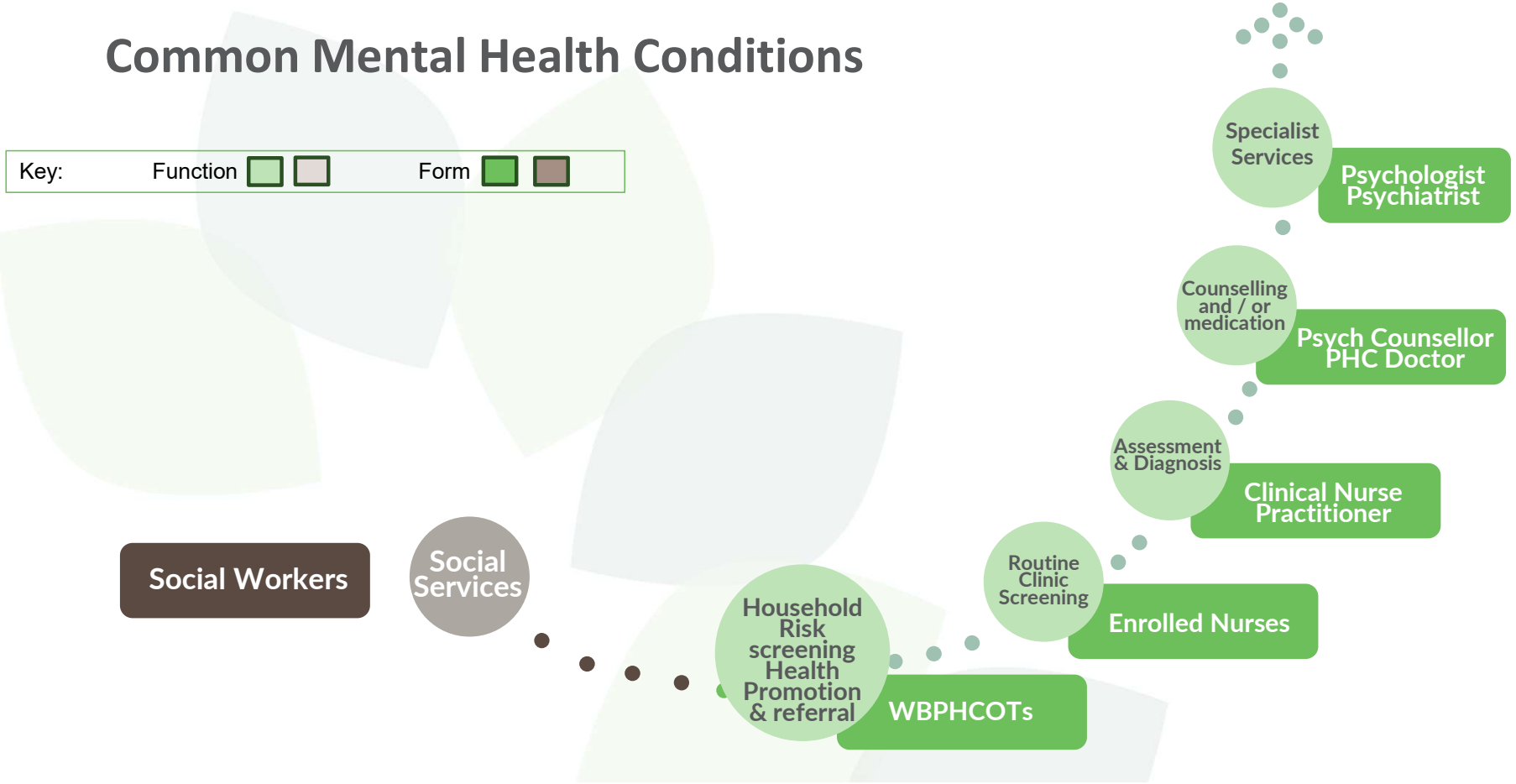




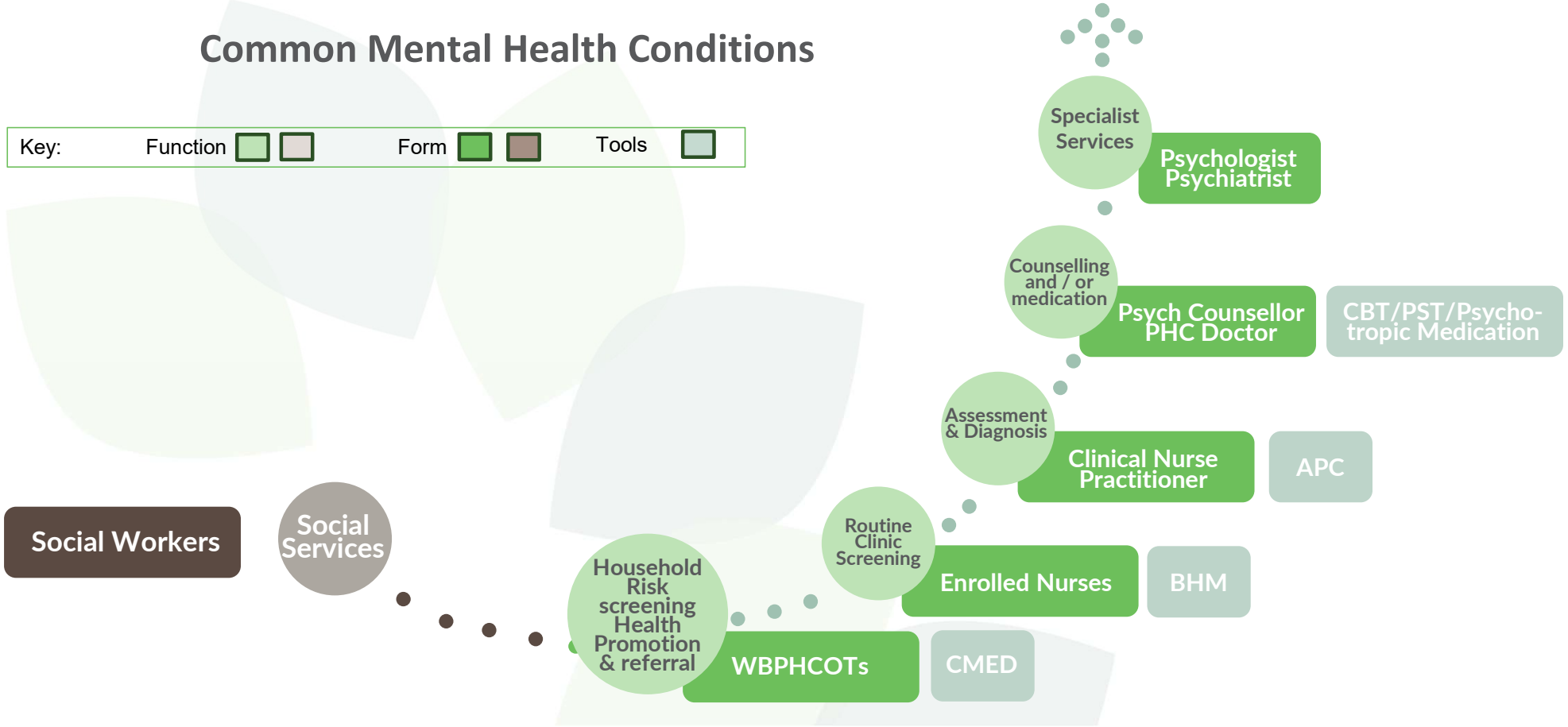
Process Map – Ideal Clinic

Layer Mental Health Services (function) into the Care pathway *(form may differ)*

Common Mental Health Conditions



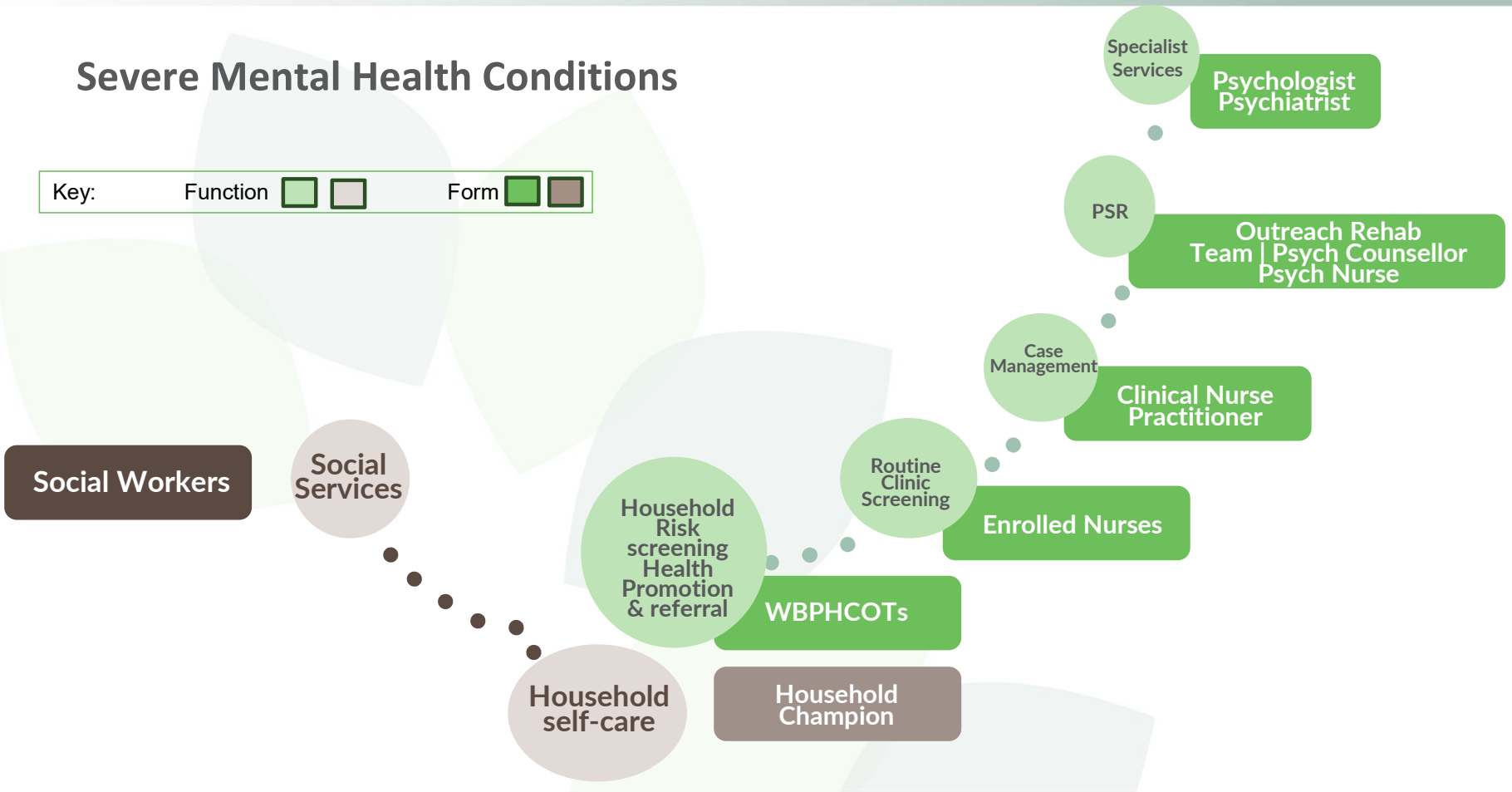
Identify/develop and test evidence-based interventions & implementation strategies for each provider



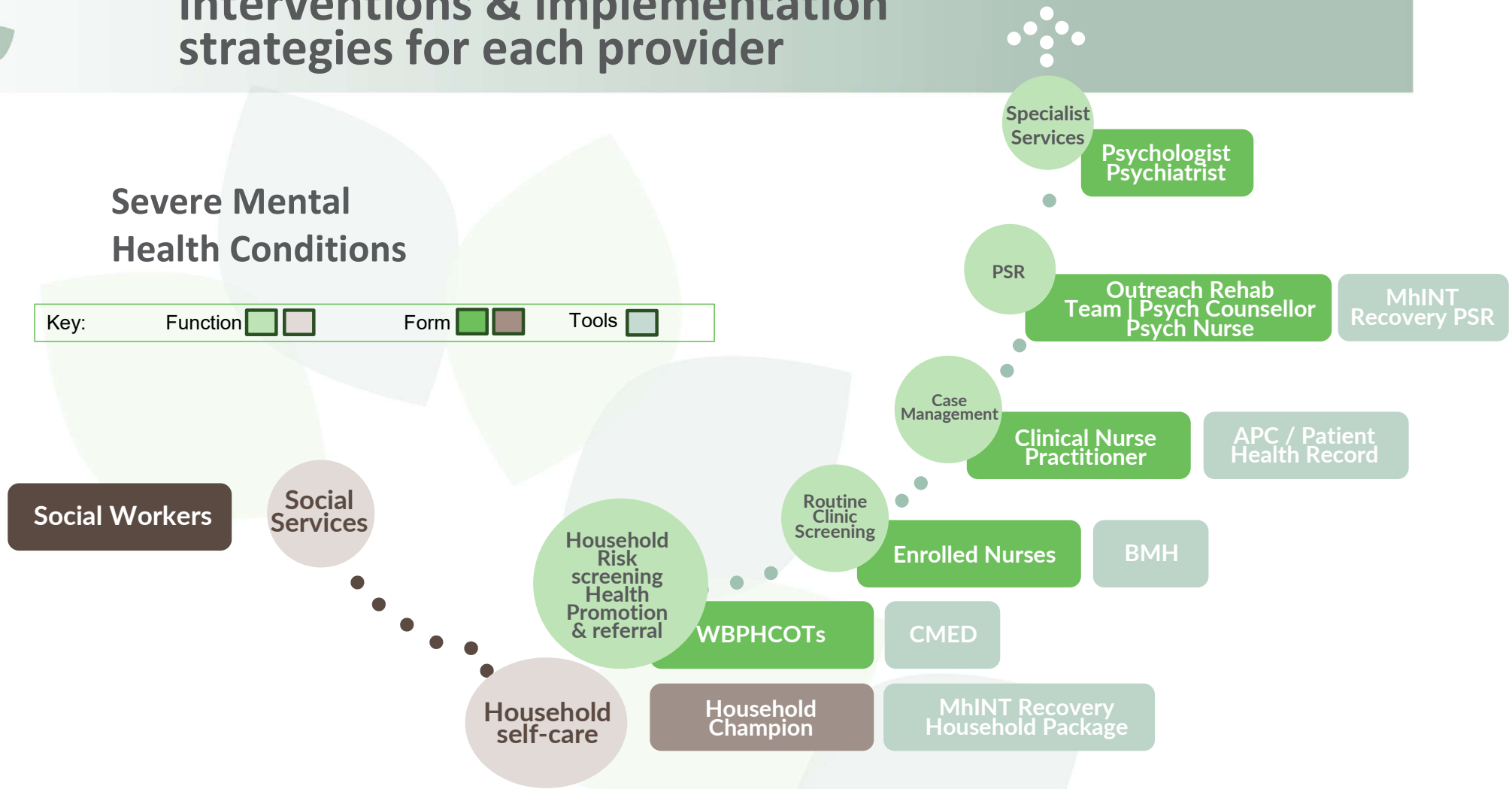
Layer mental health services (function) into the care pathway (Form may differ)

Severe Mental Health Conditions

Key: Function Form

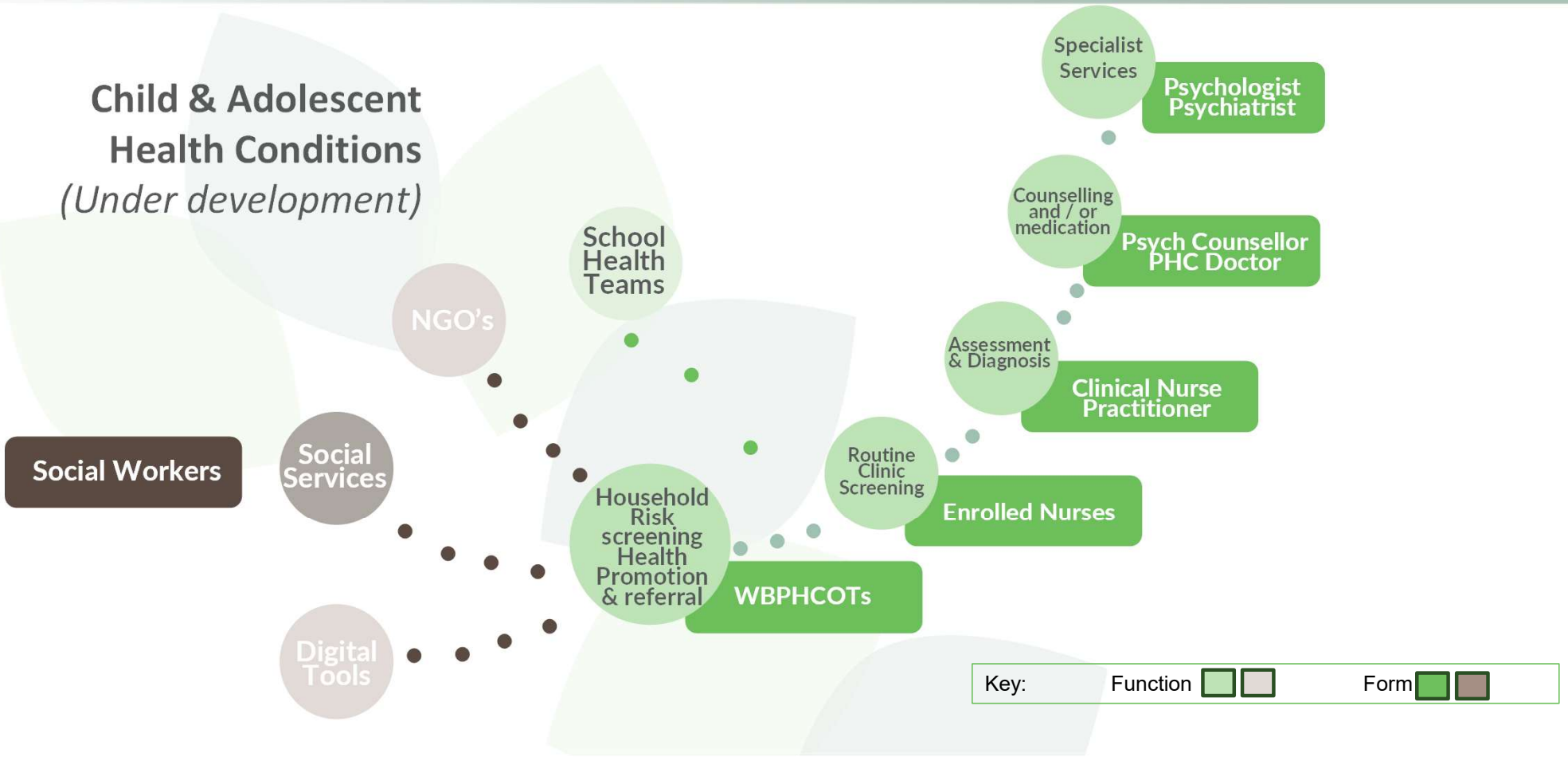


Identify/develop and test evidence-based interventions & implementation strategies for each provider



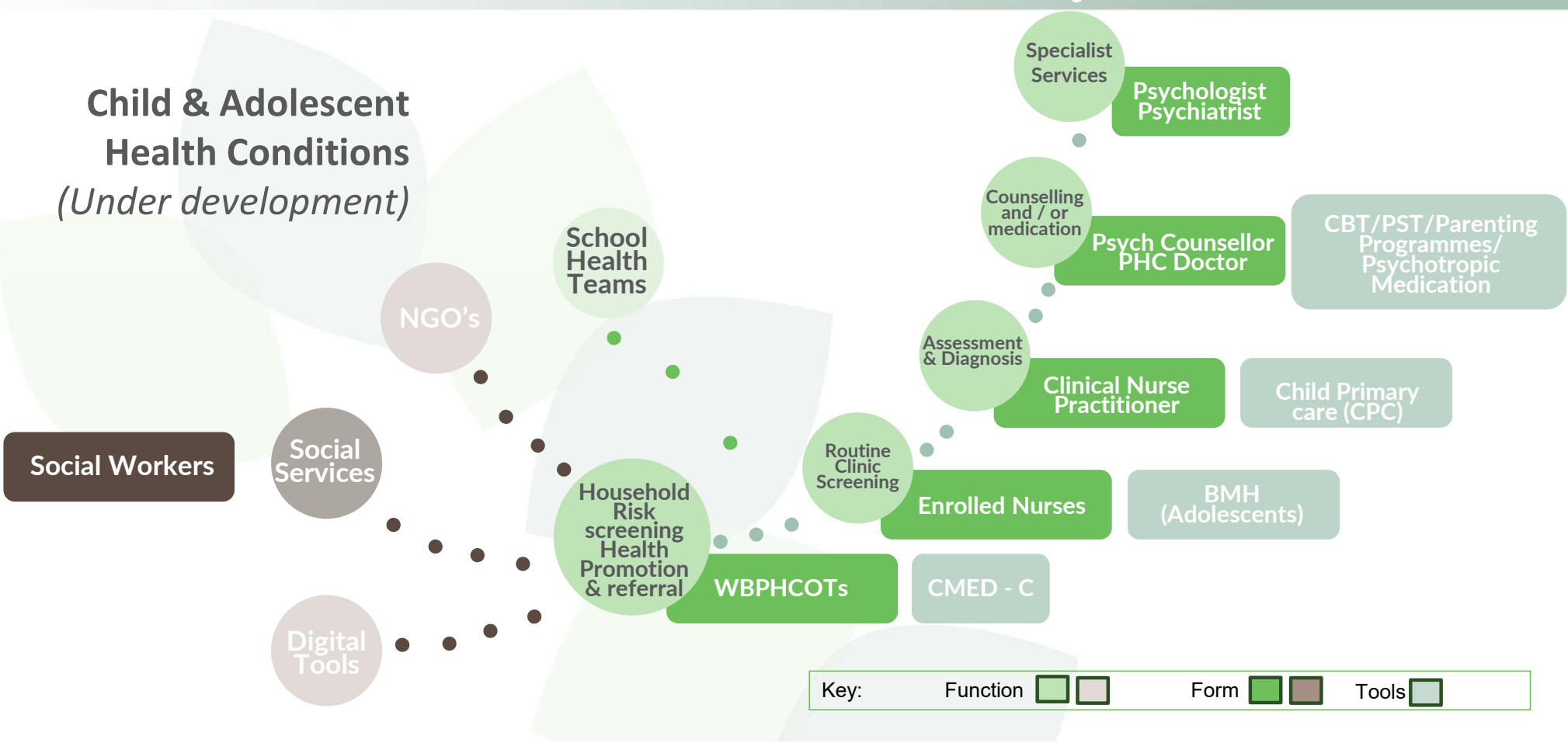
Identify/develop and test evidence-based interventions & implementation strategies for each provider

Child & Adolescent Health Conditions
(Under development)

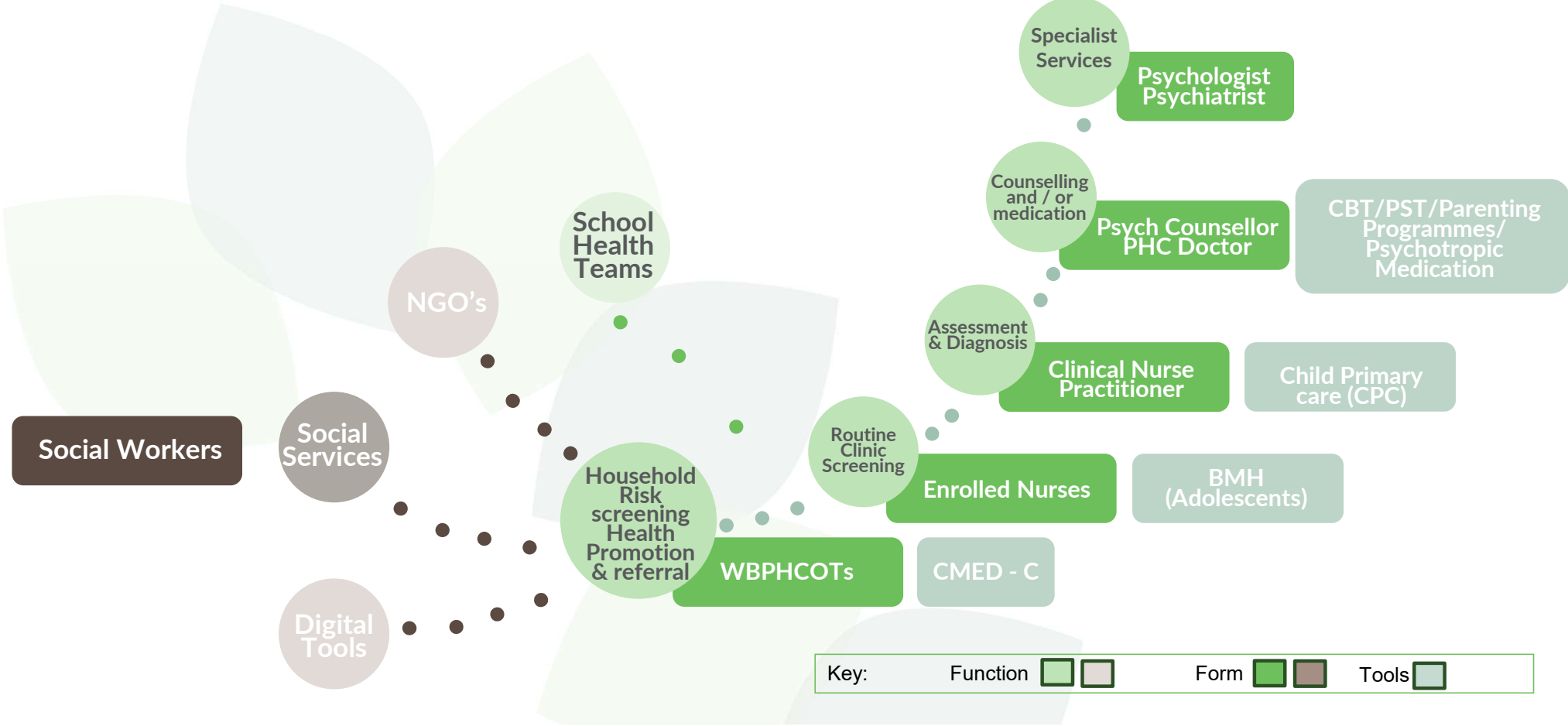


Identify/develop and test evidence-based interventions & implementation strategies for each provider

Child & Adolescent Health Conditions
(Under development)



Identify/develop and test evidence-based interventions & implementation strategies for each provider



Human Resource Scope Skills/Tools Mix

Human Resources	Scope of Practice	CMDs	Severe MH Conditions	Child & Adolescent MH Conditions
Hs/Hold Champions Self-Care	Self-Care	CMED	MhINT Recovery Hs/Hold Package	CMED-C
WBPHCOTs Screening, Health Promotion & Referral	Risk screen, health promotion, referral	CMED	CMED	CMED-C
Enrolled Nurse Routine clinic screening	Routine Clinic Screening	BMH	BMH	BMH
CNP/PN Assess, diagnose & manage	Assess, diagnose & manage	APC	APC	Child Primary Care (CPC)?
Psych Counsellor/Psych Nurses/Social Workers	Counselling & PSR	Evidence Based Counselling	PSR	Evidence Based Counselling
PHC Doctors	Initiation & maintenance of medication	Initiation & maintenance of psychotropic medication	Initiation & maintenance of psychotropic medication	Initiation & maintenance of psychotropic medication
District Clinical Specialist Teams	Technical support & mentorship	Technical support & mentorship	Technical support & mentorship	Technical support & mentorship
Specialist Services	Specialist Referral Services	Specialist Referral Services	Specialist Referral Services	Specialist Referral Services

Implementation: *Capacity Building & Mentorship Support*



Reassess & Modify

Strengthened MhINT intervention along the care cascade

Continuous Quality Improvement

Community Mental Health Education & Detection

(CMED TOOL)

CHWs

MENTAL HEALTH PROMOTION & REFERRAL

Facility Morning Health Talk

(MhINT Psycho-education morning talks & posters)

Health promoter/CHW etc

Indicator: No. MH morning talks/No. of morning talks

Screening (Brief mental health screening tool) (BMH)

Enrolled Nurse(EN)/EN assistant

Screening uptake Indicator: *No. screened/PHC headcount*

Screening presumptive rate Indicator: *Screened positive/Total screened*

Assessment

(APC)

Professional Nurse(PN)

Positivity rate indicator: *No. diagnosed/ Presumptive MH cases*

Treatment Initiated

(Referral pathways)

Clinic Counsellor
Doctor
MH specialists

Indicator: *Number referred for treatment/ Number assessed positive*

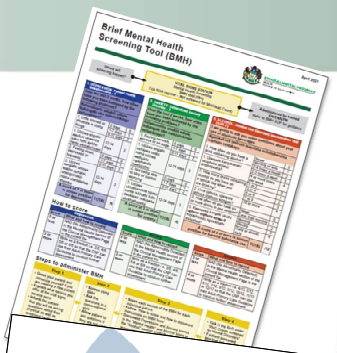
Patients retained on treatment

Professional Nurse(PN)

Indicator: *MH caseload*













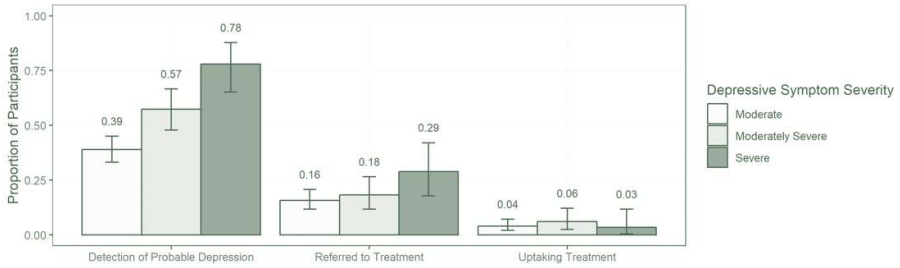
Analyze and Evaluate

Reach Cascade Analysis: Diagnosis, Referral, Uptake (n=412)

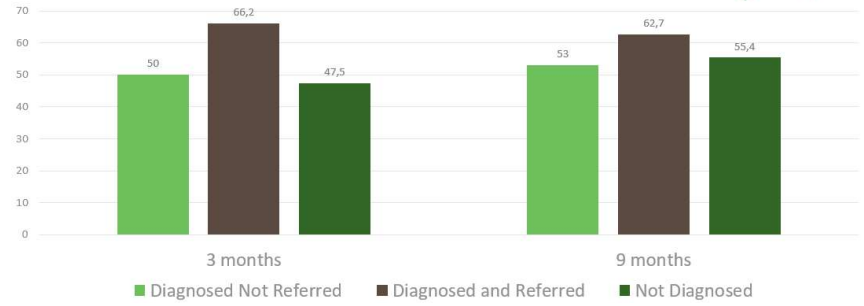
49% diagnosed

37% (18%) referred

25% (5%) uptake treatment



Effectiveness: Percentage having at least 50% reduction in PHQ9 scores at 3 and 9 months (Baseline, n=623; 3 months, n= 468; 9 months, n=454)



Cross sectional survey & CFIR interviews

Interviews (N=79): Nurses, Counsellors, OMs, patients
Survey: (N=68)

Individual Characteristics

Enabling
- Training exposure

Barriers
- Personal emotional issues

Inner Setting

Barriers
- Cascade model of training
- Poor psychosocial support
- High workloads
- No validated screening tool
- Lack of supervision/mentoring (nurses)
- Co-located counselling not always available

Outer setting Characteristics

Barriers
- Low levels of MH literacy & demand for services

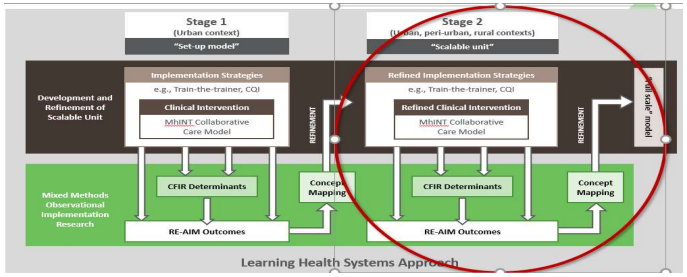
Intervention Characteristics

Barriers
- Additional time

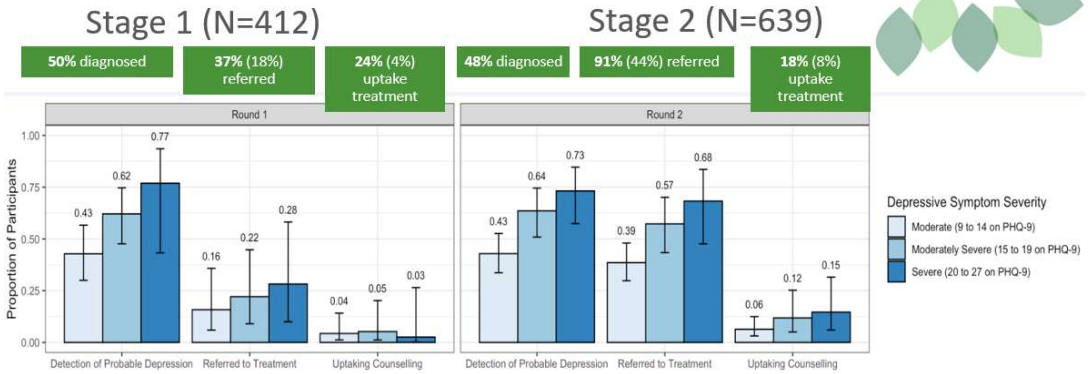
Enabling
Counselling acceptable to patients

Kemp CG et al. (2020) Patient-level predictors of detection of depressive symptoms, referral, and uptake of depression counseling among chronic care patients in KwaZulu-Natal, South Africa. Glob Ment Health (Camb). 7:e18.
Kemp, C. et al. 2021. Pushing the bench: a mixed methods study of barriers to and facilitators of primary depression care by professional nurses in KwaZulu-Natal, South Africa, Soc Sci and Med. Mental Health.
Kathree T, et al.. Management of Depression in Chronic Care Patients Using a Task-Sharing Approach in a Real-World Primary Health Care Setting in South Africa: Outcomes of a Cohort Study. Community Ment Health J. 2023. Epub 2023/03/26. doi: 10.1007/s10597-023-01108-y

Started new cycle



Reach: Diagnosis, Referral & Treatment 1st and 2nd stage



Diagnosed service users were more likely to be referred for counselling treatment in the second stage compared with stage one (OR 23.15, SE=18.03, z=4.04, 95%CI [5.03-106.49], p<.001)

Understanding Reach, Referral & Uptake results (2nd stage)

Patient level factors

Probability of Diagnosis:
- Depressive severity (↑)
- Perceived stress (↑)
- Alcohol use (↑)
- Comorbid condition (↑)

Patient survey (N=639)

Probability of Referral:

Probability of Uptake:
- Lower educational level (↑)

Systems level

Nurse survey linked to patient survey (N=136)

Probability of Diagnosis:
- BMH screening training (↑)

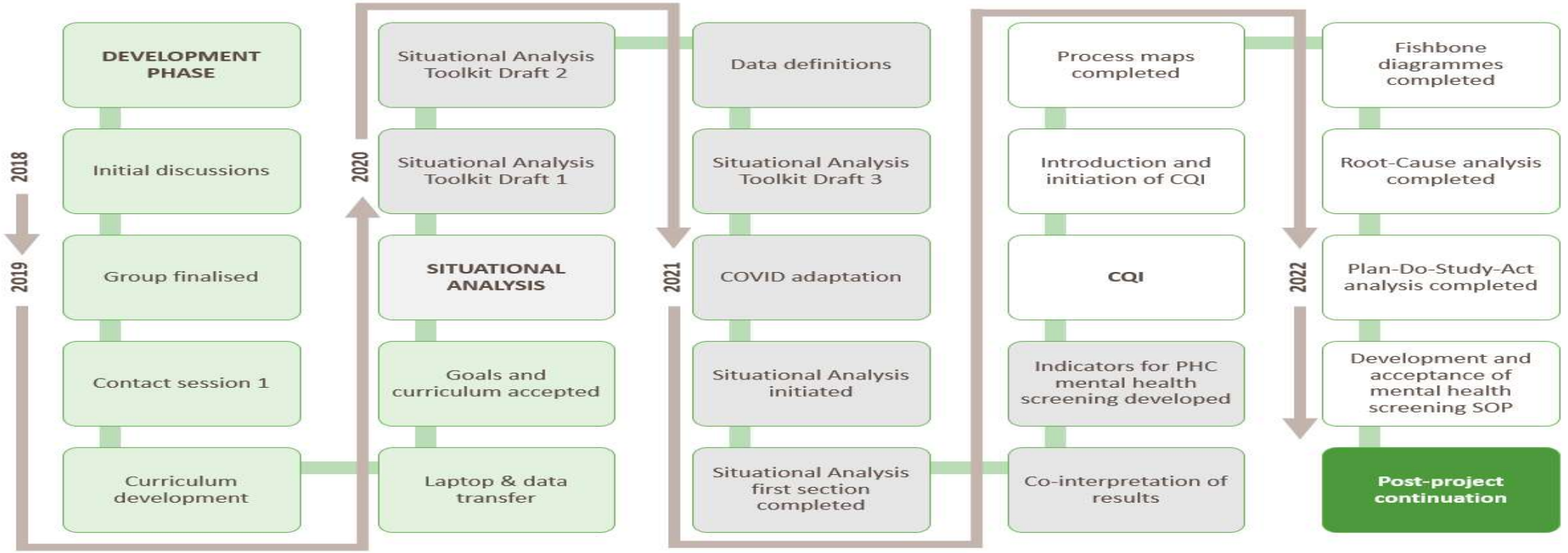
Probability of Referral:
- Acceptability of intervention (↑)
- Presenteeism of counsellor (↑)

Probability of Uptake:
- Presenteeism of counsellor (↑) (1st stage data)

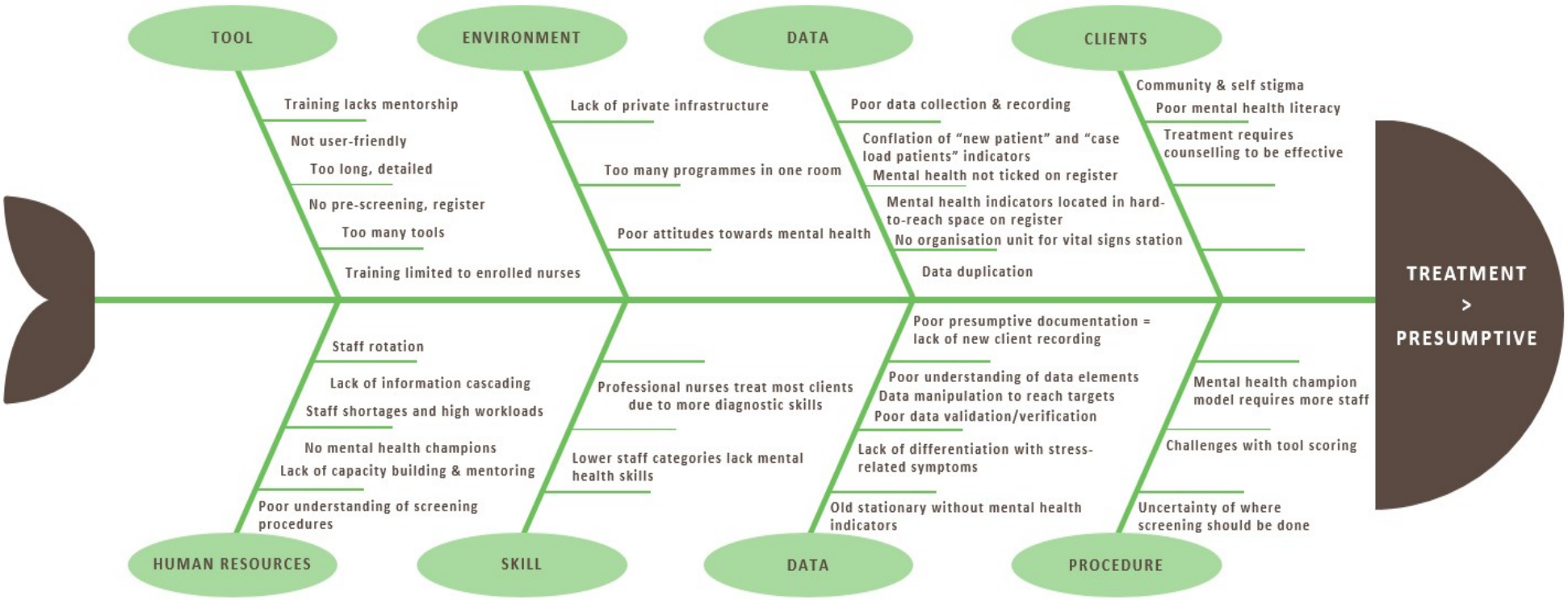
Nurse with BMH screening training more likely to make a diagnosis compared to those without (adjusted odds ratio 3.75, 95% CI 1.19, 11.80, P=0.02) . Nurses who found the intervention acceptable more likely to refer (adjusted odds ratio 2,56, CI 1,03, 6,04, p=0,04) . Referral more likely with presenteeism of clinic counsellor (adjusted odds ration 5.99, 95% CI 1.29, 27.75, p=0.022)

Petersen, I et al. (2023)Strengthening integrated depression services within routine primary health care using the RE-AIM framework in South PLOS Public Health. 3(11):e0002604

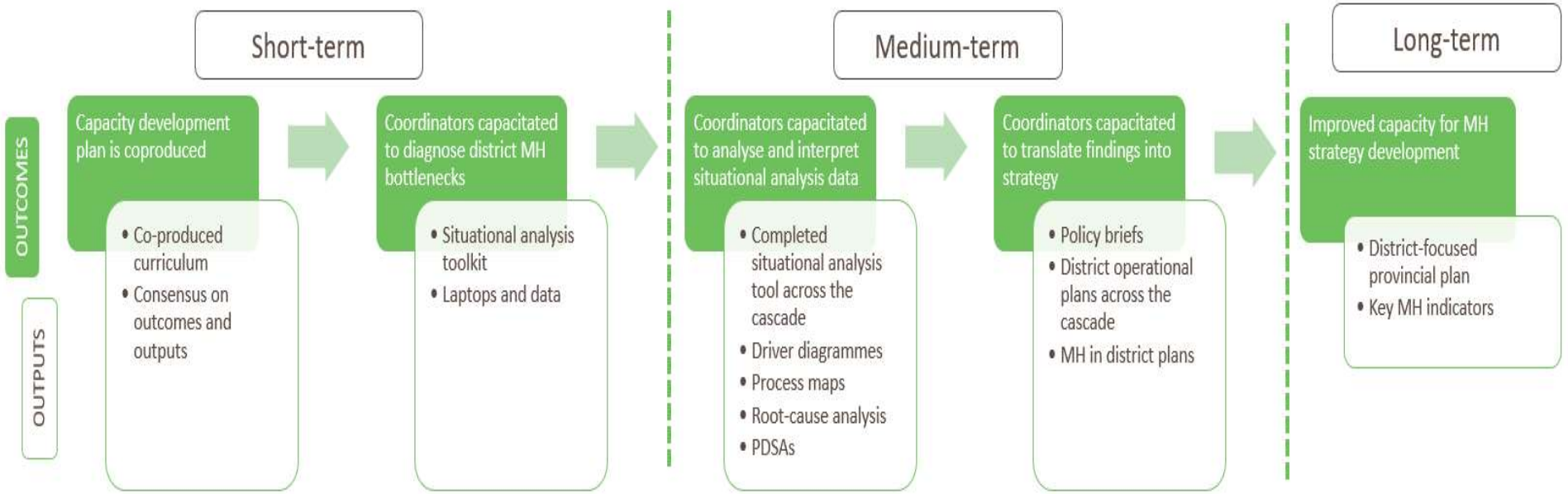
S-MhINT capacity building quality improvement programme



Mental health screening fishbone (consolidated from all districts)



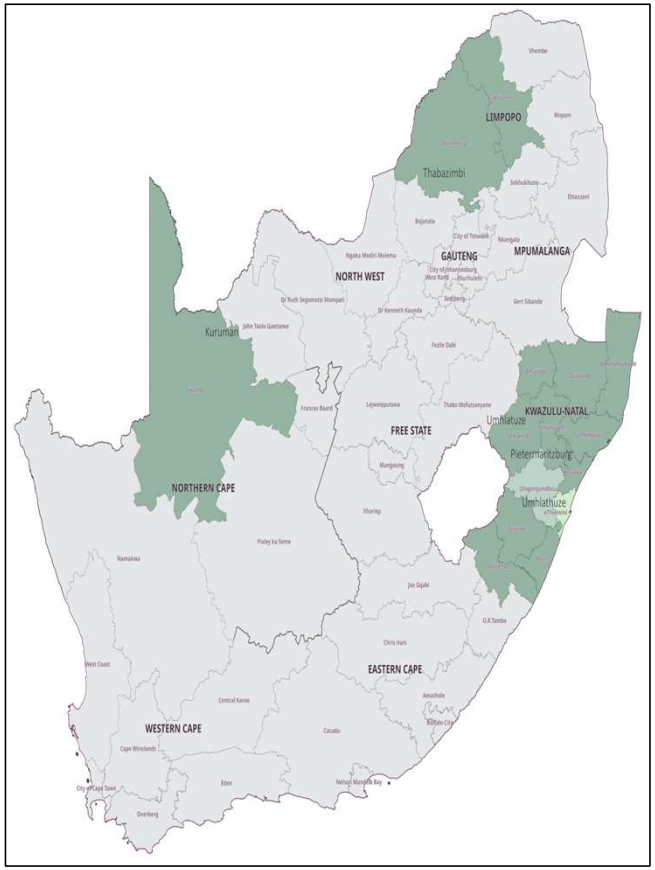
Mental Health Integration Sustainability Strategy



Vision

To generate capacity in developing responsive, people-centred district mental health systems, through blended learning, collaboration and support

Broader Scale-up



6. Support adaptation and expansion
Routinely engage in adaptation and expansion of EBP towards responding to health system and population needs.

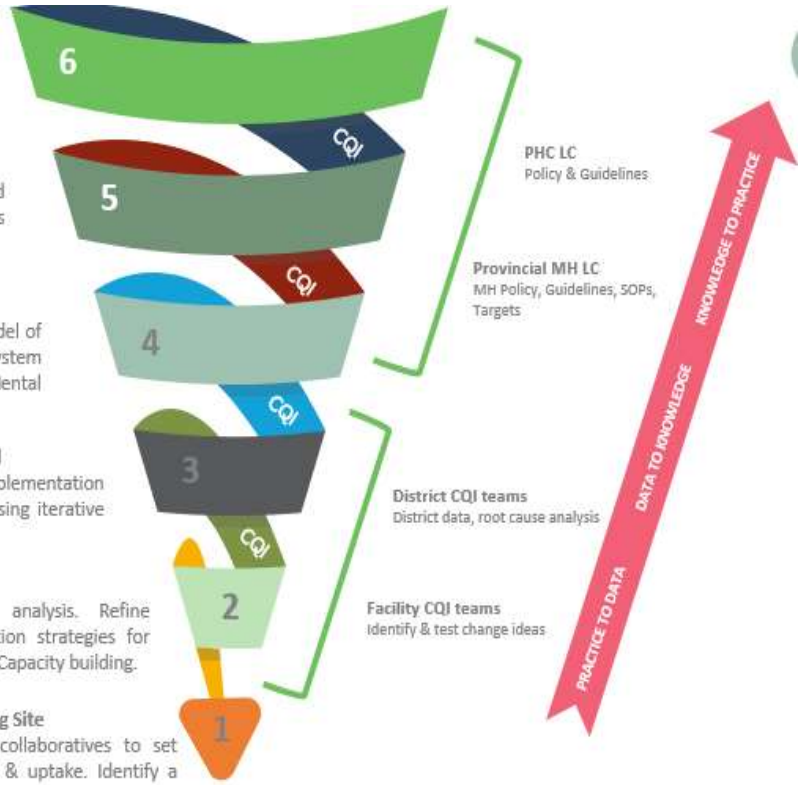
5. Support Scale-up
Provide ongoing technical & research support as needed to support cascading of training in innovations across districts & other provinces, including CQI.

4. Policy Uptake of scale-up model
Embed EBP into provincial policy, differentiated model of care for chronic conditions & health information system through the Learning Collaboratives with PHCTC & Mental Health & Substance Abuse Directorate.

3. Implementation Research to refine model
Co-refine intervention package & implementation strategies for scaling beyond test district using iterative implementation research cycles.

2. Set up model
Process mapping & situational analysis. Refine intervention package & implementation strategies for implementation in real-world settings. Capacity building.

1. Establish Learning Coll & Learning Site
Form multi-stakeholder learning collaboratives to set priorities & drive implementation & uptake. Identify a test district









Thank you

KZN Department of Health - Our staff and patients

www.crh.ukzn.ac.za

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IP2

Thank You – KZN DoH and National DoH

Our staff and Patients *www.crh.ukzn.ac.za*



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Slide 36

IP1 Relabel this slide MhINT Footprint & Funding Support
Inge Petersen, 2025-08-03T04:14:59.821

HD1 0 Done
Helena D'Offizi, 2025-08-04T08:39:48.058

IP2 Change MhINT-C district to what you currently have as Uthungela (now King Cetswayo)
Inge Petersen, 2025-08-03T04:23:02.545

HD2 0 The text is now editable, please type it in yourself because I am not a 100% sure what must be typed. Thank You 😊
Helena D'Offizi, 2025-08-04T08:38:53.974