Task-Shifting Depression Care in Low-Resource Settings

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Overview

- Why is it important to focus on depression?
- What is task-shifting and how can it address the mental health treatment gap?

The Problem

1 in 5
people in the world suffer from depression

75-85%
with depression do not receive care

Depression x Poverty
interacts in a negative cycle

Top-ranking cause
of disability worldwide

Cost of Depression

Negative effect

on functioning, social relationships, health, and quality of life

$47 trillion

The cost of chronic health conditions in the next 20 years (WEF's estimate)

Depression & heart disease

Top contributors of this cost

5:1

on depression care

50 million years of work

lost each year globally if depression is left untreated

Source: Chisolm et al. (2016)

THE GLOBAL GOALS
For Sustainable Development

Vietnam Faces Substantial Mental Health Challenges

- Minimal mental health services outside psychiatric hospitals
- Services focus on severe mental illness
- Lack of
  - trained mental health providers
  - awareness and knowledge about mental health problems
- Stigma of mental health problems

SOLUTION

Task-Shifting (and Task-Sharing)

Nonspecialized Health Workers Are Needed

WHO Expert Committee Conclusion:

"If basic mental health care is to be brought *within reach of the mass of the population*, this will have to be done by nonspecialized health workers—at all levels, from the primary health worker to the nurse or doctor— working in collaboration with, and supported by, more specialized personnel."

(WHO, 1975)

Task-Shifting (and Task-Sharing)

- Definition: Involves a redistribution of tasks from highly trained specialized health providers to other cadres of health and community workers who have less training.
- Evidence: It has been used successfully to improve care, retention and to address workforce shortages and access gaps for a variety of critical public health needs in HIV, maternal health, and chronic illnesses globally. The evidence for mental health is growing.

Why Task-Shifting Makes Sense

- Shifting components of mental health tasks to primary care can make more effective use of existing human resource and support systems in the community.
- It can ease bottlenecks in service delivery in overburdened mental health systems.
- It can also increase access by providing much needed identification, brief and simple interventions in settings that are more convenient, natural, and less stigmatizing for individuals suffering from depression.

Research

Guiding Research Goals

- Develop and test implementation strategies and interventions for depression in low-resource settings
- Build the evidence-base for task-shifting mental health care to non-mental health providers in LMIC
- Develop intervention approaches to address poverty and depression

2007

Vietnam depression care program development

Capacity building in for mental health integration into primary care settings

2009-2012

Multicomponent Collaborative Care for Depression Program

12 sites (N=2,541)
Demonstration

RCT
Guideline medication vs. MCCD
(N=475)

2012-2016

Livelihood Integration for Effective Depression Management (LIFE-DM)

4 sites, 8 groups (N=166)
MCCD + microfinance loans + Group Intervention

2017-2019

LIFE-DM Transition to Scale (GCC)

9 sites, 18 groups: (N=166)
LIFE-DM / Implementation Evaluation

2019-present

Vietnam Depression Care Scale Up Project

36 sites (N=1600)
3 implementation arms (UI, Supervision, Learning Collaborative)

Research Overview

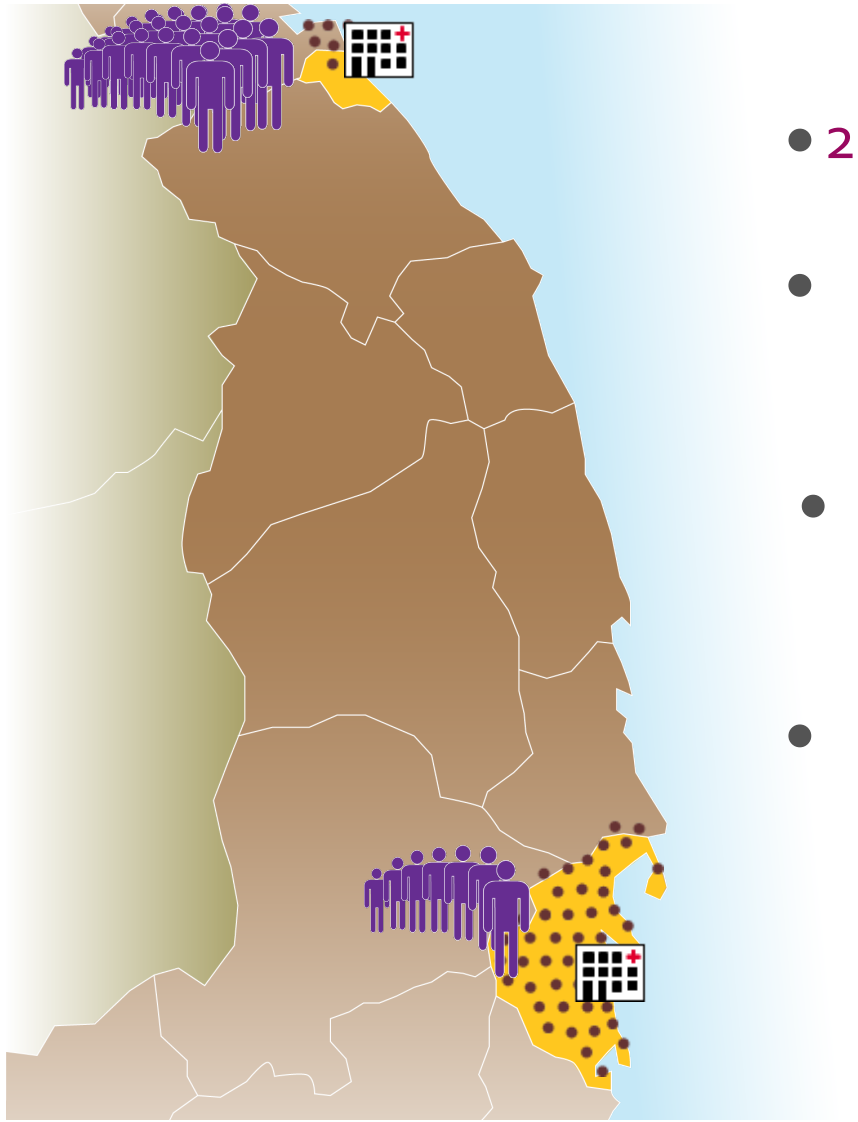
- Three depression intervention studies:
  - Study 1. Multicomponent Collaborative Care for Depression (MCCD)
  - Livelihood Integration for Effective Depression Management (LIFE-DM)
    - Study 2. Effectiveness Study: LIFE-DM vs. Usual Care
    - Study 3. Scale-Up Study: LIFE-DM Pre-Post Treatment
- Lessons learned about task-shifting

Study #1

Multicomponent Collaborative Care for Depression (MCCD)

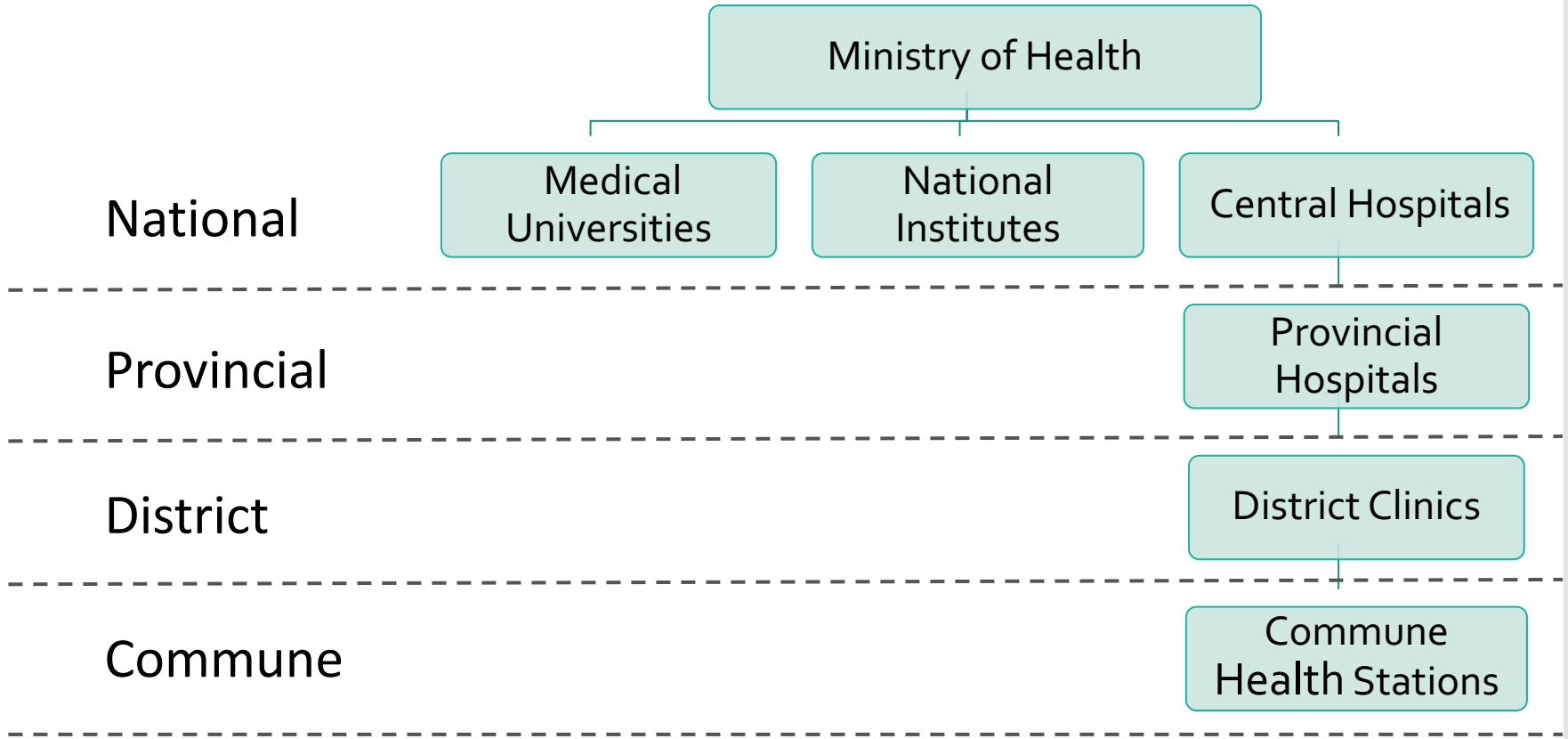
Vietnam – A Country in Transition

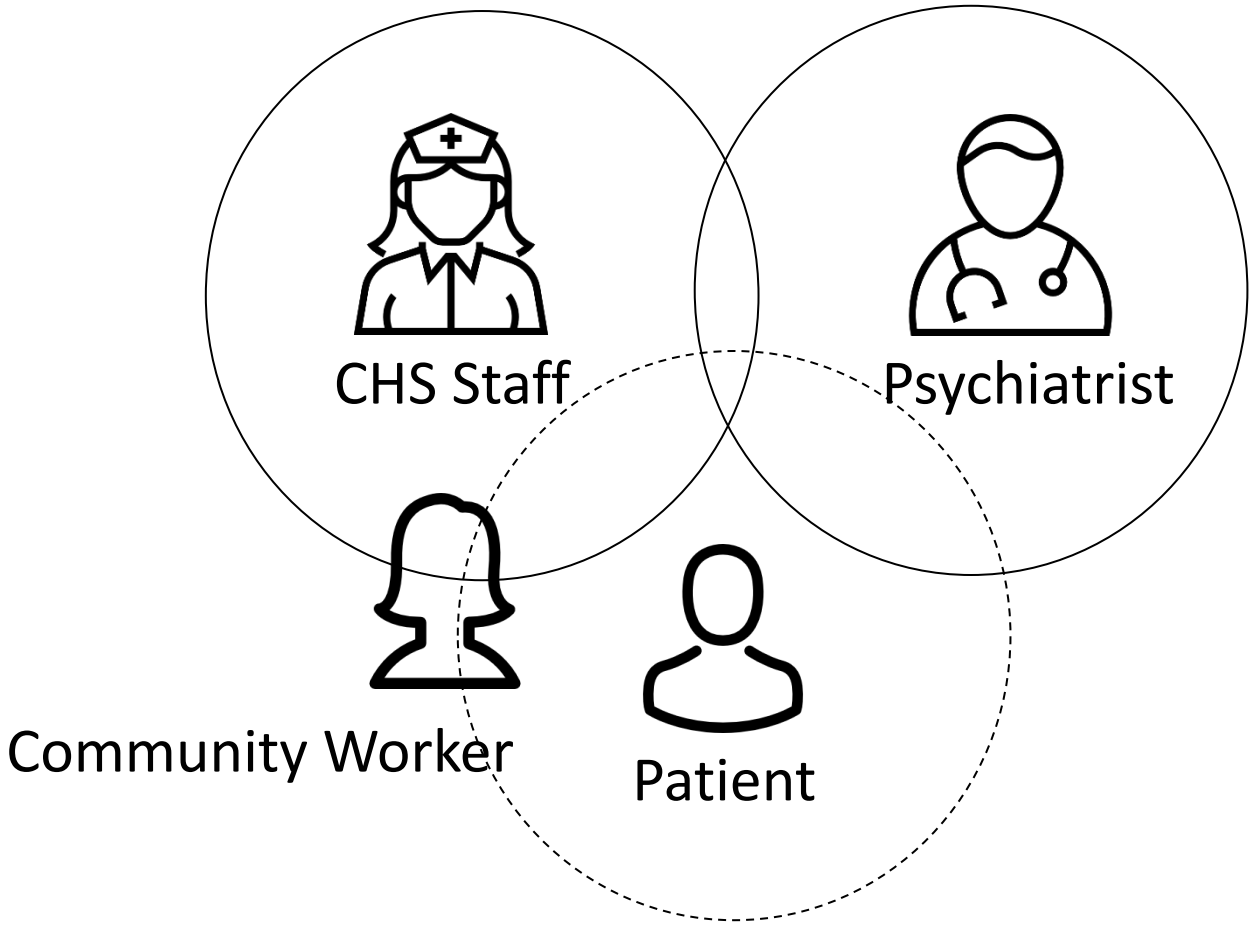
Unmet Need Is Great!



- 2 psychiatric hospitals
- Da Nang—37 psychiatrists for 800,000 people
- Khanh Hoa—7 psychiatrists for 1.2 million people
- 20–30% adults in these provinces estimated to be at risk for common mental health problems

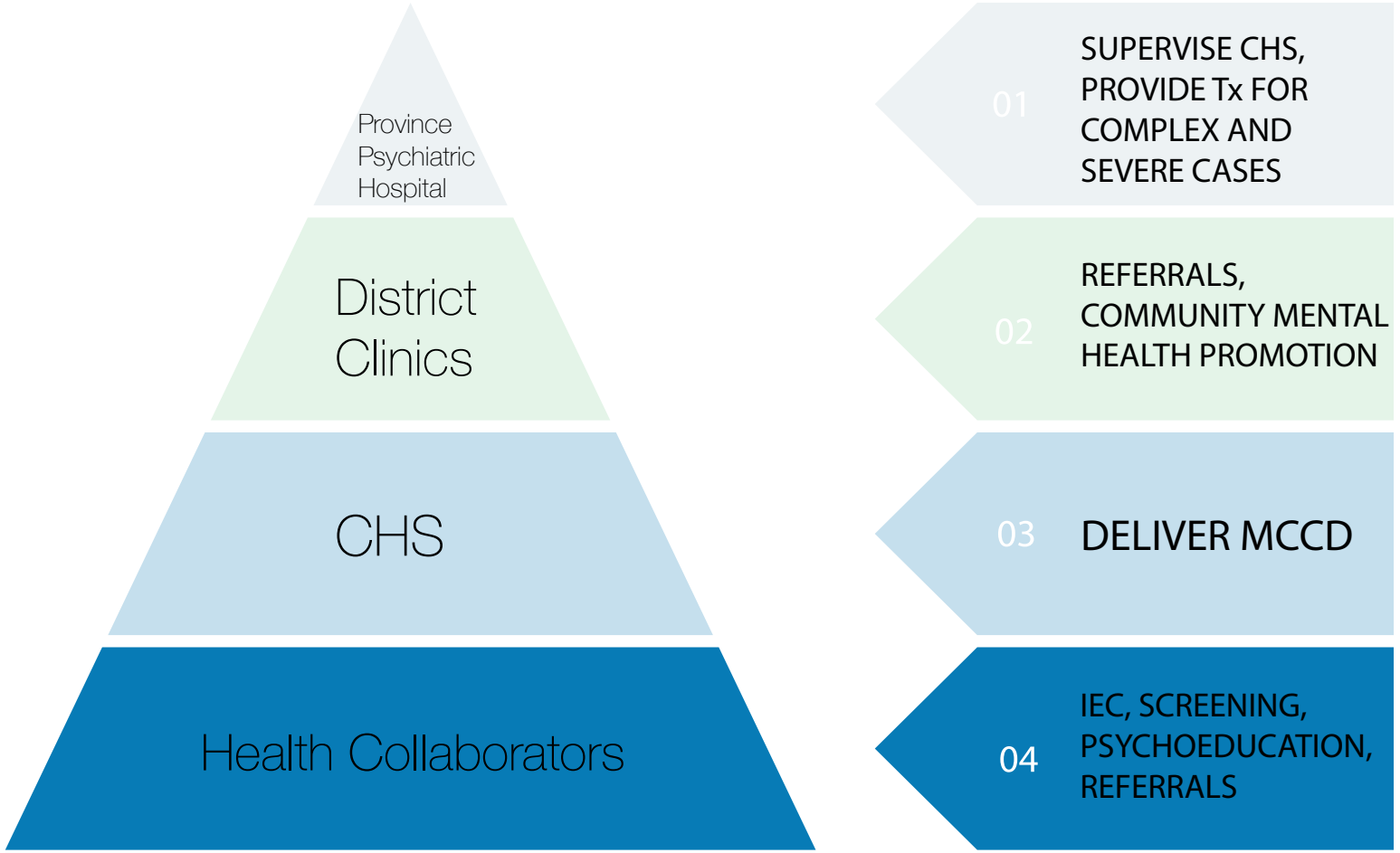
Vietnam Health System





Commune Health Stations (Primary Care)

Psychiatric Hospital (Mental Health)



COLLABORATIVE STEPPED CARE MODEL

MCCD COMPONENTS

01

COMMUNITY MENTAL HEALTH PROMOTION /IEC

02

SCREENING AND ASSESSMENT

03

PSYCHOEDUCATION

04

DEPRESSION MANAGEMENT TREATMENT OPTIONS:

Individual Therapy

Medication Management (6 months)

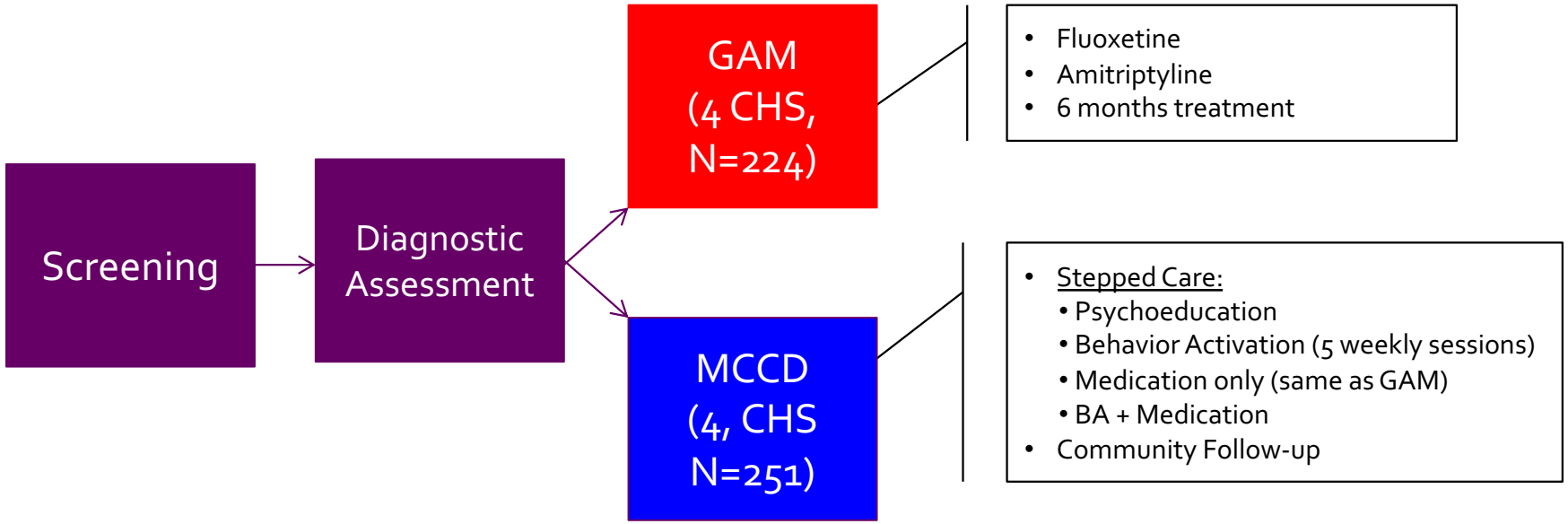
Both Therapy and Meds

05

FOLLOW-UP SUPPORT / HOME VISITS (OPTIONAL)

RESEARCH EVALUATION

RCT Study Design



Randomized Controlled Study

Outcome: Depression, Anxiety, Functioning, Healthy Behaviors, Treatment

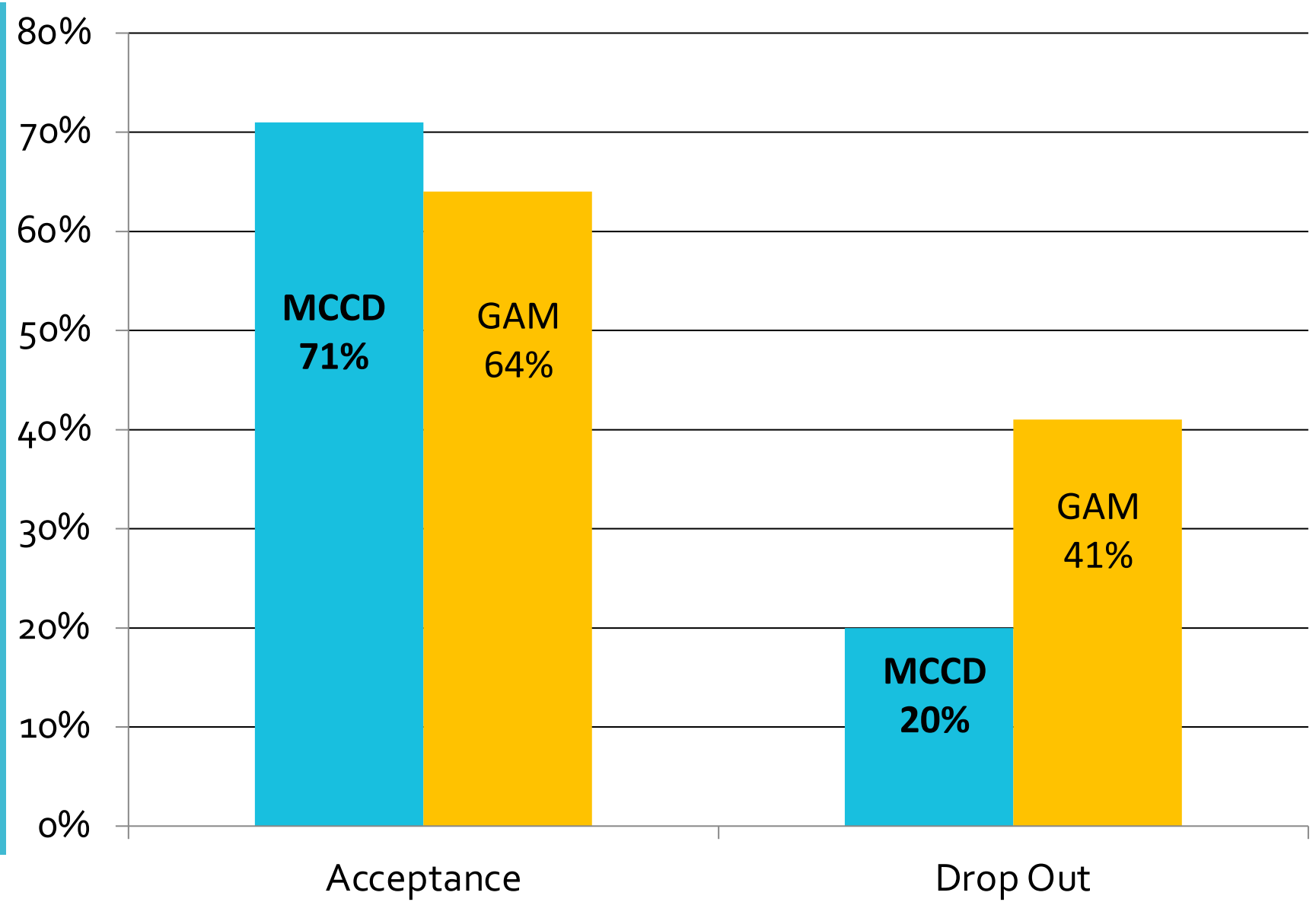
Analyses

- Multilevel models using SAS Proc Mixed and Stata to compare the rates of change across the two conditions
- Four repeated measures were modeled as a function of the intervention, time (0, 6, 12, 24) and their interaction effects
- Propensity weights were used to adjust for inequivalence of groups at baseline
- Intent to treat analyses
- Outcomes:
    - Mental Health (Depression Diagnoses, PHQs, GAD)
    - Health Functioning (SF-12) – Physical Functioning and Mental Health Functioning

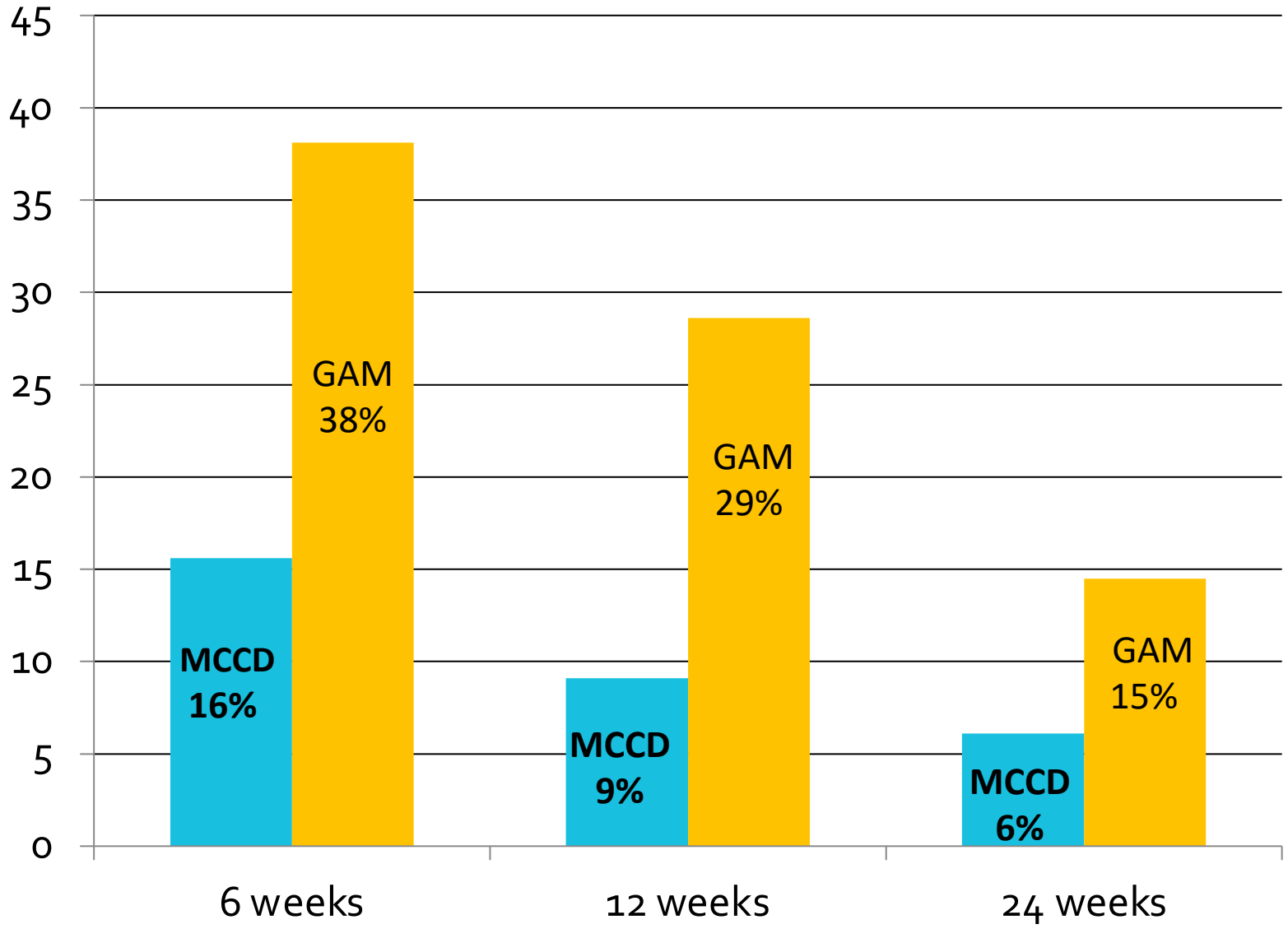
Sample Characteristics

- N = 475, MCCD =251 , GAM=224
- Age, X=49.58 (SD 10.43)
- 76% Female, 68% Married, 88% Buddhist
- Education = 24% < primary, 31.2% primary, 26.7% secondary, 14.1% high school, 4% college
- Occupation = 30% farmers, 27% house work*, 14% workers, 12% hawkers/small business, 6% government workers, 12% others
- Working status* = MCCD (74%), GAM (84%)
- Economic status = 25% poor, 25% near poor, 50% not poor
- Location = 45% rural

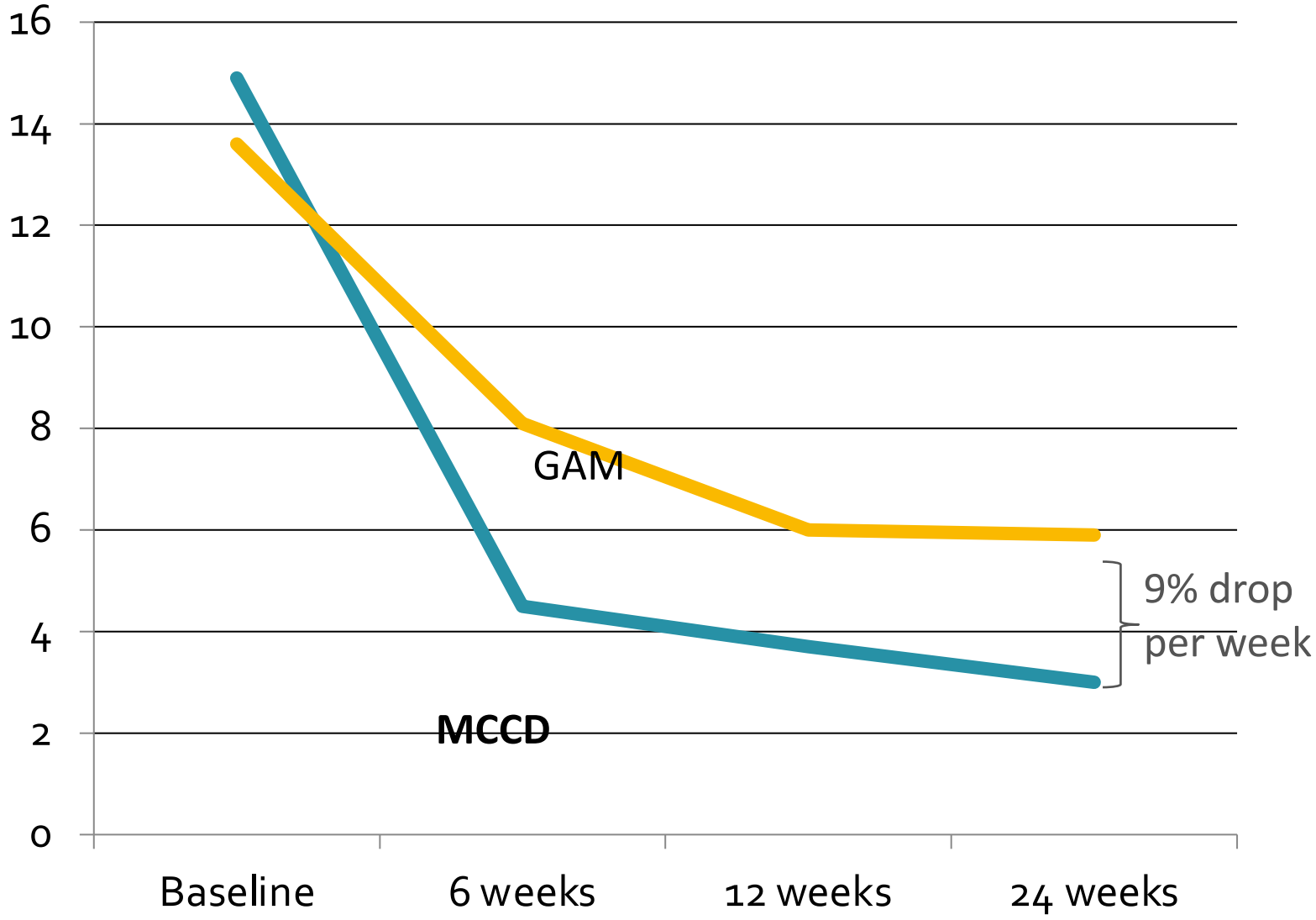
MCCD Improved Treatment Acceptance and Decreased Drop Out



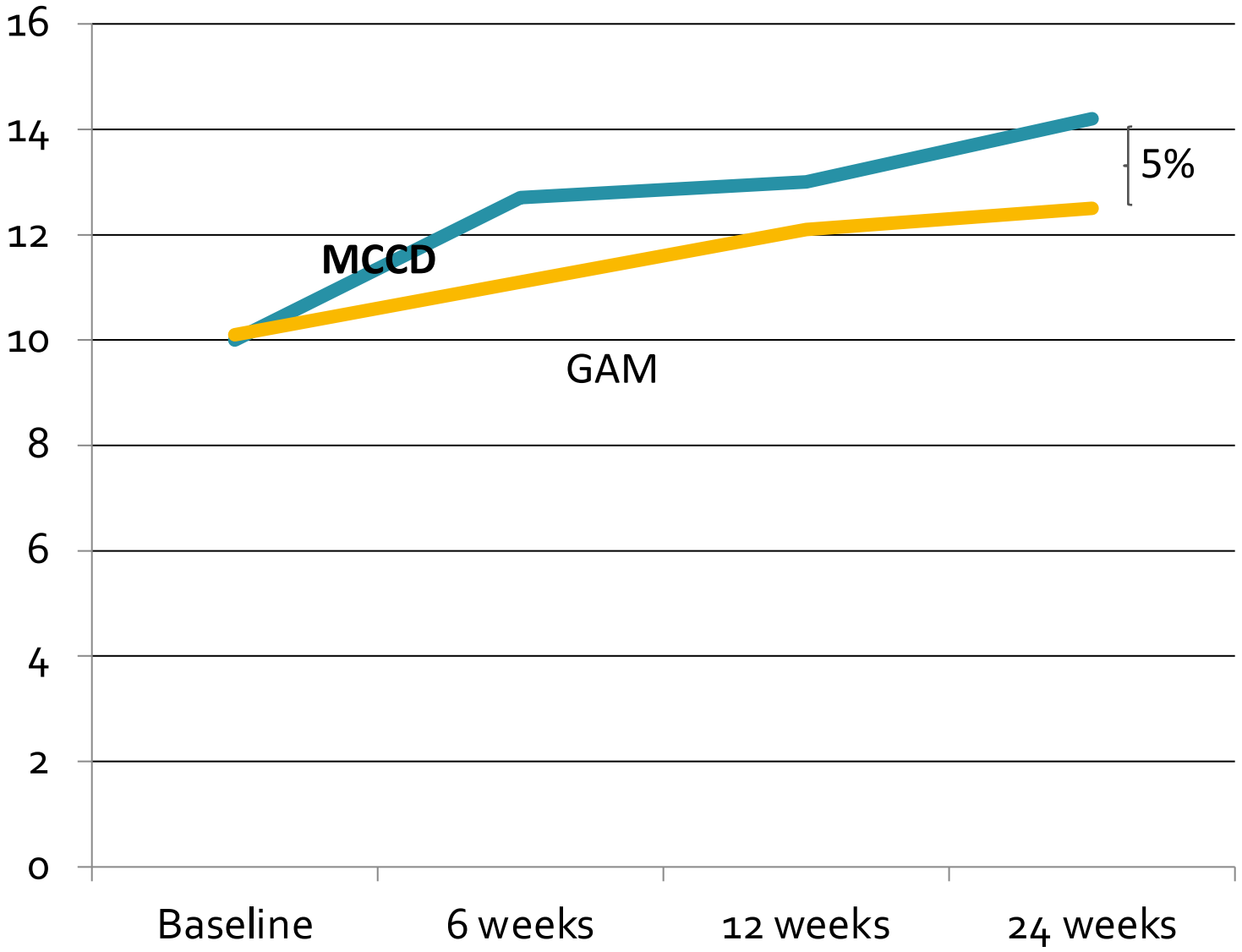
MCCD Reduced Depression



MCCD Reduced Severity of Depression Symptoms



MCCD Improved Health Functioning



Effectiveness of MCCD

- Stepped collaborative care (behavior activation and antidepressant) was superior to guideline care using antidepressant medication at all time points.

- MCCD
  - increased treatment acceptance
  - decreased drop out
  - reduced depression
  - Improved health functioning

- First study in Vietnam to demonstrate that depression care could be task-shifted to community health stations and effectively delivered by primary care providers and even community health workers.

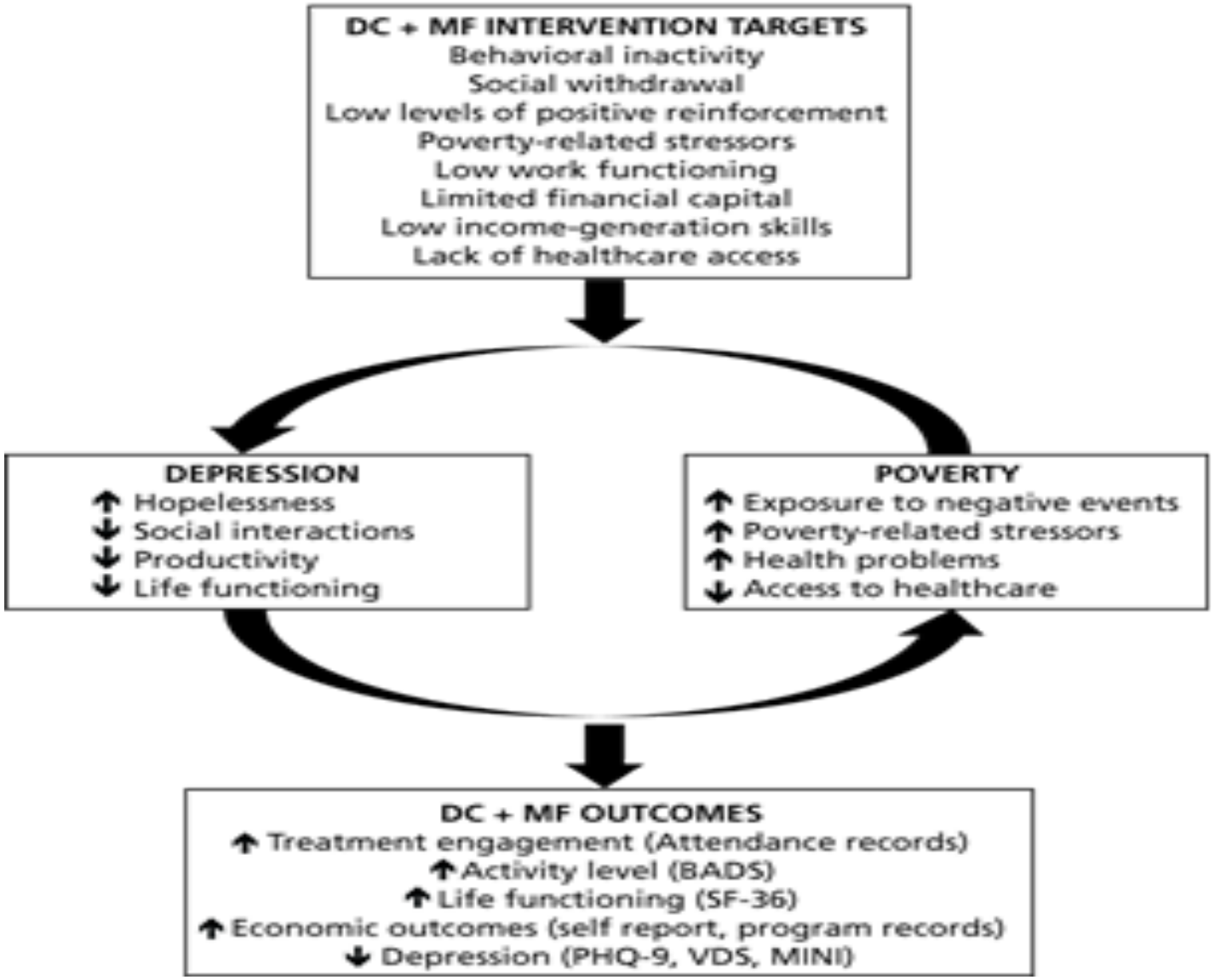
Study #2

Effectiveness of LIFE-DM Compared with Usual Care

What is LIFE-DM?

- Livelihood Integration for Effective Depression Management (LIFE-DM) is a
- U.S. National Institute of Mental Health (NIMH) R34 research study
- Aims of LIFE-DM are to provide low income women in Vietnam with:
  - Effective personal depression management skills
  - Microfinance and other livelihood supports
- Evaluation of outcomes at 6 and 12 months:
  - Depression, income, functioning, quality of life

Figure 1. Conceptual Model for DC + MF Program



Addressing depression and poverty at the same time can break the cycle of depression and poverty

12 session group therapy

mood / stress management

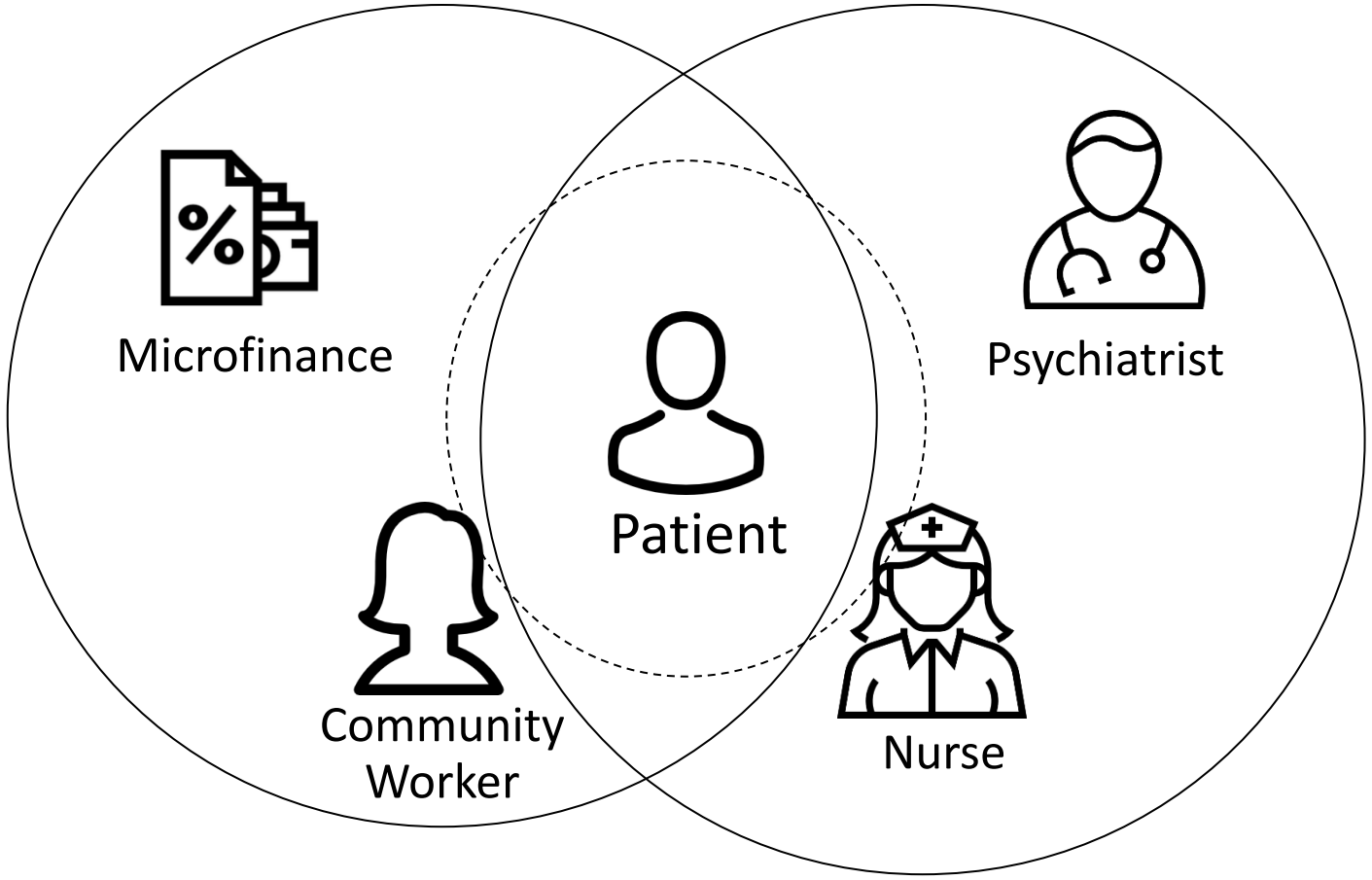
problem solving skills

Life-DM

$150 microfinance loan

livelihood skills

personal finance skills



Collaborative Care for Depression and Poverty

Research Methods

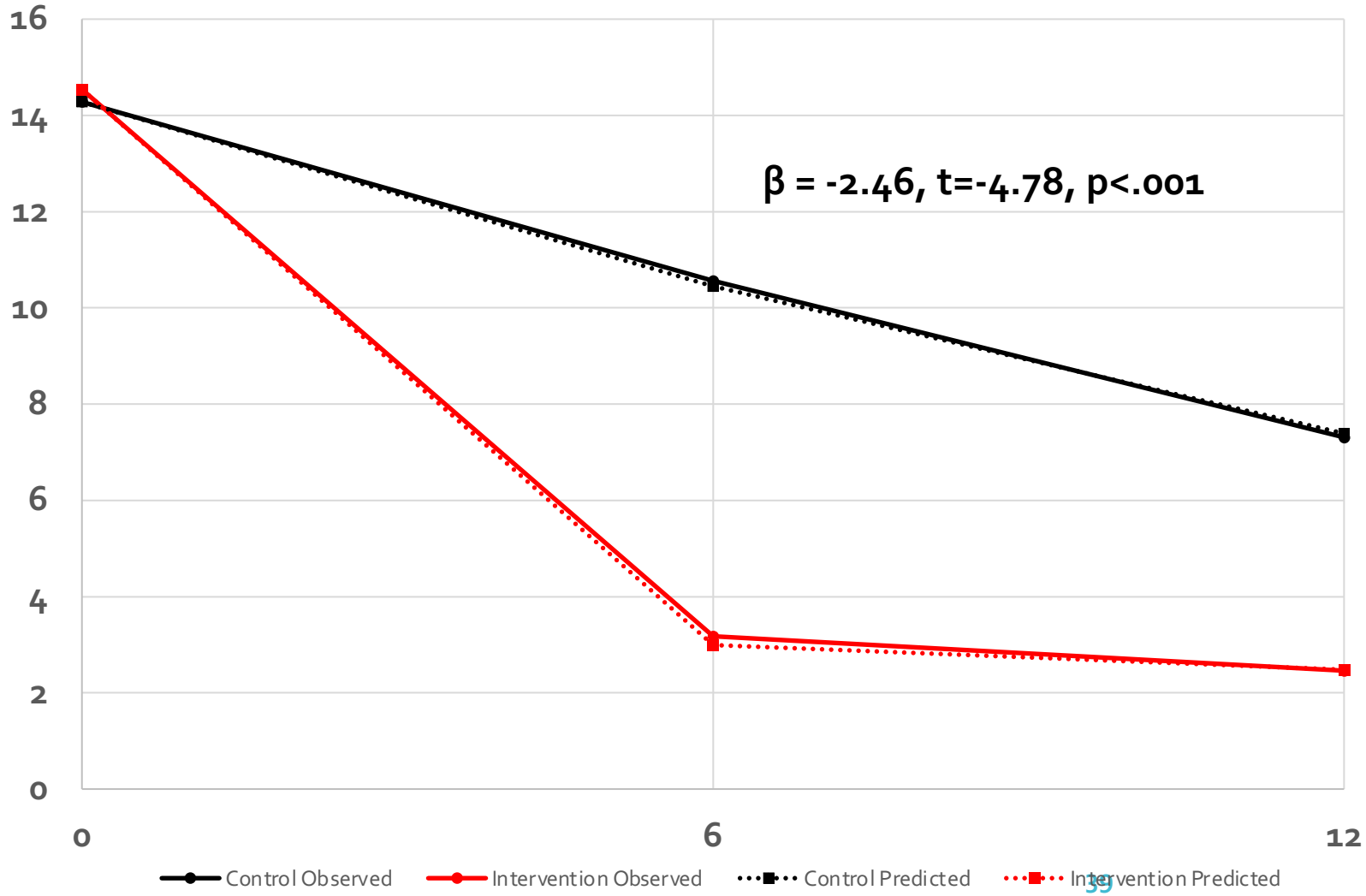
- **Design**: Matched-pairs clustered controlled trial, comparing Life-DM vs Usual Care (UC)
- **Setting**: 4 Commune Health Stations (CHS) in Da Nang
- **Matching criteria**: CHS staff size, CHS director's medical training, number of patients per year, similar demographics
- **Providers:** 8 CHS Nurses and 8 Women's Union community facilitators
- **Sample**: 166 female participants with PHQ > 9, < $95 USD monthly income, aged 18-55 (excluding psychosis, mania, substance abuse, high suicide risk)
- **Outcomes:** Treatment engagement (Mental health visits), depression symptoms (PHQ), anxiety (GAD), health and mental health functioning (SF-12), behavior activation (BADS), income, goal self-efficacy, and social support at 6 and 12 month follow-up

Sample

- **Recruitment/Enrollment**: 198 recruited, 91% (N=180) met criteria, 75% (N=175) consented
- **Sample size**: baseline (N=166), 6-month (N=133, 80%), 12 months (N=130, 78%)
- **Baseline characteristics**: Mean age 43 (SD 8) years, 72% married, 34% are unemployed, 29.6% live under poverty line, average per capita family income is $40.6 (SD $20) per month, 35% have small businesses (mostly market/food vendors), 47% with existing loans.

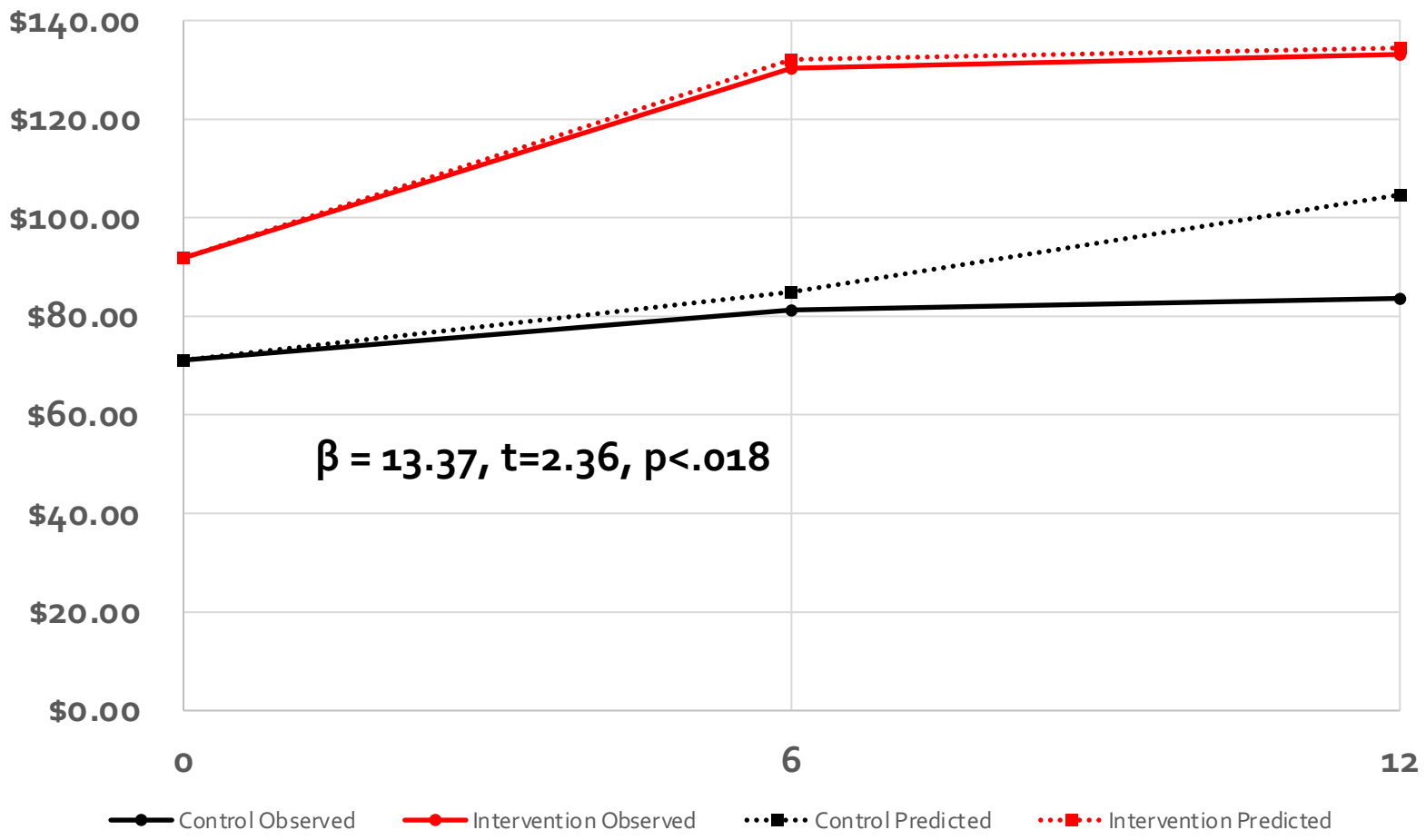
LIFE-DM Reduced Depression

Depression – PHQ-9



LIFE-DM Improved Income

Individual Monthly Income



Effectiveness of LIFE-DM

- LIFE-DM was superior to usual care
  - increasing treatment acceptance
  - reducing depression
  - Improving economic outcomes (income, loans, savings, business difficulty, efficacy, and profitability)
  - Functioning, quality of life, social support and capital, and self-efficacy
  - Effects are strongest at 6 months


HỘI LIÊN HIỆP PHỤ NỮ - TRUNG TÂM VĂN HÓA THỂ THAO
QUẬN HẢI CHÂU
HỘI THI ĐỒNG DIỄN THỂ DỤC THỂ THAO NĂM 2016

Study #3

GCC Scale Up

LIFE-DM Scale-Up Model

- Engagement with leaders to gain political buy-In and resources in the community and health system
- Capacity Building and Quality Improvement of the health system
- Tiered training across 3 phases:
  - 1) Provincial mental health specialist and leaders
  - 2) Workshops and Supervision of commune providers
  - 3) Learning Collaborative to support implementation

Evaluation

- **Goals:**
  - Program Implementation (reach, adoption, implementation quality)
  - Impact on provider outcomes (depression skills)
  - Impact on patient outcomes for LIFE-DM participants
- **Setting**: 8 Commune Health Stations (CHS) in Da Nang and Hue WU sites
- **Participants:**
  - Phase 1: 34 provincial providers
  - Phase 2:
    - 42 commune / district providers
    - 83 patients
  - Phase 3:
    - 49 commune / district providers
    - 91 patients

Provider Outcomes

Measure	Baseline		12-month Follow-up		B T-Test p-value
	N	Mean	N	Mean	
Identifying clients	47	1.40	41	1.80	0.014
Screening for depression	46	1.43	41	1.90	0.004
Educating clients	47	1.36	41	1.85	0.003
Prescribing antidepressants	47	0.19	39	0.59	0.036
Individual counseling	47	1.30	40	1.73	0.016
Referring to specialists	18	1.22	32	1.53	0.199
Providing social support	47	1.13	41	1.56	0.015
Community outreach	47	1.09	41	1.41	0.054
Group therapy counseling	47	0.91	41	1.39	0.008
Supporting livelihood process	30	0.93	41	1.20	0.277

Quotes from Providers

"When attending the training courses, I was nervous, stress and sleepless. Then I think patients have to try to overcome difficulties, why don't I. I myself want to help others, when they are happy, I am happy."

"The project has brought a chance to poor women suffering from depression to open a new page of their life. Because it helps them change their thinking gradually to improve their quality of life."

"Many patients consider depression is crazy. When they attend the group, they understand depression is not crazy. They sing, they dance, do aerobic exercise together. It was so much fun."

Phase 2

Phase 3

Quotes from Patients

"When attending the training courses, I was nervous, stress and sleepless. Then I think patients have to try to overcome difficulties, why don't I. I myself want to help others, when they are happy, I am happy."

"The project has brought a chance to poor women suffering from depression to open a new page of their life. Because it helps them change their thinking gradually to improve their quality of life."

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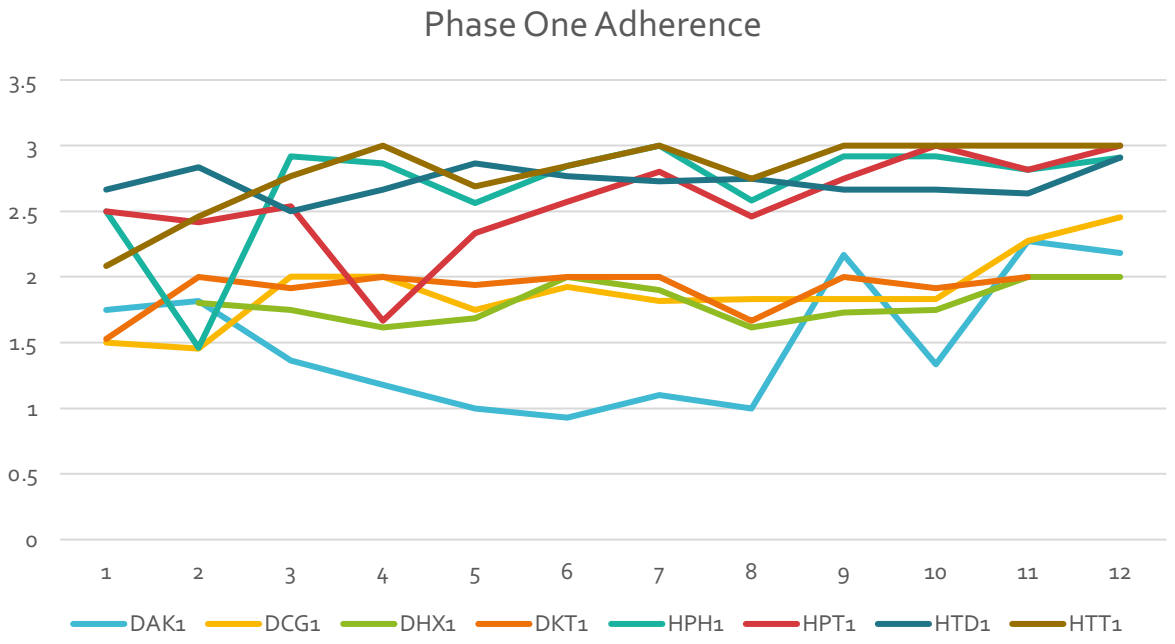
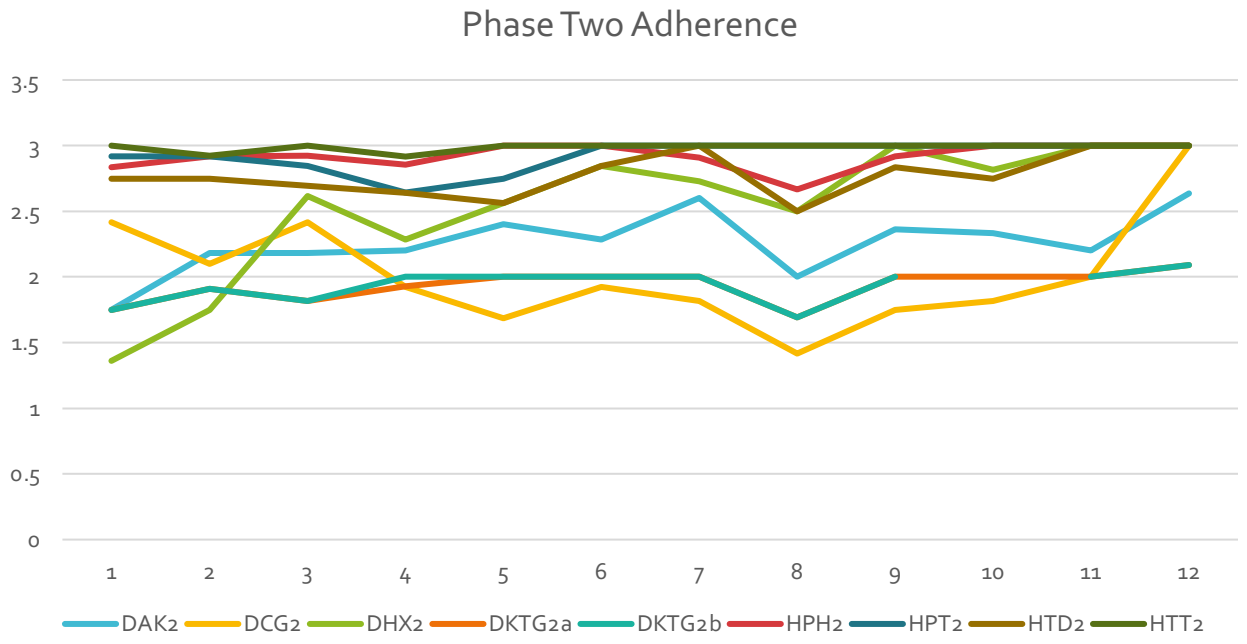




	# Patients	# Dropped	# Completed	# Sessions	Practice	Participate	Adherence	Quality
Phase 2	62	8 (13%)	53 (85%)	9.9	1.43	1.66	2.24 (.54)	2.53 (.50)
Phase 3	84	6 (7%)	71 (85%)	10.3	1.16	1.33	2.48 (.49)	2.62 (.50)

Adherence and Quality

Patient Outcomes

Measure	Baseline		6-month Follow-up		B T-Test p-value
	N	Mean	N	Mean	
Depression Score[1] (PHQ-9; 0-27)	132	13.84	119	5.13	0.000
Anxiety Score (GAD-7; 0-21)	140	9.65	121	4.22	0.000
Physical Health Functioning (SF12v1 PCS; 0-100)	135	35.00	115	36.63	0.028
Mental Health Functioning (SF12v1 MCS; 0-100)	135	32.81	115	46.40	0.000
Quality of Life (Q-LES-Q-SF; percent)	136	0.35	119	0.48	0.000
Self-efficacy (adapted from AACTG; 0-10)	136	5.32	101	6.38	0.000
Behavioral Activation (BADS; 0-54)	137	22.45	118	31.10	0.000
Social Support Index (MOS; 0-100)	138	46.26	119	58.51	0.001
Number of groups - receive support from	137	0.54	119	0.82	0.002
General Family Functioning (FAD; 1-4)	138	2.29	117	2.13	0.000
Child Strengths and Difficulties Questionnaire (SDQ; 0-40)	41	8.83	33	5.09	0.016

[1]Due to missing data in patient surveys, the PHQ-9 scores were supplemented with implementation data. At baseline, 17 scores come from patient surveys, while 115 scores come from implementation data (first group treatment session). At 6-months follow-up, 85 scores come from patient surveys, while 34 scores come from implementation data (last group treatment session).

Effectiveness of GCC Scale-up

- Improved mental health outcomes and general functioning of participants
- Increased participants' ability to improve livelihood / economic outcomes in areas such as income generation, business management, and work productivity
- Improved family functioning
- Improved partner or caregivers' mental health and functioning
- Improved socio-emotional functioning for one child identified to have problematic behavior

Effectiveness of GCC Scale-up

At the system implementation level:

- Increased reach and adoption of depression care services in the community
- Improved quality of depression care
- Improved the depression care knowledge, attitudes, and practices of providers

Guiding Research Questions

Can depression care be task-shifted and shared with non-mental health providers?
YES

What implementation models is the most effective, sustainable, and cost-effective model for scaling up depression care?

What factors are associated with adoption and quality of depression care?

R01 Goals

- To address the research gaps in implementation science related to task-shifting mental health services in LMIC contexts:

Specific Aims:

1. Conduct comparative effectiveness of three implementation strategies: a) usual implementation, b) enhanced supervision, and c) community-engaged learning collaborative, using the RE-AIM framework (adoption, effectiveness, reach, implementation quality and maintenance)
2. To assess factors (organizational, provider) associated with implementation (adoption, implementation quality and sustainability)
3. To conduct cost-effectiveness analyses to quantify the cost savings to policymakers for various strategies for task-shifting depression treatment to primary care

Aim #1a

Compare the effectiveness of the 3 implementation strategy on RE-AIM outcomes
Compare effect on adoption and implementation quality at 0, 6, 12, and 24 months

Reach

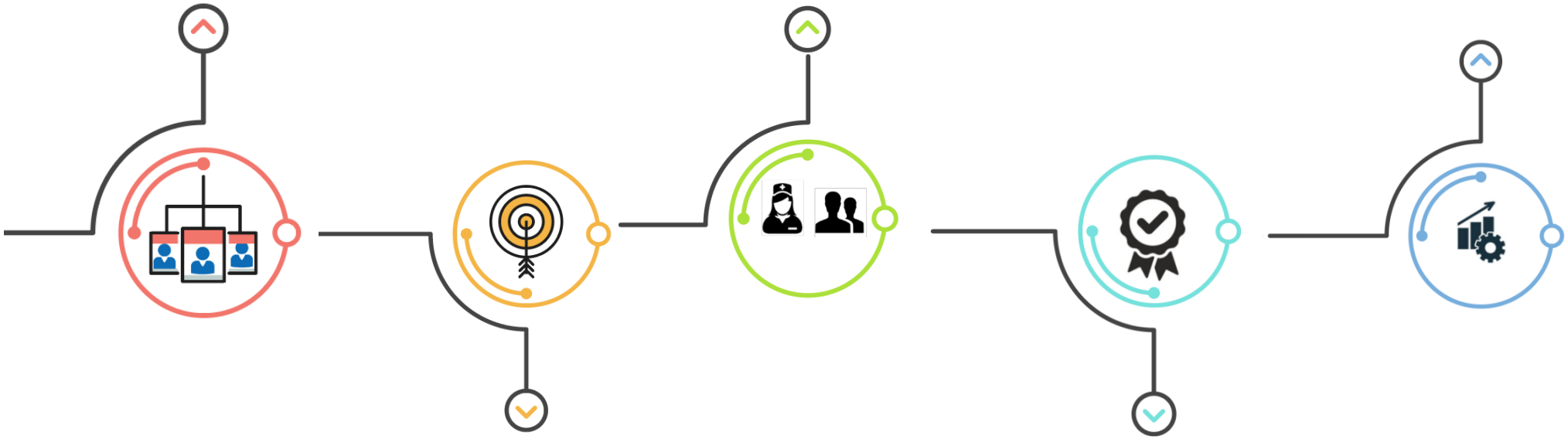
#of depressed patients that receive screening and depression services

Adoption

#,% of providers that provide depression care components, amount of depression care components provided by each provider

Maintenance

REAIM outcomes at 24 months



Effectiveness

improvement of depression and functioning for depressed patients enrolled in the patient outcome study

Implementation Quality

provider competence in depression care, adherence / zquality of therapy, model implementation quality indicators

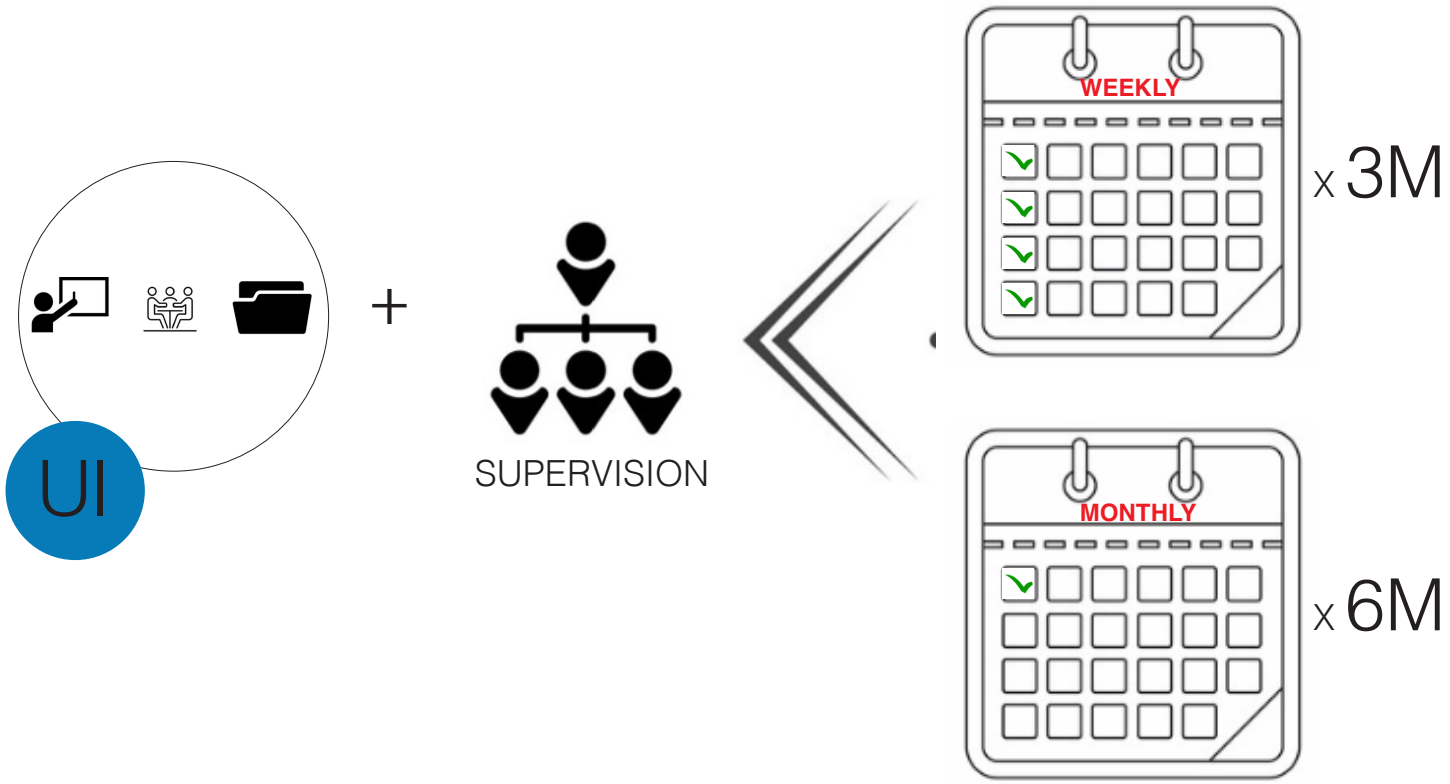
USUAL IMPLEMENTATION UI

WORKSHOPS

PLANNING

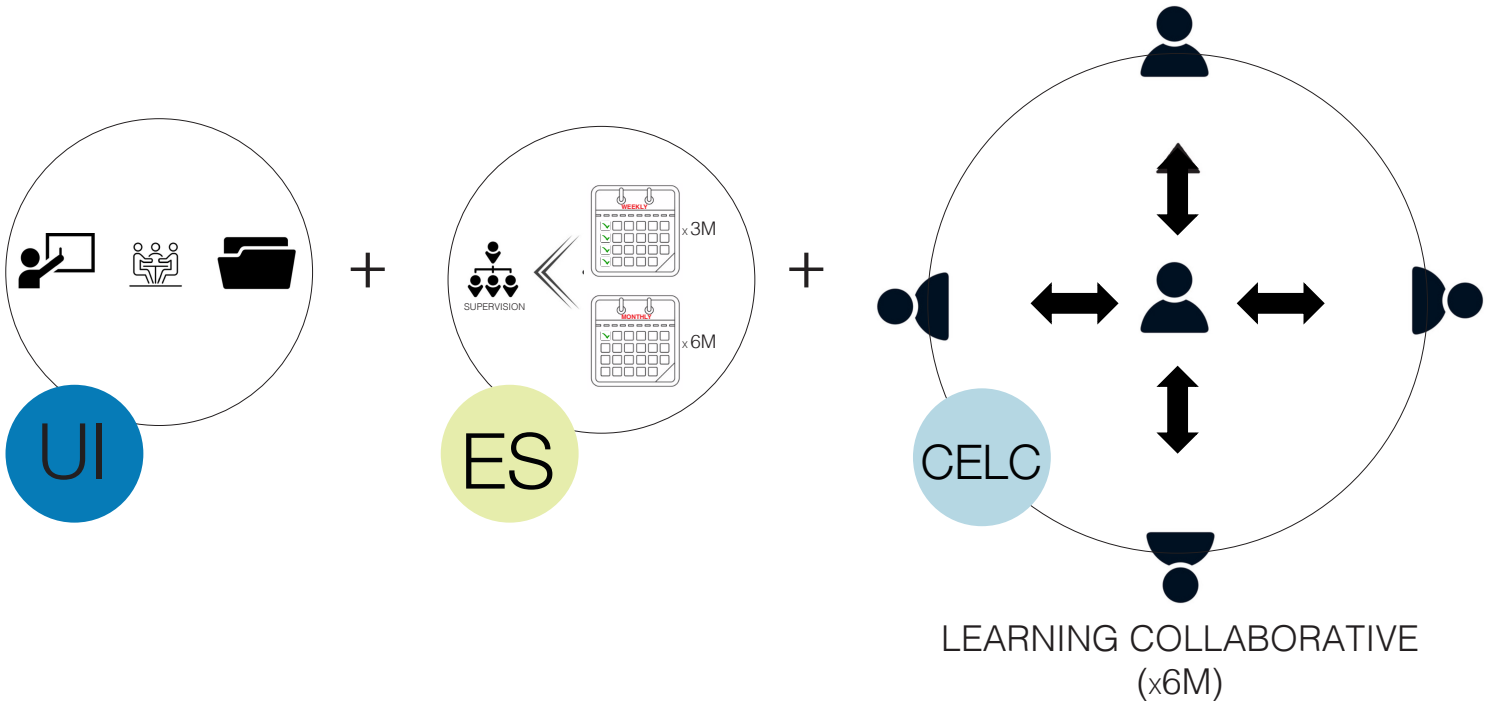
TOOLKIT

ENHANCED SUPERVISION ES

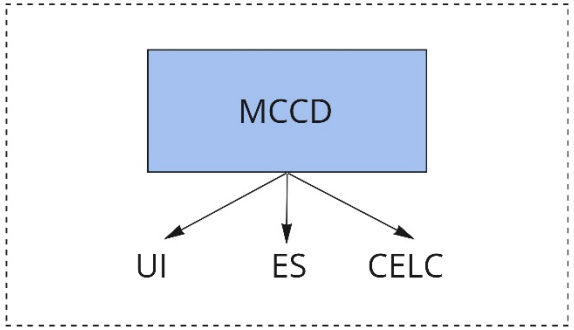


COMMUNITY-ENGAGED LEARNING COLLABORATIVE

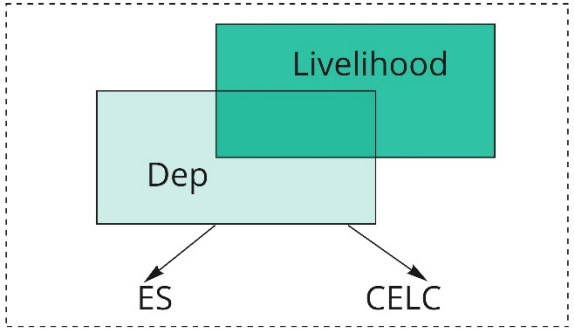
CELC



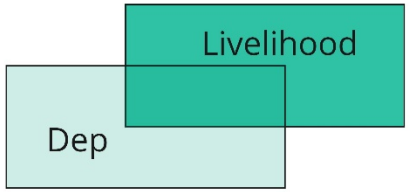
Evolution of Depression Care Studies



R01 Depression Scale-Up
Process Training + Implementation Support
UI vs. ES vs. CELC



GCC Transition to Scale
Develop and Pilot Delivery Model for LIFE-DM
Process Training + Implementation Support
ES vs. CELC



LIFE-DM System Intervention
Women, Poverty, Depression
UC vs. LIFE-DM

MCCD System Intervention
Comparative Effectiveness
MCCD vs. Guideline Medications

Lessons Learned

- Task-shifting and system integration can improve access and quality of care
- Early focus on implementation barriers
- Community engagement and planning was key to successful implementation
- Leveraging existing social services / programs reduced burden on health system
- Adequate support mechanism such as collaborative care or a team-based approach
- Appropriate supervision was necessary
- Dual approach for depression and poverty was particularly critical for women

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Development of Community Based Depression Care: AP grant to Vietnam Veterans of America Foundation; Project Managers: T. Nguyen and M.H.Nguyen; Lead Scientific Advisor: Ngo, 2008-2012.

Development of LIFE-DM In Danang: NIMH R34MH094648, PI: Ngo, Vietnam PI: Lam, Community Manager: T. Nguyen; 2012-2016.

LIFE-DM Scale Up Model for Danang and T.T. Hue: GCC 0789-05, PI: Nguyen & Ngo; 2016-2019.

RCT for Depression Care Implementation Model: NIMH R01MH112630; PI: Ngo; Vietnam Co-PIs: T. Lam & T. Nguyen; 2018-2023.

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Thank You!

Please contact me at Victoria.ngo@sph.cuny.edu for additional information.