FROM IMPLEMENTATION RESEARCH TO IMPACT

The GACD Diabetes Research Programme Report

Online launch event on World Diabetes Day

Thursday 14 November 2024

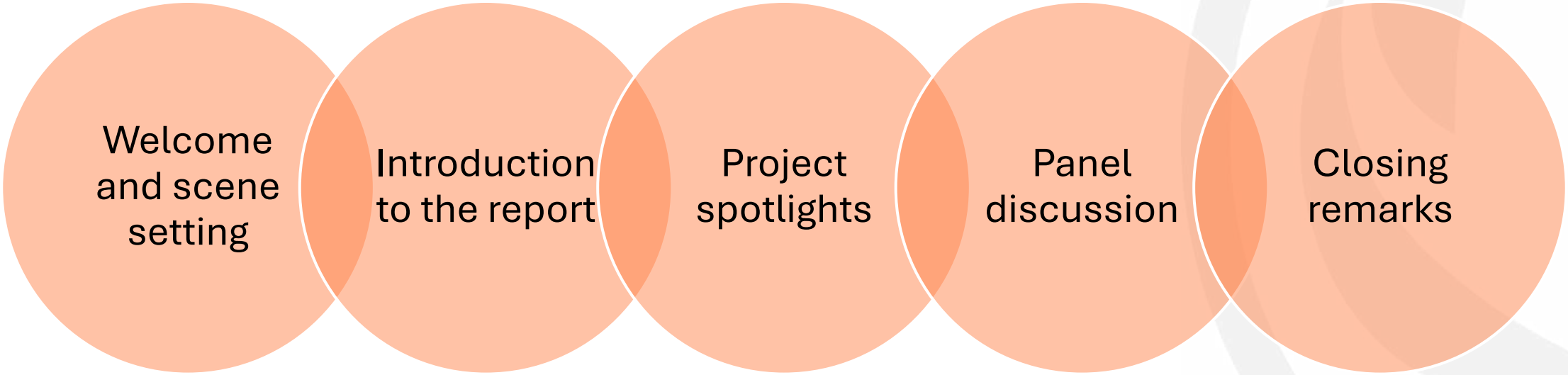
This event is being recorded

Please mute yourself, unless asking a question

If you can, please leave your camera on ☺

Please use the chat box to ask questions and share reflections

Overview of today’s launch event



The Global Alliance for Chronic Diseases (GACD)

- GACD is the first collaboration of major research funding agencies to address chronic, non-communicable diseases.
- Together, the members of the alliance represent 80% of global public funding for health research.

National Health and Medical Research Council, Australia

Sao Paulo Research Foundation, Brazil

Canadian Institutes of Health Research

European Commission

Indian Council of Medical Research

Agency for Medical Research and Development, Japan

Health Research Council of New Zealand

South African Medical Research Council

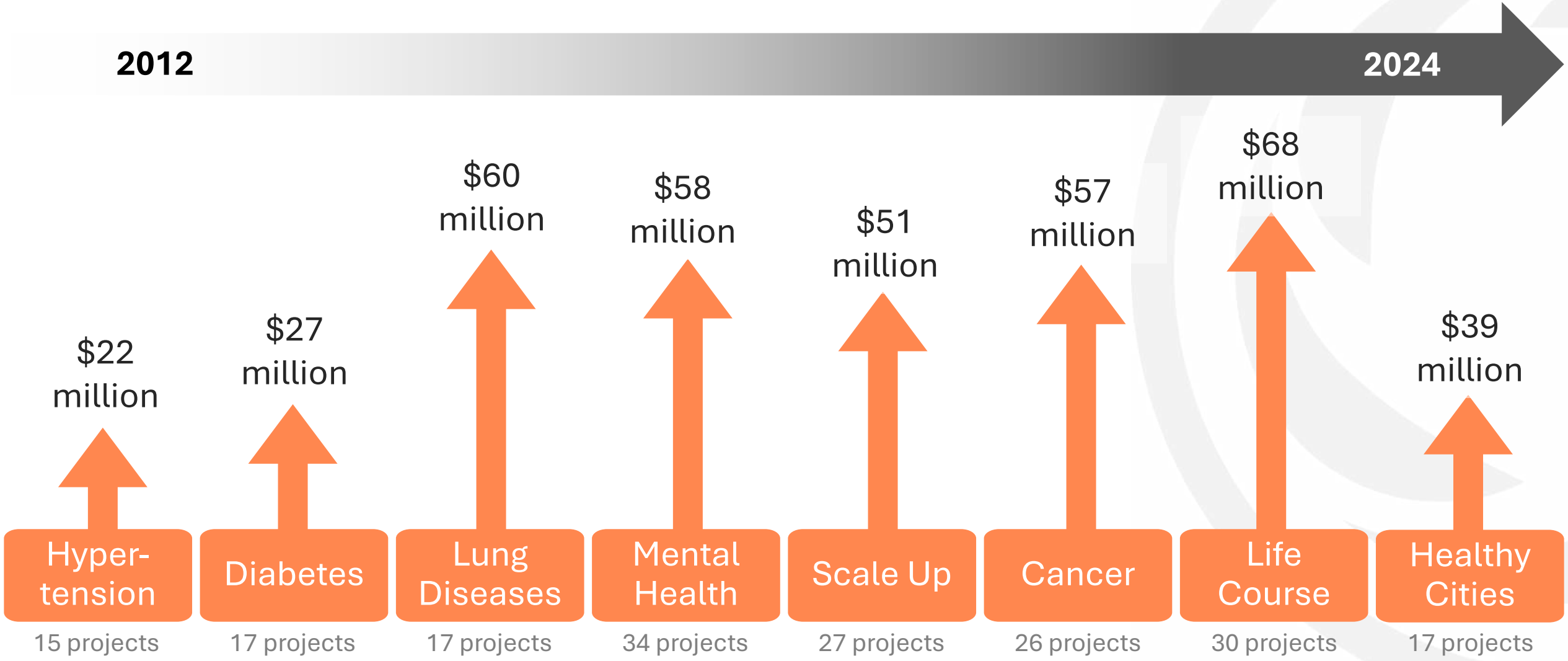
Health Systems Research Institute, Thailand

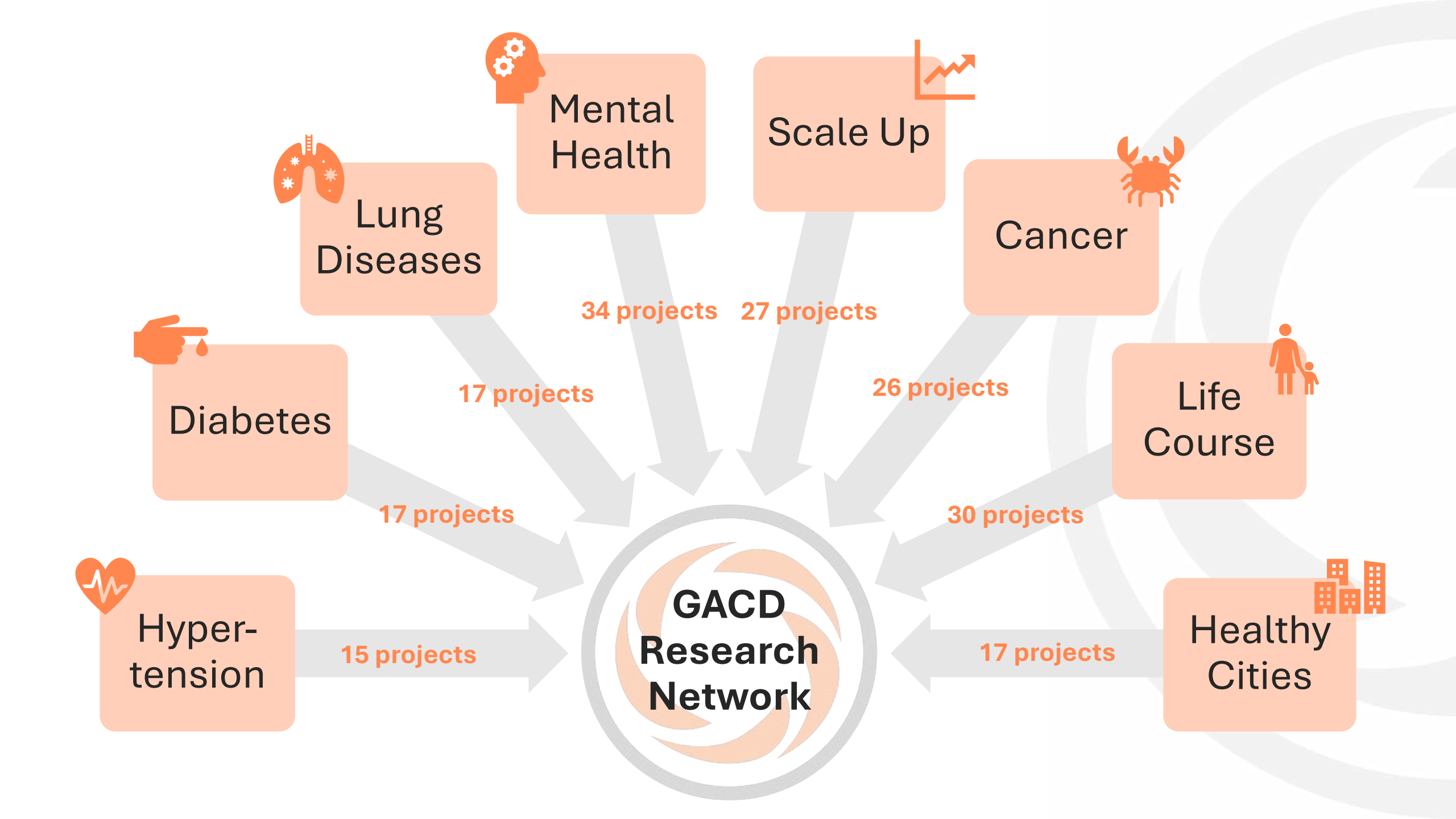
UK Medical Research Council

UK Department of Health and Social Care

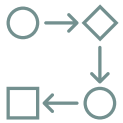
US National Institutes of Health

GACD has invested US $375+ million




Mental Health
Scale Up
Lung Diseases
Cancer
34 projects
27 projects
Diabetes
17 projects
26 projects
Life Course
17 projects
30 projects
Hyper-tension
15 projects
GACD Research Network
17 projects
Healthy Cities

Products



Procedures

Programmes

Practices

Policies

Pills

Principles

Does THE THING ***work***?

How can we best help people and places to ***do*** THE THING?

Implementation strategies are the ***stuff we do*** to help people and places do THE THING

Implementation outcomes are ***how much*** and ***how well*** they do THE THING

Introduction to the GACD Diabetes Report

Maisha Syed – lead report author

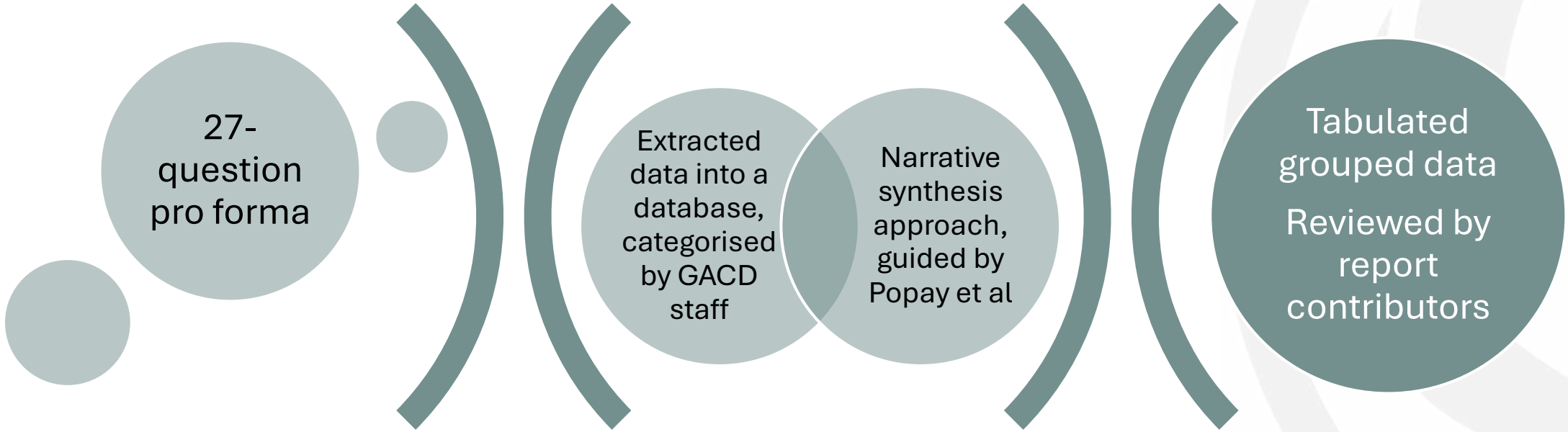
Carolyn Johnson – Programme Manager

Margaret Bee – Senior Impact & Policy Manager

Aims of the report

1. **Summarise** the 14 GACD-funded diabetes implementation research projects
2. Provide an **initial synthesis** and appraisal of the methods, strategies, results, and impact
3. Serve as a **springboard** for researchers to further consider future meta-syntheses of implementation science projects
4. Invite readers to **build on the interpretations** presented

Preparation of the report



Data collection

Analysis

Interpretation

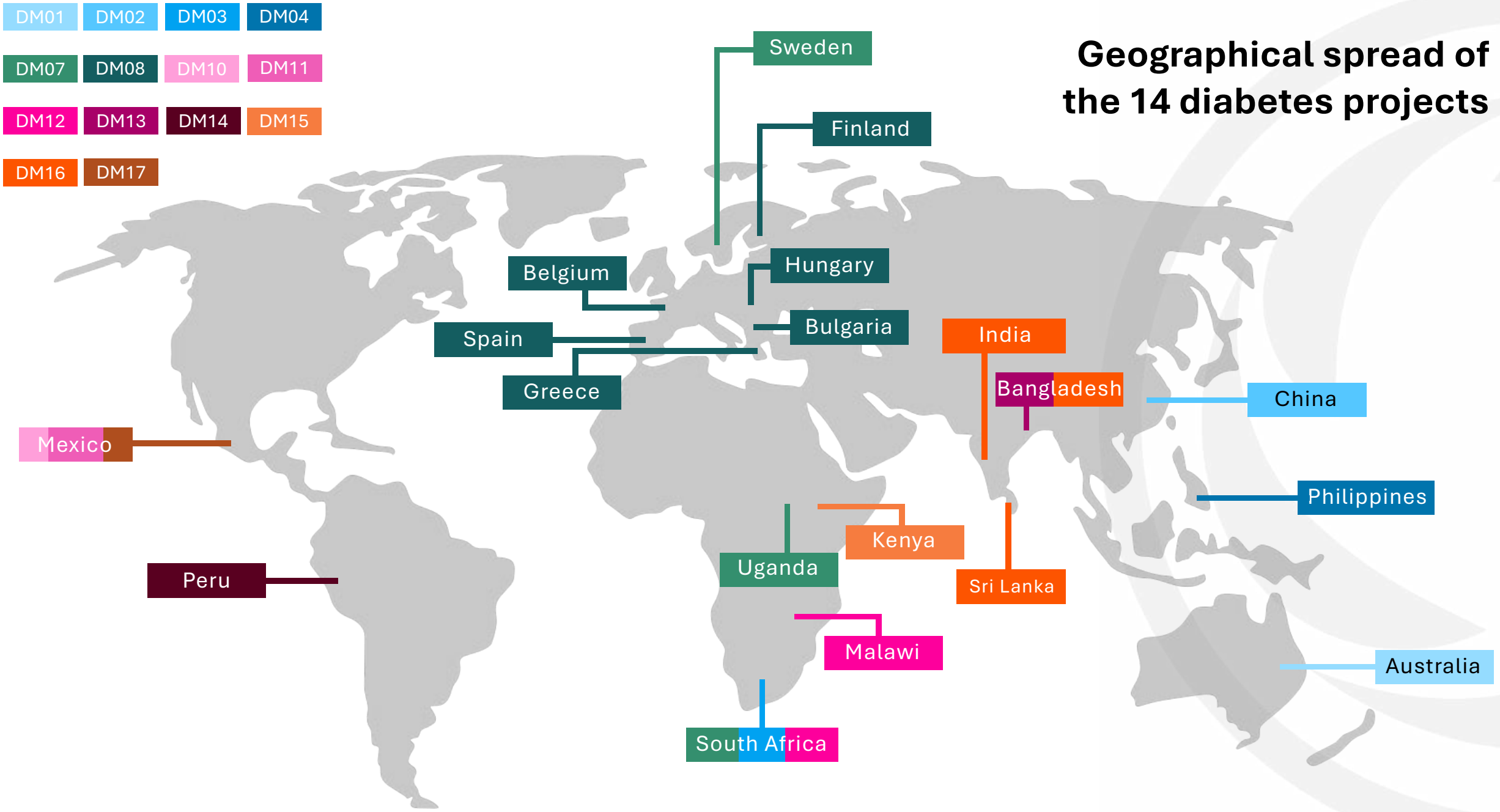
Total funding for the programme exceeded $21 million (USD)

GACD Associate Member (funding agency)	Country or region	No. of diabetes projects funded
National Health and Medical Research Council	Australia	3
Canadian Institutes of Health Research with International Development Research Canada	Canada	4
South African Medical Research Council	South Africa	2
European Commission	Europe	2
Consejo Nacional de Humanidades, Ciencias y Tecnologías (CONACyT) [National Council of Humanities, Sciences and Technologies]	Mexico	2
UK Medical Research Council	UK	2
US National Institutes of Health	US	3
Indian Council of Medical Research	India	1
Chinese Academy of Medical Sciences	China	2

Due to co-funding arrangements, some projects are listed under more than one agency.

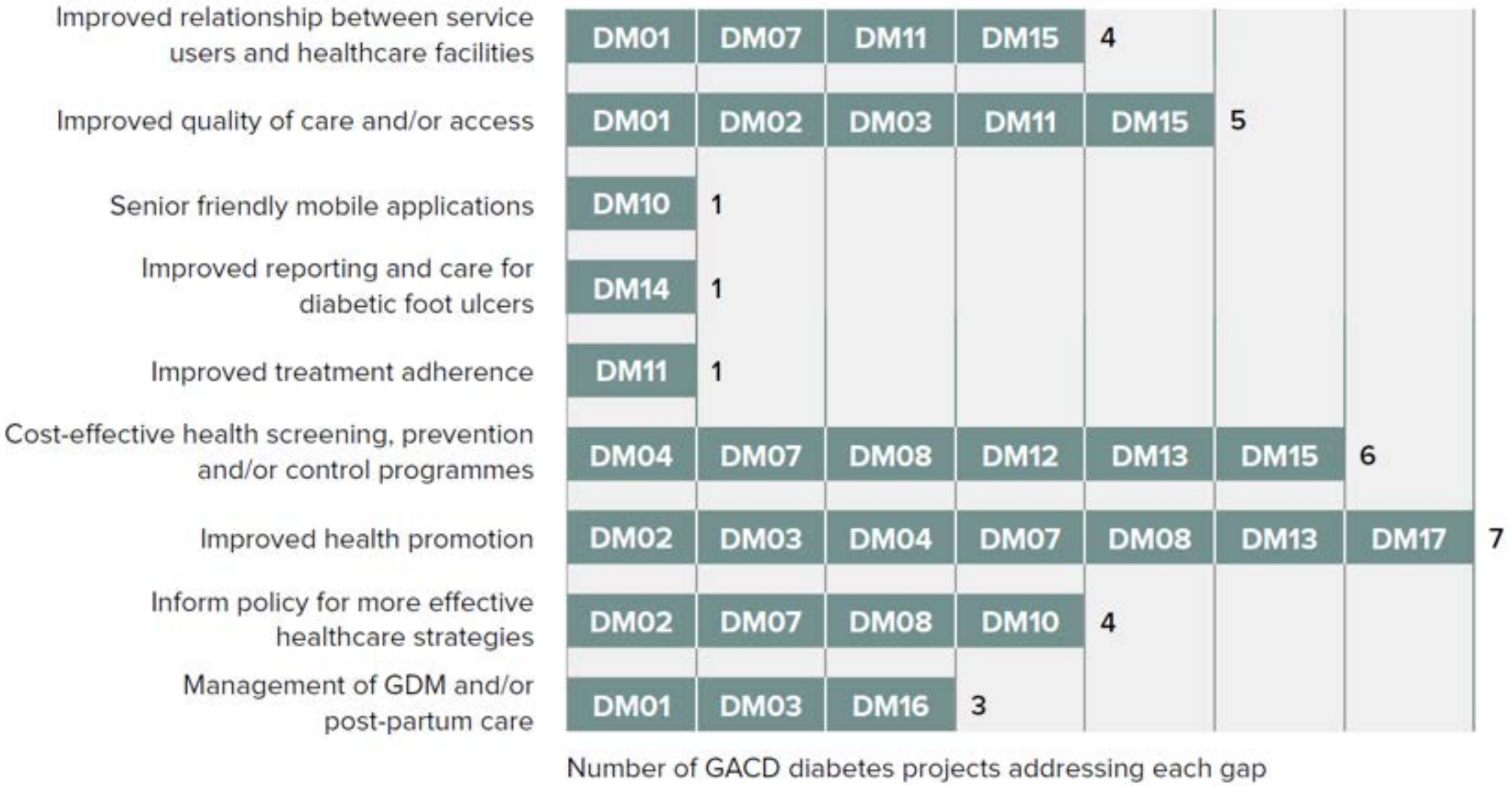
DM01	Improving the management of diabetes in pregnancy in remote Australia
DM02	SMART Diabetes: **S**ystematic **M**edical **A**ssessment, **R**eferral and **T**reatment for **Diabetes** care in China using Lay Family Health Promoters
DM03	IINDIAGO: **I**ntegrated **IN**tervention for **DIA**betes r**I**sk after **G**estati**O**nal diabetes
DM04	CHAPP: **C**ommunity **H**ealth **A**ssessment **P**rogram in the **P**hilippines
DM07	SMART2D: A people-centred approach through **S**elf-**MA**nagement and **R**eciprocal learning for the prevention and management of **T**ype **2** **D**iabetes
DM08	Feel4Diabetes (**F**amilies across **E**urope following a h**E**althy **L**ifestyle **4 Diabetes** prevention
DM10	Development of an interactive social network for metabolic control of patients with diabetes
DM11	Development and validation of software to provide medical treatment and patient empowerment to type 2 diabetics, through interaction with medical staff and real-time recording]
DM12	Mobile phone text-messaging to support treatment for people with type 2 diabetes in sub-Saharan Africa: a pragmatic individually randomised trial
DM13	The Bangladesh D-Magic Trial: **D**iabetes **M**ellitus **A**ction through **G**roups or **I**nformation for better **C**ontrol
DM14	Implementation of foot thermometry and SMS to prevent diabetic foot ulcer
DM15	BIGPIC: **B**ridging **I**ncome **G**eneration with **G**roup **I**ntegrated **C**are
DM16	A lifestyle intervention program for the prevention of type 2 diabetes mellitus among South Asian women with gestational diabetes mellitus
DM17	Tools and practices to reduce CVD and complications in diabetics in Mexico

Geographical spread of the 14 diabetes projects



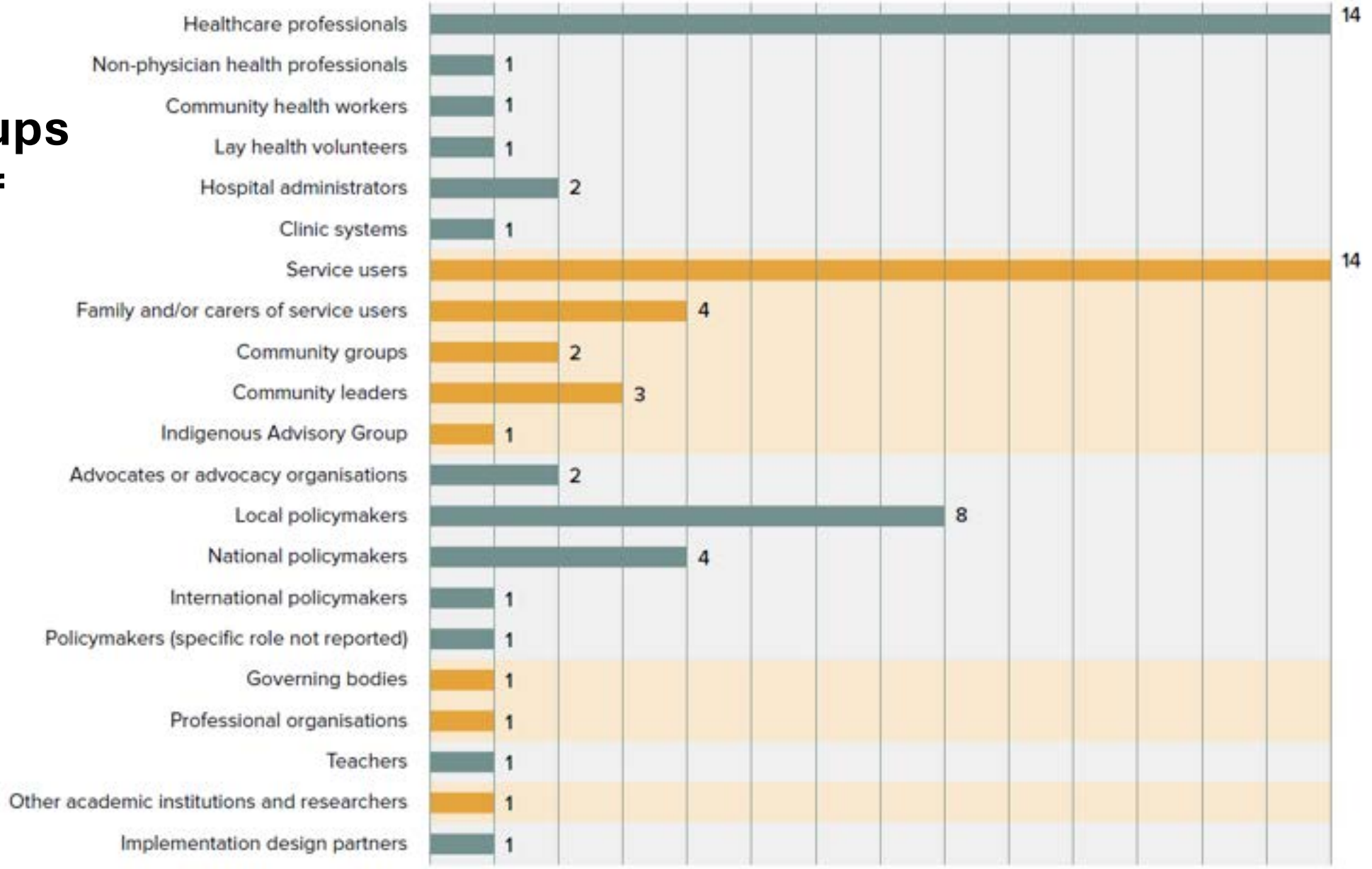
www.gacd.org/our-impact/diabetes-report

Implementation gaps addressed by the 14 diabetes projects



www.gacd.org/our-impact/diabetes-report

Stakeholder groups and frequency of engagement



www.gacd.org/our-impact/diabetes-report

Six different study designs were used across projects

- A feasibility study
- A prospective observational study
- Pre/post analyses
- A hybrid type 2 effectiveness-implementation study
- Individual randomised trial
- Cluster randomised trials

Mixed methods were the most favoured approach by researchers

Theories, models, and frameworks (TMFs)

Total

- 17 TMFs used across different functions

Most common

- COM-B, RE-AIM, and the MRC Framework

Applications

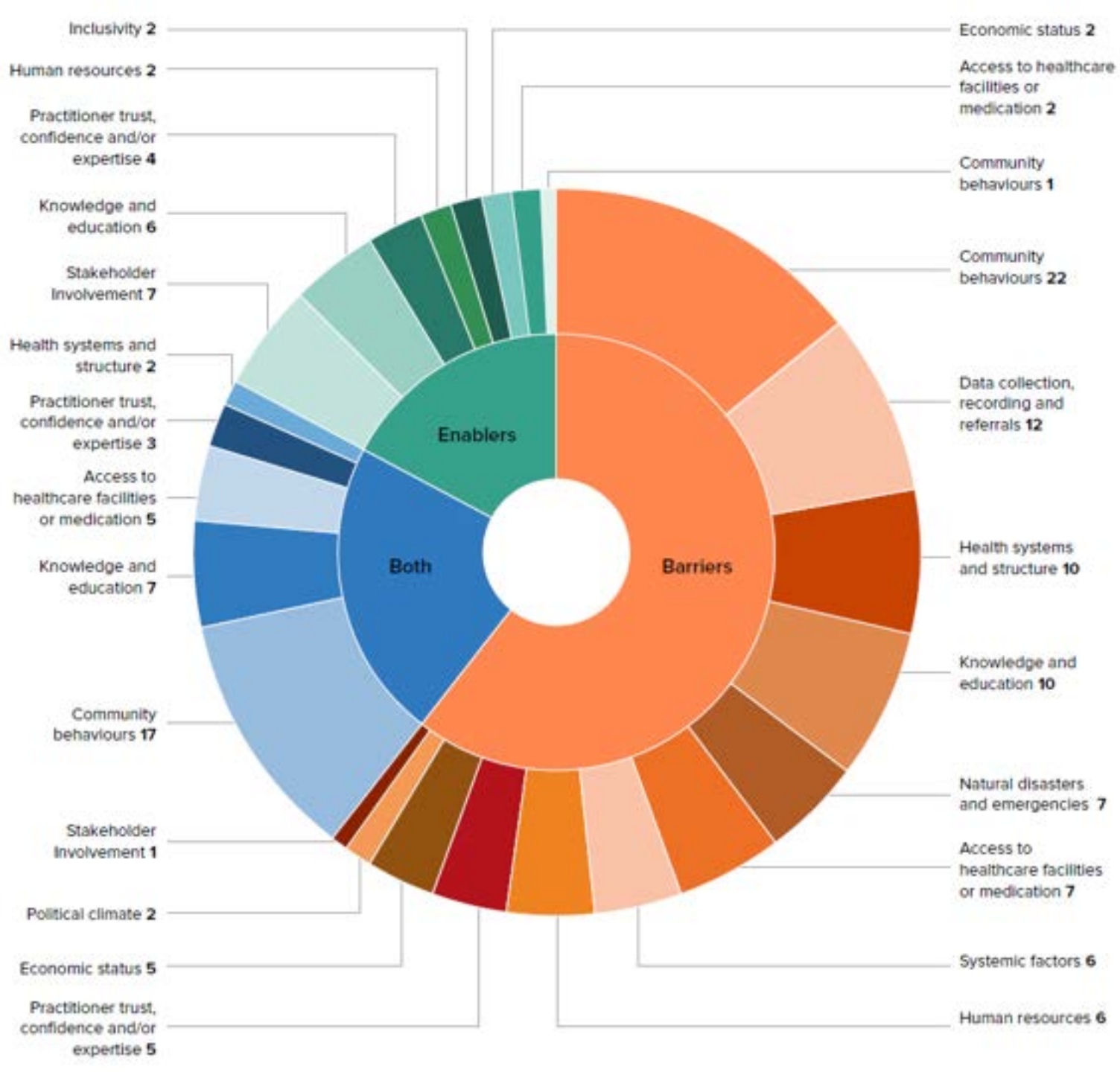
- Formative work, intervention implementation, strategy refinement, and evaluation

Multipurpose

- 11 TMFs were used for more than one purpose

Sunburst diagram of context-specific barriers and enablers faced

- Some contextual factors were consistently barriers **or** enablers across all projects
- Other factors differed depending on the setting



www.gacd.org/our-impact/diabetes-report

Community health programmes

Community mobilisation

Electronic data management

Facilitator-led sessions

Health promotion materials

Knowledge building and training for healthcare professionals

Knowledge building for service users

Microfinance

m-Health*

Xu et al. (2024) PMID: 38408460 | *Includes telephone calls, text messages, voice messages and mobile applications and/or software

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The trends across commonly grouped themes create scope for future tailored research in these areas

Example 1

Telephone calls
and **voice messages**
were always accompanied by
facilitator-led group sessions,
but not vice versa

The trends across commonly grouped themes create scope for future tailored research in these areas

Example 2

Health promotion materials were always accompanied by knowledge building for service users, as were community health programmes and community mobilisation

Twelve projects reported impact

The most common themes of impact were:

Strengthened national health systems to respond to the burden of diabetes

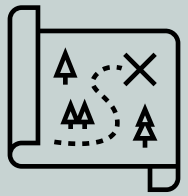
Influence on national health programmes, strategies or guidelines

Programme scale up

Six core lessons learned

Collaborate for success

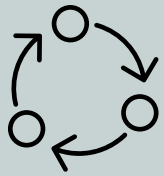
Tailor to context



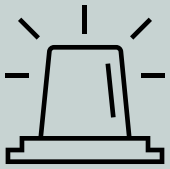
Technology is a tool, not a silver bullet

Address health inequities

Consider sustainability from the start



Expect the unexpected



PROJECT SPOTLIGHT: DM01

Improving the management of diabetes in pregnancy in remote Australia

A/Prof Renae Kirkham – Menzies School of Health Research, Australia

On behalf of the Diabetes Across the Lifecourse: Northern Australia Partnership

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Acknowledgement of Country

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DIABETES across the LIFECOURSE: Northern Australia Partnership

VISION

Working in partnership with Aboriginal & Torres Strait Islander people, primary health care and community-controlled organisations to break the cycle of type 2 diabetes and related conditions.

PRIORITY 1

Prevention and improved management of obesity and diabetes across the lifecourse

PRIORITY 2

Strengthen community engagement in a lifecourse approach to diabetes, focus on preconception, pregnancy and youth

PRIORITY 3

To strengthen the Aboriginal and Torres Strait Islander community-based workforce in diabetes

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DIABETES across the LIFECOURSE: Northern Australia Partnership

DEVELOPING KNOWLEDGE

- Pregnancy And Neonatal Diabetes Outcomes in Remote Australia (PANDORA)
- Intergenerational Health in the NT (I-HiNT)
- Cardiovascular Risk in IndigenouS People (CRISP)
- IMProving evidence Around Contemporary Therapies for Diabetes in the NT (IMPACT Diabetes NT)

PREVENTION

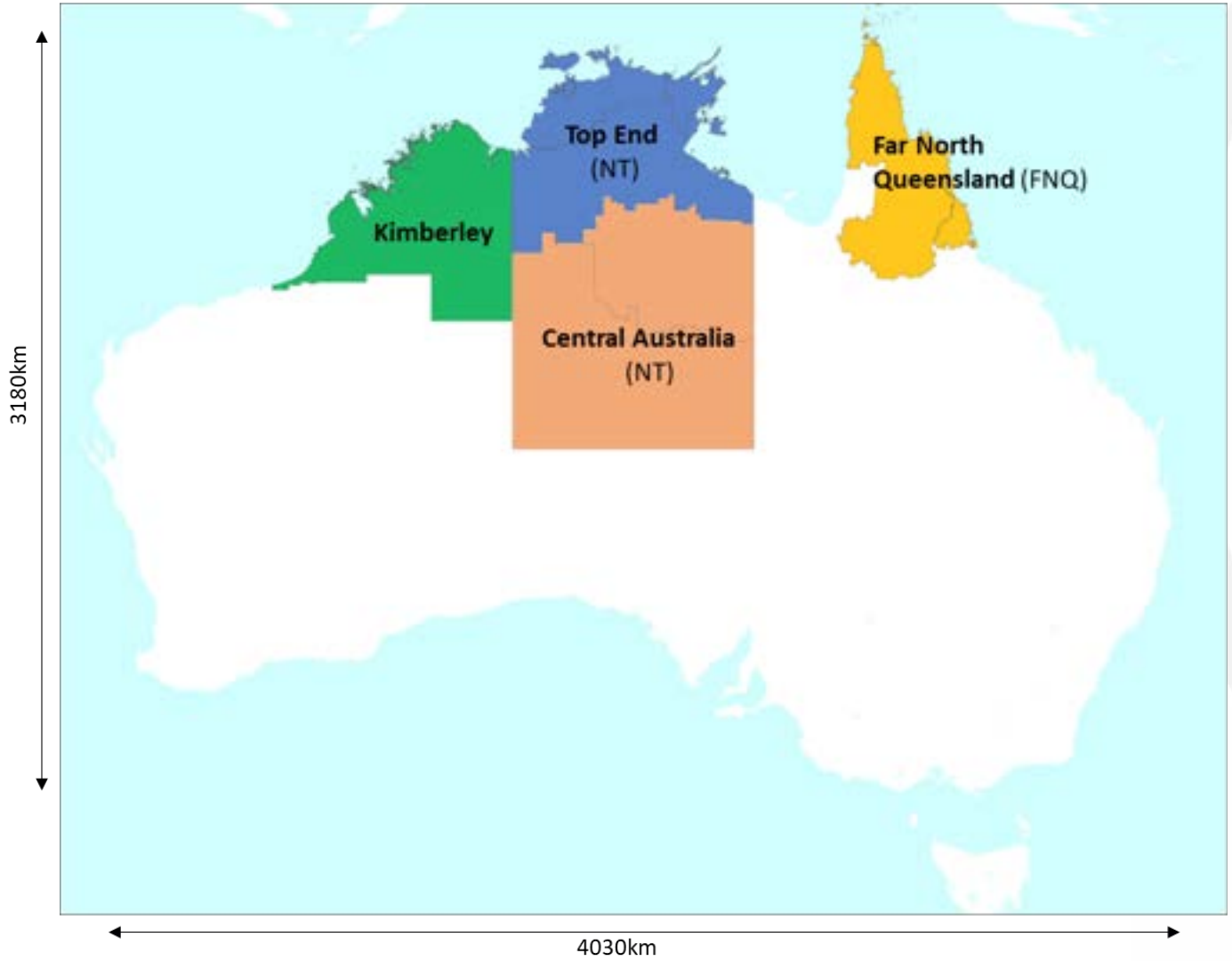
- Diabetes in Pregnancy Co-Design & Prevention
- Merne Mwerre Artweye Areye-ke

IMPLEMENTATION

- Diabetes in Pregnancy Clinical Register
- Youth Type 2 Diabetes Co-Design & Models of Care
- Coronary Artery Calcium Scoring in Women Trial
- Aboriginal Community-Based Workforce

AMSANT
apunipima CAPE YORK HEALTH COUNCIL
Baker
Central Australian Aboriginal Congress
diabetes australia
healthylivingNT
mater research
MIWATJ HEALTH
TELETHON KIDS INSTITUTE
Proudly supported by NORTHERN TERRITORY GOVERNMENT
Queensland Government

Our context



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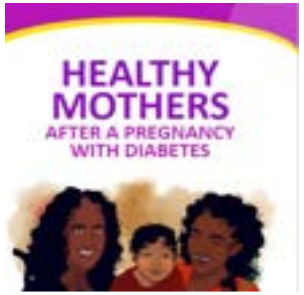
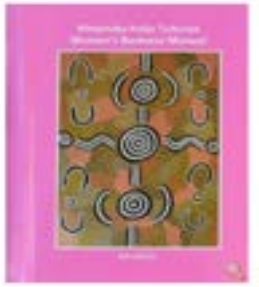
DIP Health Systems 2016-2020

To improve systems of care and services for women with hyperglycaemia in pregnancy in remote Australia





DIP Clinical Register

- Key findings reports
- Postpartum recall lists

Recalls & reminders

- Electronic care plans
- Improved hospital discharge summaries

Education

- Clinician education
- Resources to support educating women
- Newsletters

Stakeholder Engagement

- Clinical reference group
- Aboriginal and Torres Strait Islander advisory group

Guidelines & procedures

- Review and promotion

Stakeholder groups

Study collaborated with individual and groups including:

- Clinicians in the Northern Territory and Far North Queensland (Clinical Reference Group founded during this study)
- Aboriginal and Torres Strait Islander Advisory Group (founded in 2017 during this study)
- Local and national policy makers
- Advocates and advocacy organisations (Aboriginal Medical Services Alliance of the Northern Territory)

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Methods of engagement

- Invited partners to be investigators on the study
- Regular meetings of investigators to share progress and invite feedback and strengthen collaboration between groups
- Regular written updates to stakeholders
- Targeted engagement towards champions who were able to influence peers and policy
- Collaboration with the Partnership's Aboriginal and Torres Strait Islander Advisory Group, who provided advice on cultural responsiveness

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Challenges

- Engagement is resource intensive
- Facilitated by pre-existing relationships, more difficult in areas where relationships were new
- High clinician turnover, variable interest and competing priorities

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Benefits – supportive networks

"The capacity to network, being part of that wider reference group. Especially when you're working remote, you don't get to network a lot with people across services"

(Medical practitioner, primary care and hospital, Central Australia)

"We have regular conferences with the obs and gynae … I think there's more of a team, we're all on the same team, and you don't have the ivory towers that you had before."

(Diabetes educator, primary care, Top End)

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MacKay D et al. Int J. Environ. Res. Public Health. 2024.

Foundations for the future

- Partnerships developed through this study remain strong continue to engage clinicians and policy makers in our work
- This model discussed as ‘best practice’ internationally
- This phase of work also led to studies which engage directly with consumers and communities

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Thank you

https://diabeteslifecourse.org.au

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PROJECT SPOTLIGHT: DM13

Research impact in the Bangladesh D-MAGIC project

Ed Fottrell – University College London, UK

Institute for Global Health

GLOBAL ALLIANCE FOR CHRONIC DISEASES
AN ALLIANCE OF HEALTH RESEARCH FUNDERS

UK Research and Innovation

D-Magic

Diabetes **M**ellitus **A**ction through **G**roups or **I**nformation for better **C**ontrol
2014-2018




Context: Faridpur

SE Asia J Public Health 8(2):104-111

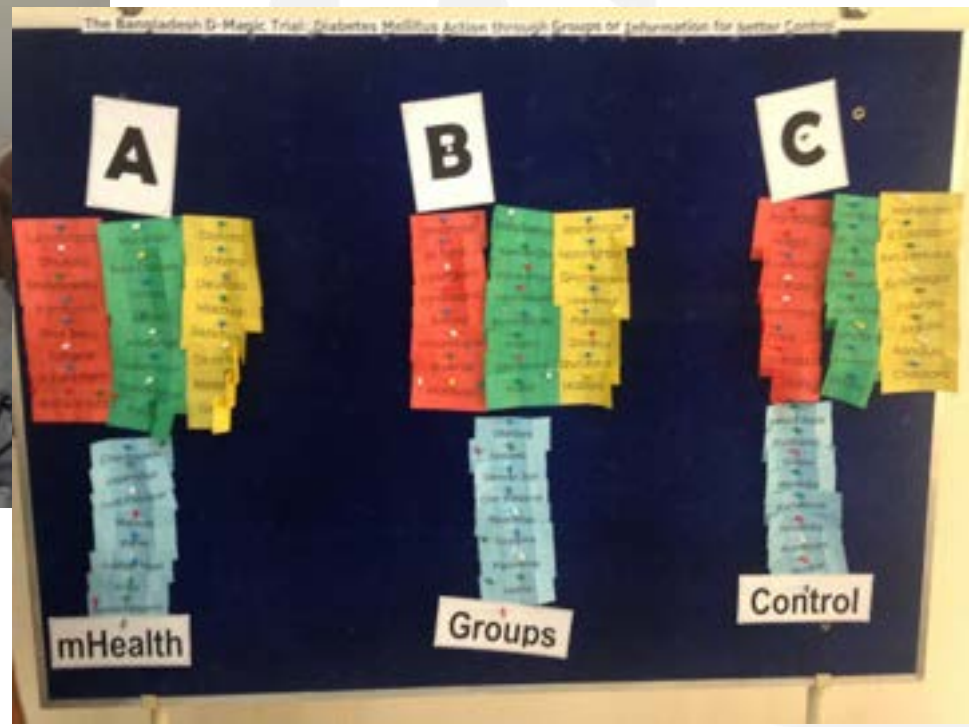
Context: Faridpur

- 30-40% of adults have raised blood sugar
- 20% have raised blood pressure
- > 70% have 3+ risk factors

BMJ Glob Health 2018;3:e000787

BMJ Glob Health 2018;3:e000891

Community orientation & public randomisation



Trials 2016 **17**:600
BMJ Open 2018 **8**:e022035

Intervention 1: mHealth – health promotion

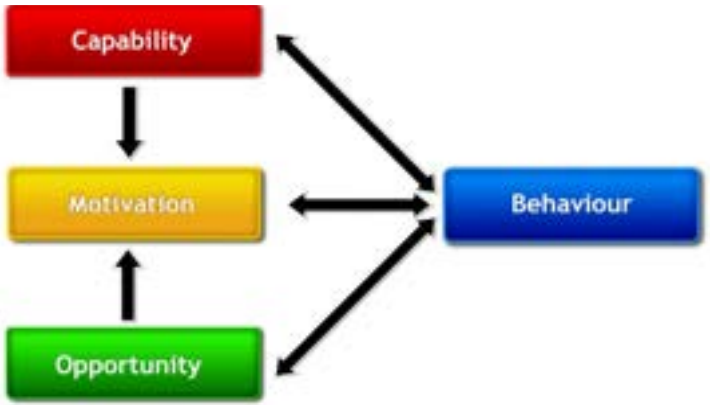


Table 2. Steps to message content development.

Step	Summary of step
STEP 1: Context of the intervention	The formative research provides an in-depth analysis of the context of the intervention.
STEP 2: Break down intended outcomes	Related to the formative research and the overall outcomes of the project, specific outcomes for the five areas of focus, i.e. care-seeking, diet, physical activity, smoking and stress, were identified.
STEP 3: Identify and list the enablers and barriers to behaviour change	Enablers to promoting a healthy lifestyle and barriers to implementing a healthy lifestyle were identified from the formative research and listed.
STEP 4: Categorise the barriers and enablers according to COM-B and the TDF	The identified enablers and barriers were categorised according to TDF and COM-B.
STEP 5: Suggest behaviour change approaches for each enabler and barrier	In light of the appropriate transtheoretical domains, behaviour change approaches were identified for each enabler and barrier
STEP 6: Table of message content produced based on the intended outcomes, barriers and enablers and BCTs	A table of message was produced based on the intended outcomes and assigned BCTs addressing each enabler and barrier.

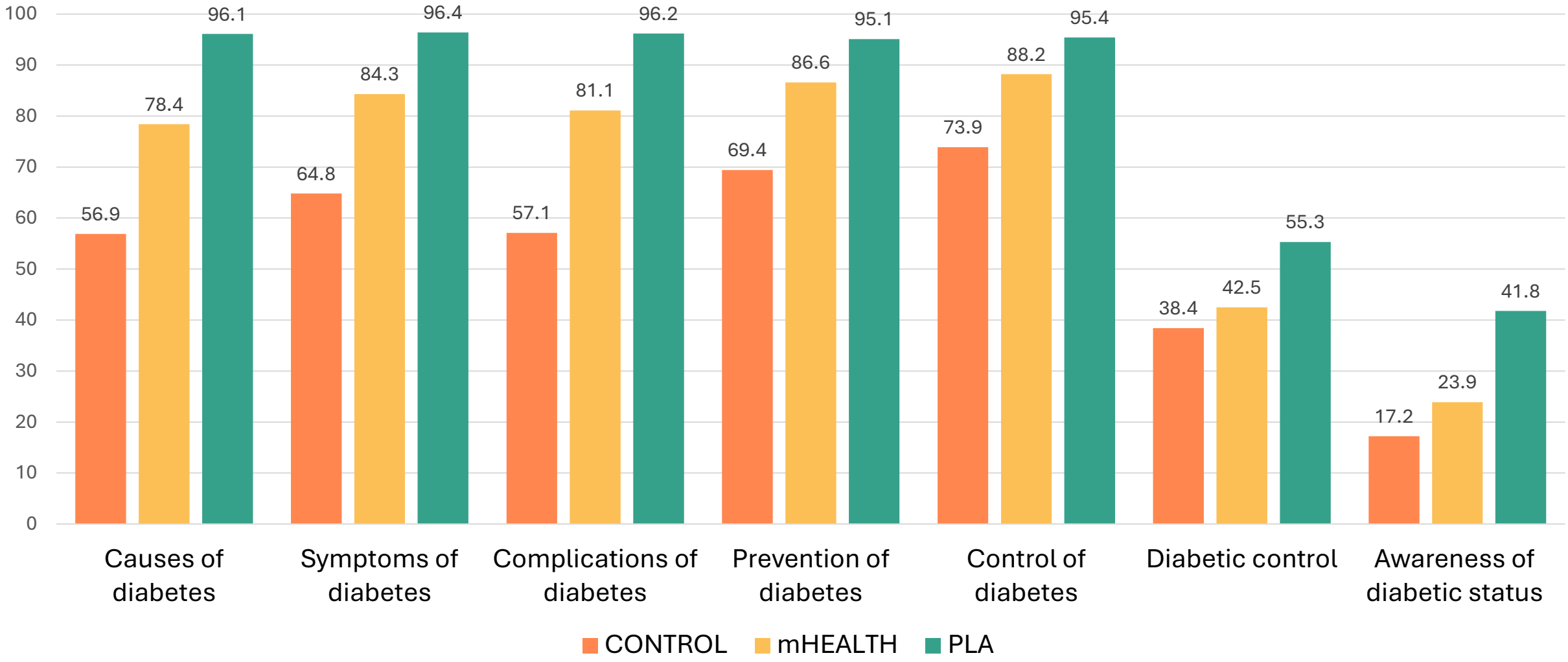
Intervention 2: Participatory Learning & Action (PLA)





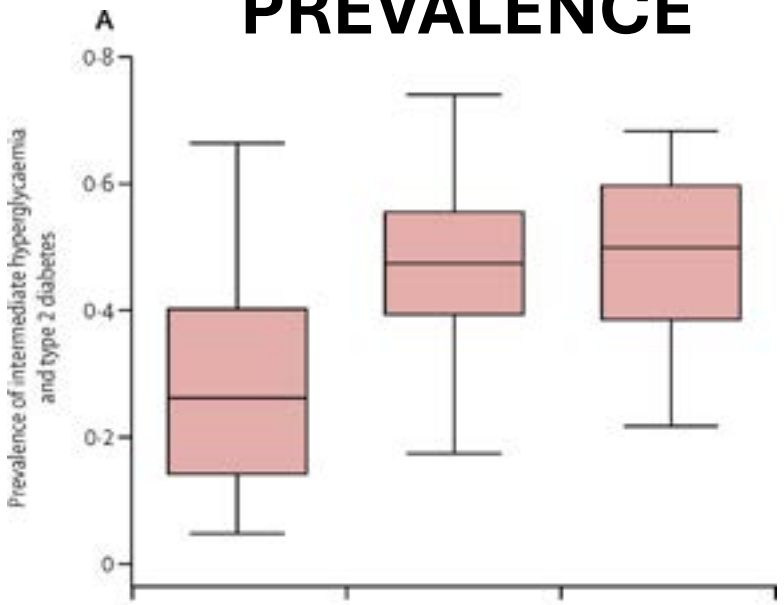


Diabetes knowledge and awareness



Lancet Diabetes & Endo. 2019 7(3) 200-212

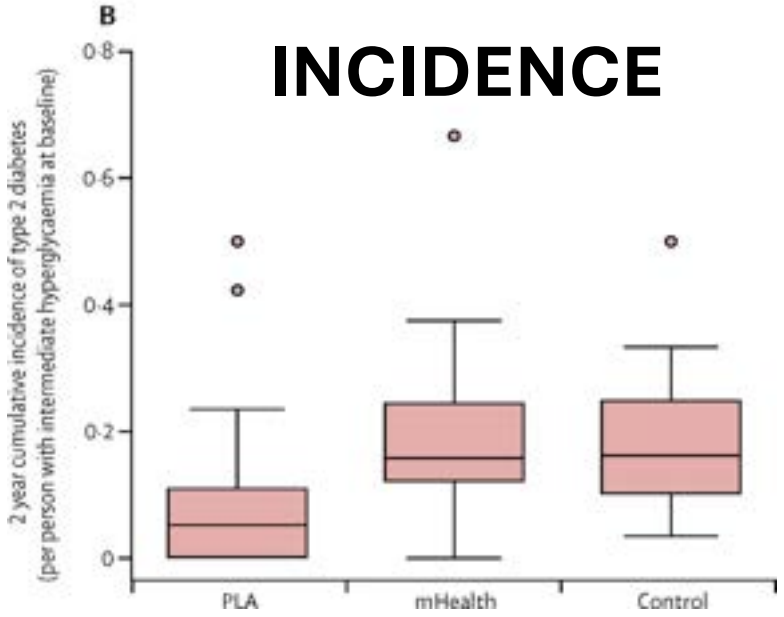
PREVALENCE



PLA – **21% absolute reduction** in combined prevalence of intermediate hyperglycaemia & diabetes

Lancet Diabetes & Endo. 2019 7(3) 200-212

INCIDENCE

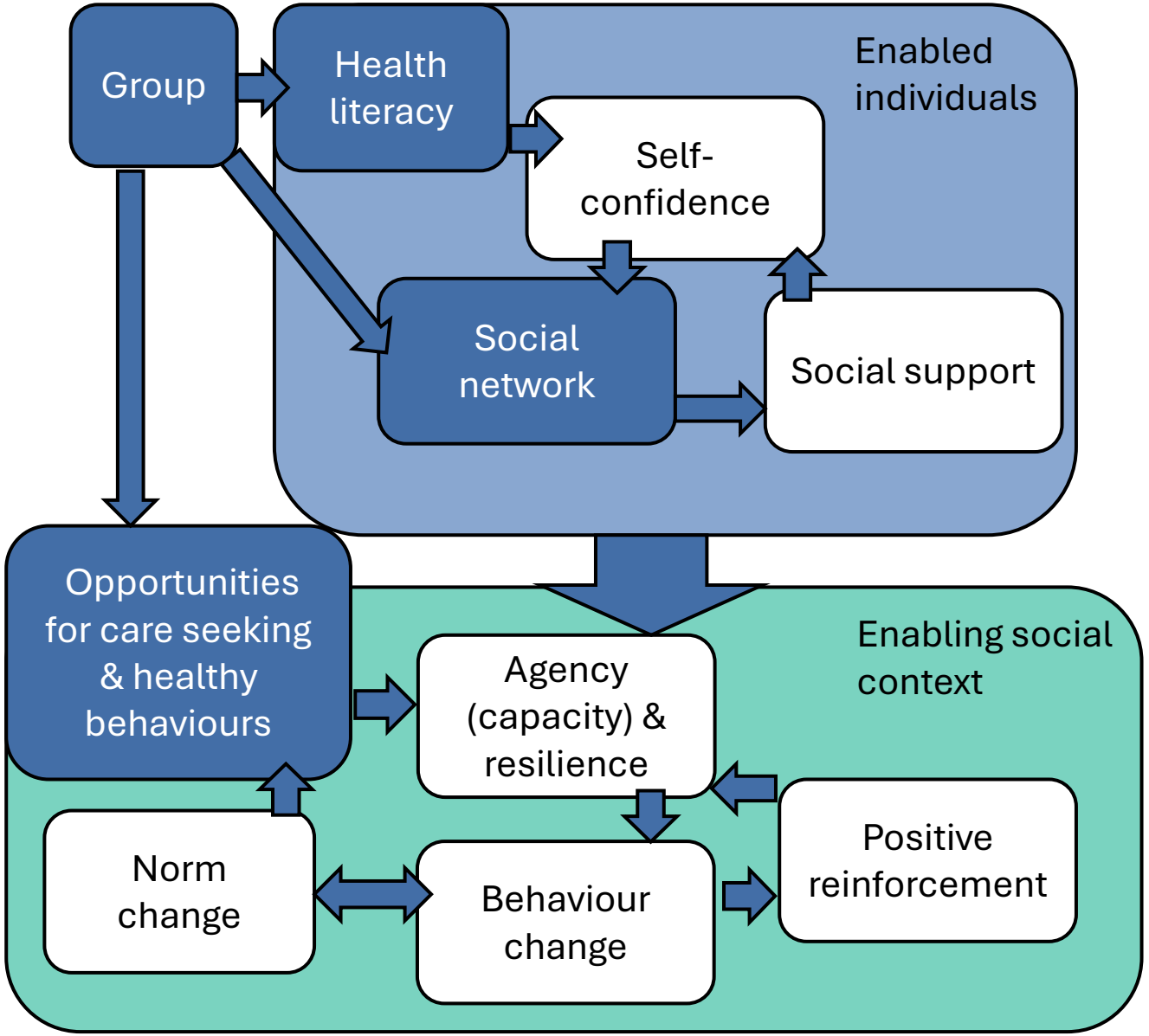


PLA – **9% absolute reduction** in 2-year incidence of diabetes among individuals with intermediate hyperglycaemia at baseline

J Epidemiol Community Health 2022;**76:**586-594

EQUITABLE & HIGHLY COST EFFECTVE

How does PLA work?



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UK Research and Innovation

D:CLARE

Diabetes: **C**ommunity-**l**ed **A**wareness, **R**esponse and **E**valuation
2019-2024




Institute for Global Health

GLOBAL ALLIANCE FOR CHRONIC DISEASES
AN ALLIANCE OF HEALTH RESEARCH FUNDERS

UK Research and Innovation

PECAN

Participatory **E**ngagement of **C**ity Communities **A**gainst **N**CDs in Nepal & Bangladesh
2024-2027

NYU Langone Health

PROJECT SPOTLIGHT: DM15

Social Determinants of Health: Context for the BIGPIC Trial

Rajesh Vedanthan, MD MPH

Director, Section for Global Health, Institute for Excellence in Health Equity

Associate Professor, Department of Population Health, NYU Grossman School of Medicine

Disclosures

I receive financial support from the following company or companies related to the products listed below. These relationships may lead to bias in my presentation.

Entity	Type(s) of relationship(s)	Product name(s)	Relevant disease(s) or condition(s)
NONE			

K01TW009218
R01HL125487
U01HL114200
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R21AI169362
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US State SGH110023GR005
AHA 14SFRN20490315
European Commission H2020
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Not secure | theconversation.com/global-health-still-mimics-colonial-ways-heres-how-to-break-the-pattern-121951

Global health still mimics colonial ways: here's how to break the pattern

August 18, 2019 4.17am EDT

Author

Madhukar Pai
Director of Global Health & Professor, McGill University

Disclosure statement

Madhukar Pai served as a commissioner on the Lancet Commission on Tuberculosis. He receives funding support from the Canada Research Chairs program, the Bill & Melinda Gates Foundation, Stop TB Partnership, and FIND, Geneva. He has no financial or industry related conflicts.

Partners

Imagine this scenario. A couple of newly minted Master of Public Health graduates from an African university, say in Rwanda, land in Washington DC for a 2-week visit. They visit a few hospitals, speak to a few health care workers and policymakers, read a few reports, and write up a nice assessment of the US health system with several recommendations on how to fix the issues they saw. They submit their manuscript to the American Journal of Public Health.

Can you imagine journal even sending it out for review? Even if the paper got published somewhere, would US health researchers take it seriously? (They should, I suppose. After all, the broken US health care system needs all the help it can get.)

Clearly, it's an impossible scenario yet American graduates land in low-income countries to advise them on global health issues all the time. I met an African expert recently and she expressed her frustration about how American "kids" with little or no experience come all the time to "advise" her government on what to do about health.

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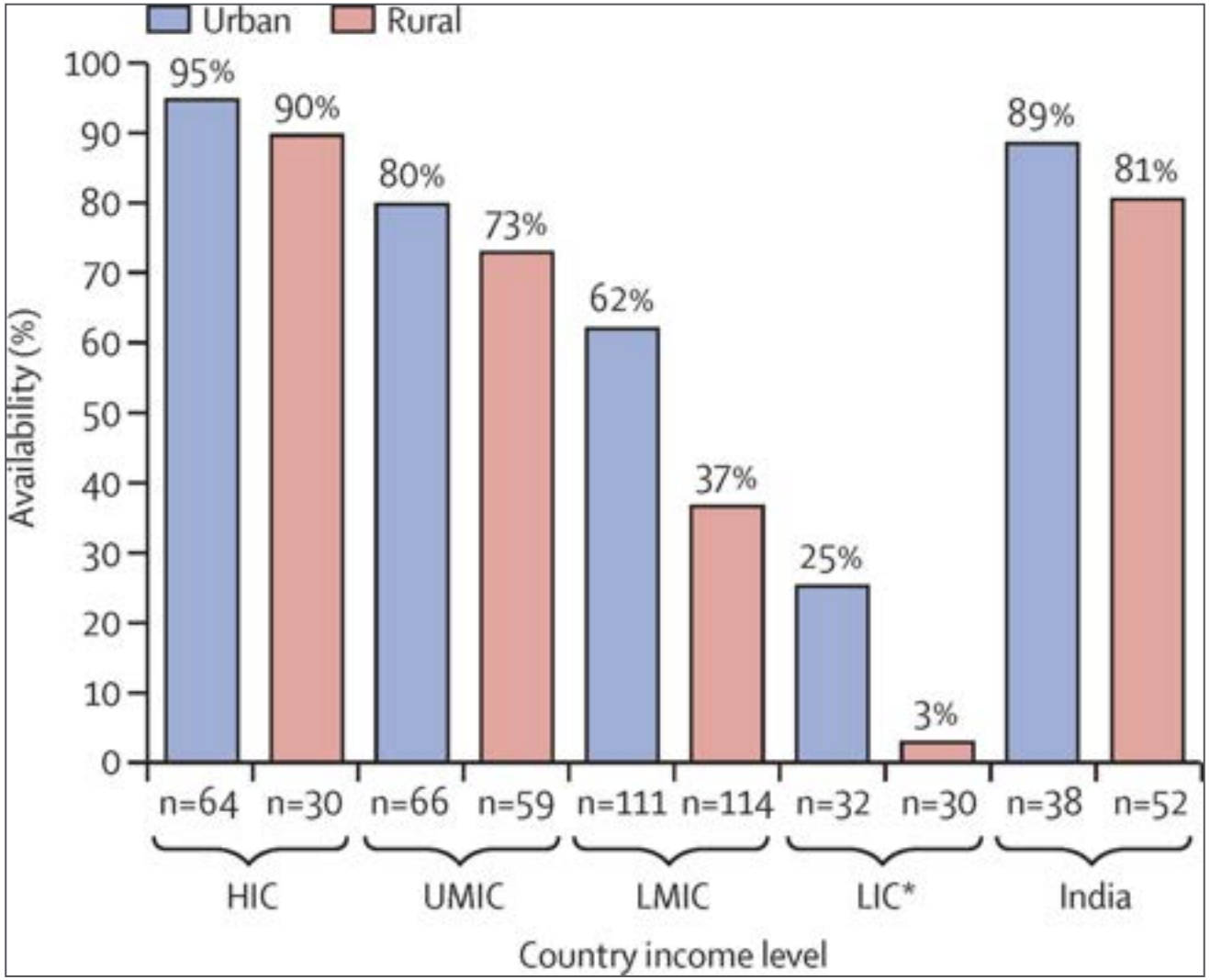
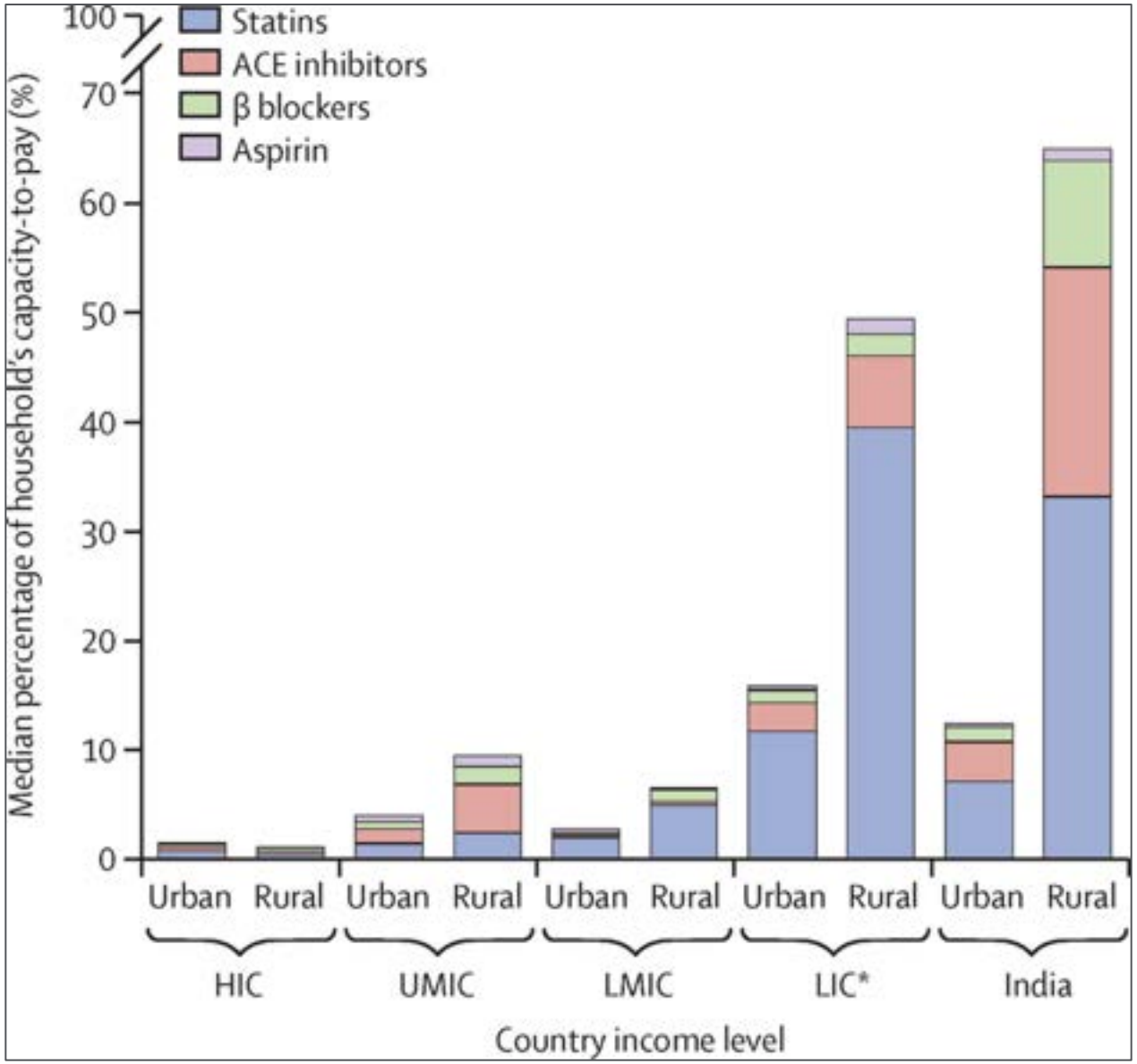
Poor Availability of Medications



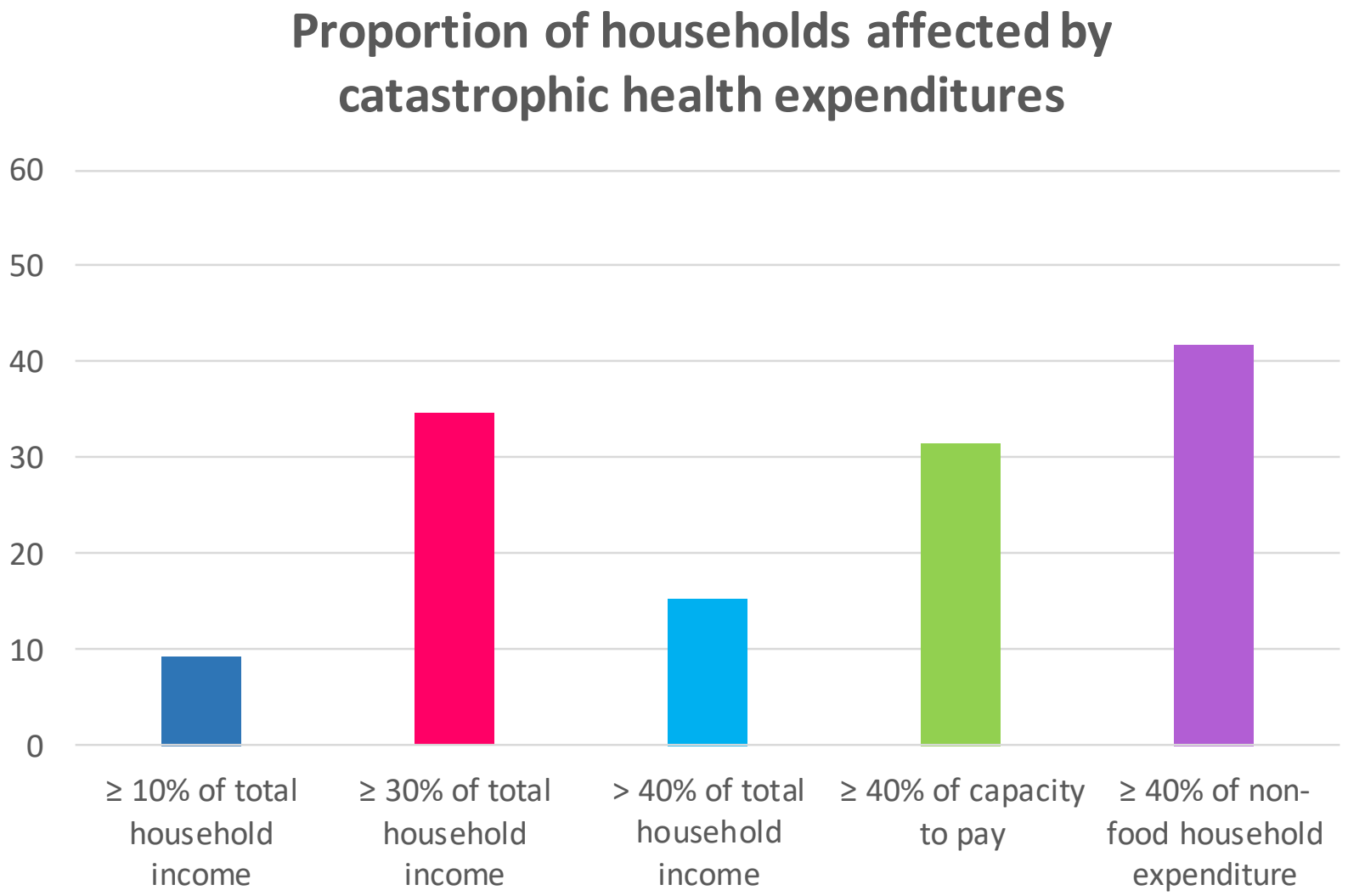
Khatib, et al (2016) *Lancet*

Poor Affordability



Khatib, et al (2016) *Lancet*

Household-Level Cost of NCDs



NYU Langone Health

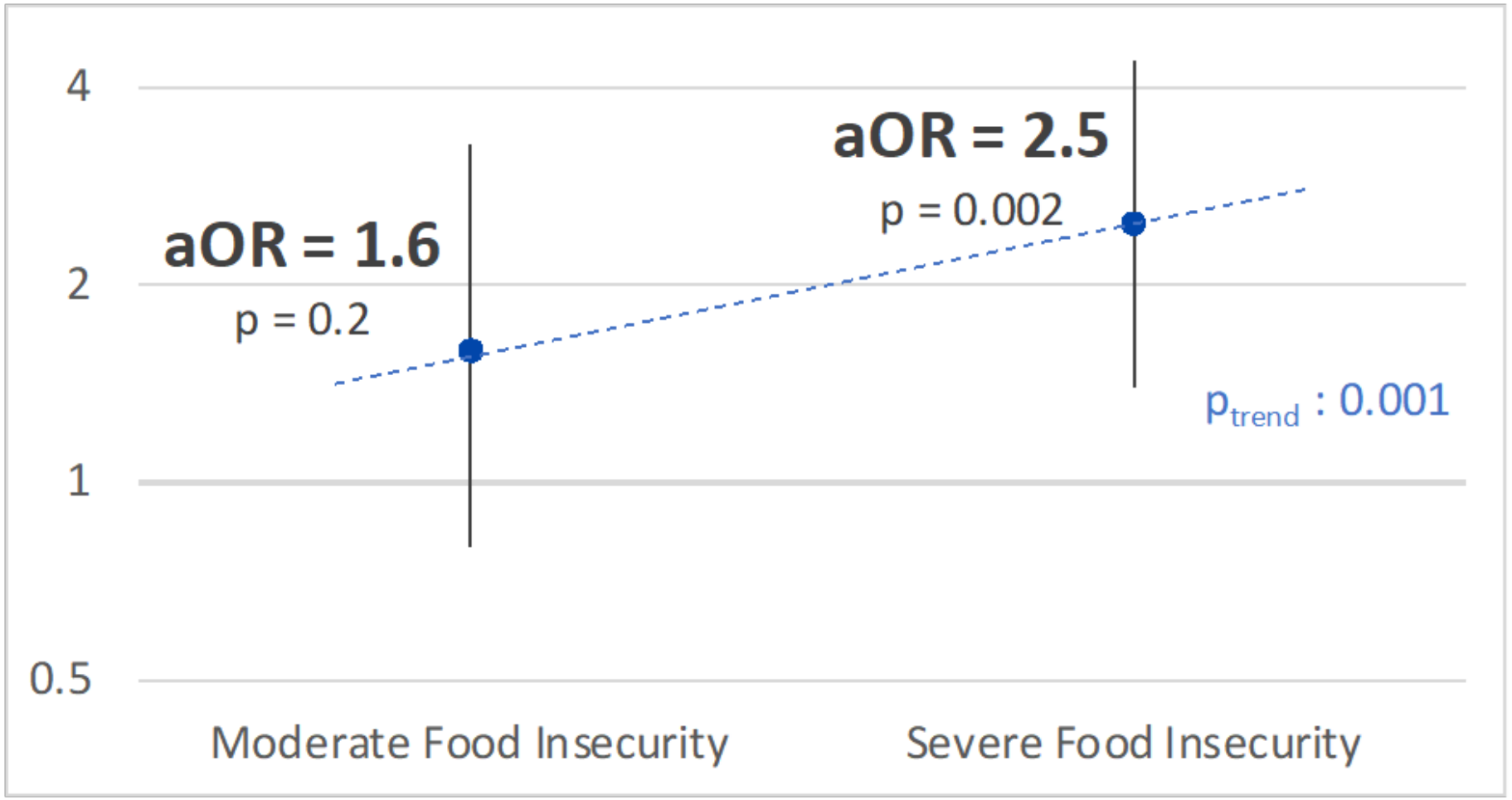
Jan et al (2018) Lancet

Economic Reality

Characteristic	Total (n=1460)	Usual Care (n=491)	Paper Based (n=500)	Smart Phone (n=469)
Age (years)	54.2	54.6	53.7	54.3
Female Gender (%)	58	63	56	56
Unemployed (%)	21	17	16	31
Monthly Earnings < US$50 per month (%)	49	54	52	42
National Health Insurance Coverage (%)	15	11	14	19

Vedanthan et al. (2019) JACC

Food Insecurity Associated with Difficulty Accessing Care



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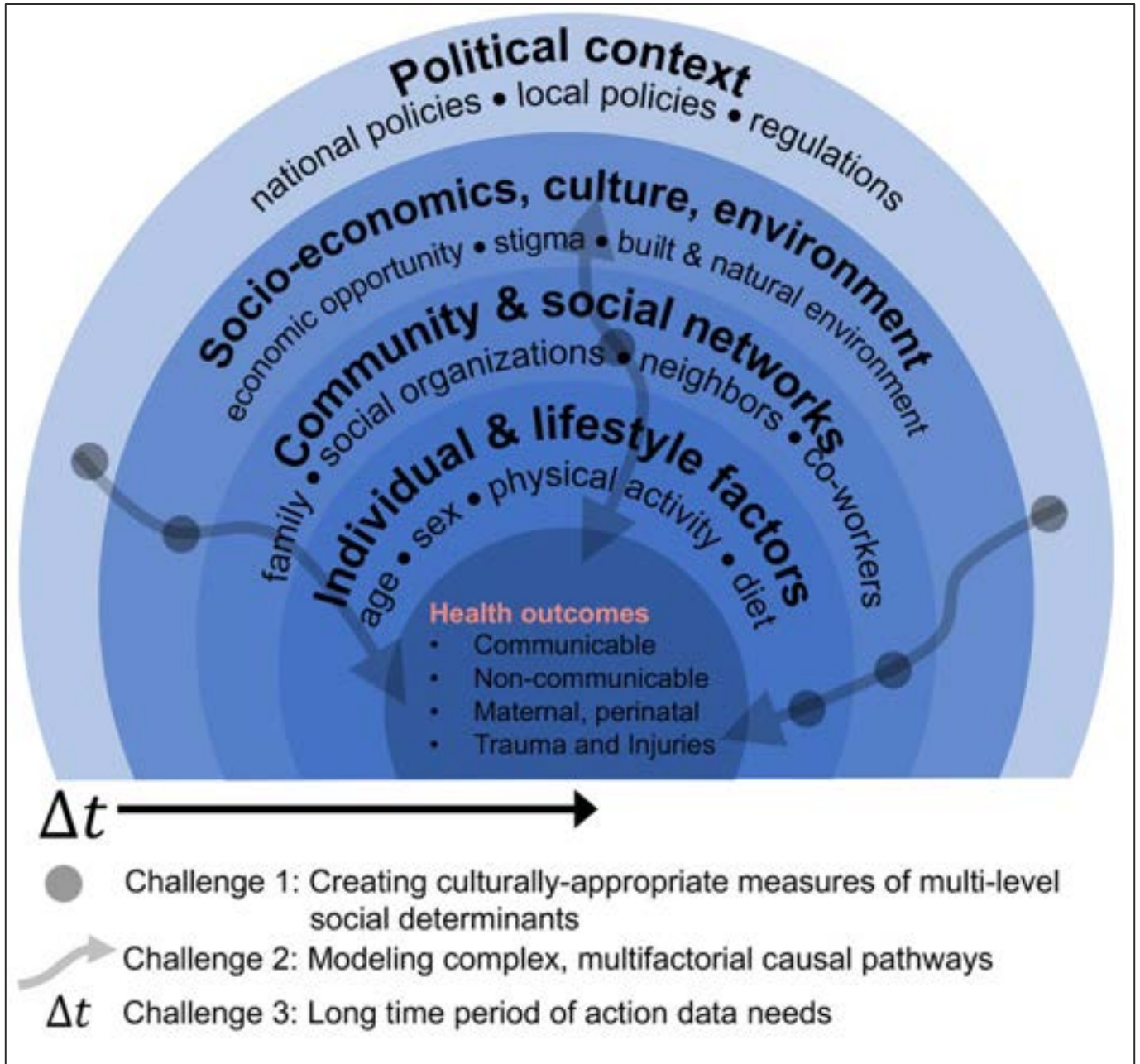
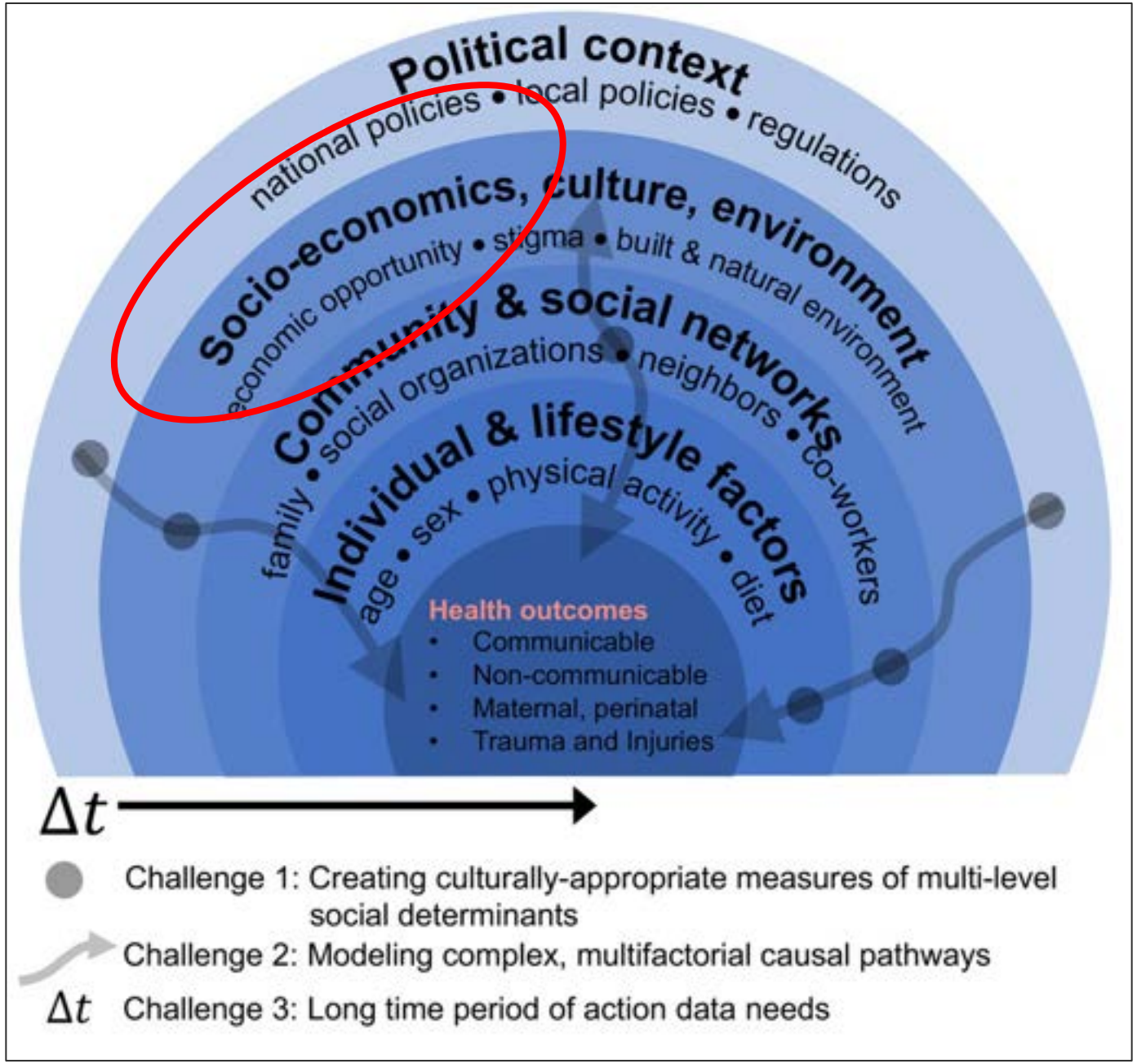
Section for Global Health

Ardehali, et al. BMJ Global Health (in press)

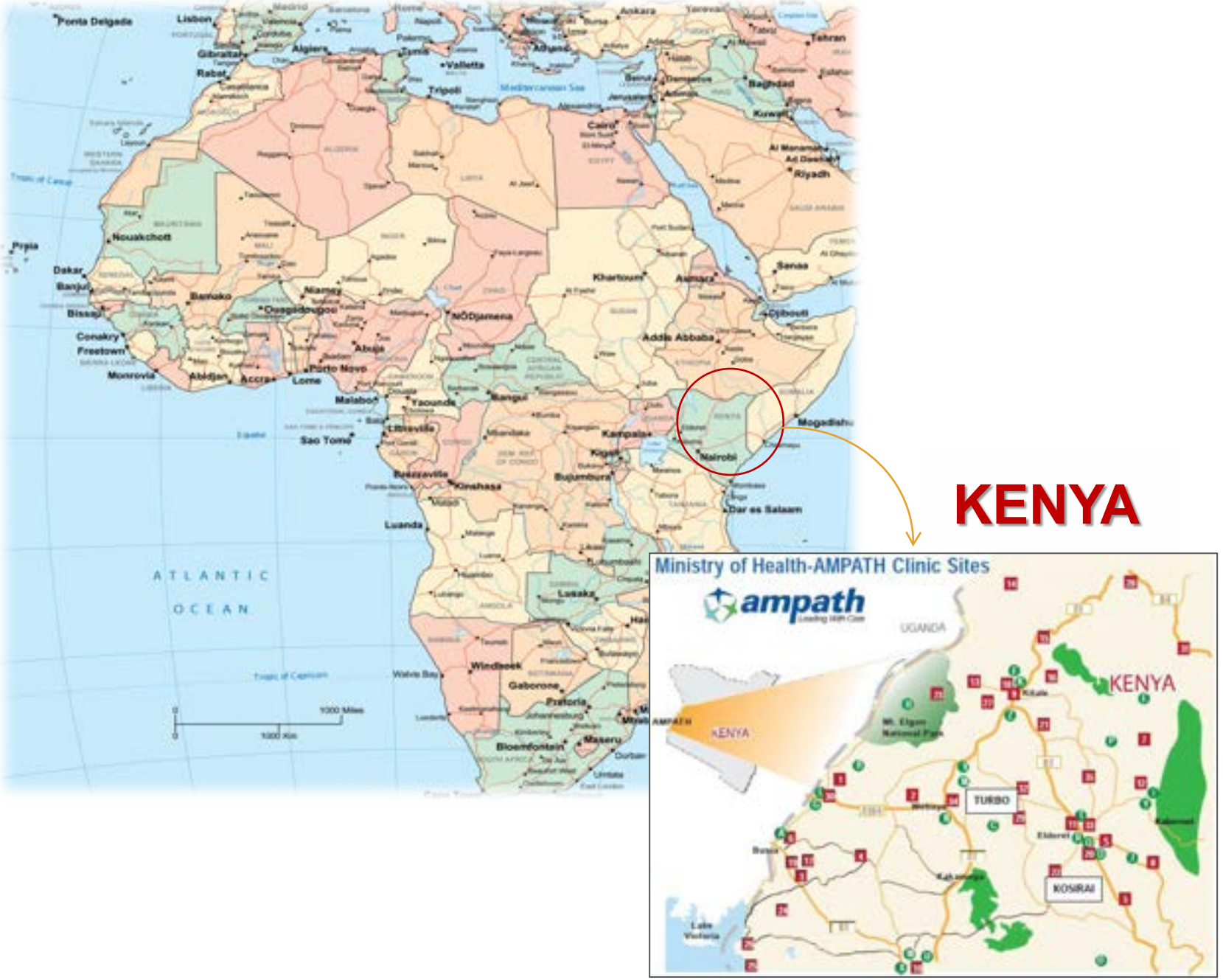
Social and Structural Determinants of Health



Chunara et al. Lancet Digital Health (2024)



Chunara et al. Lancet Digital Health (In Press)


KENYA
Ministry of Health-AMPATH Clinic Sites
ampath
KENYA
UGANDA
TURBO
KOSIRAI
ATLANTIC
OCEAN

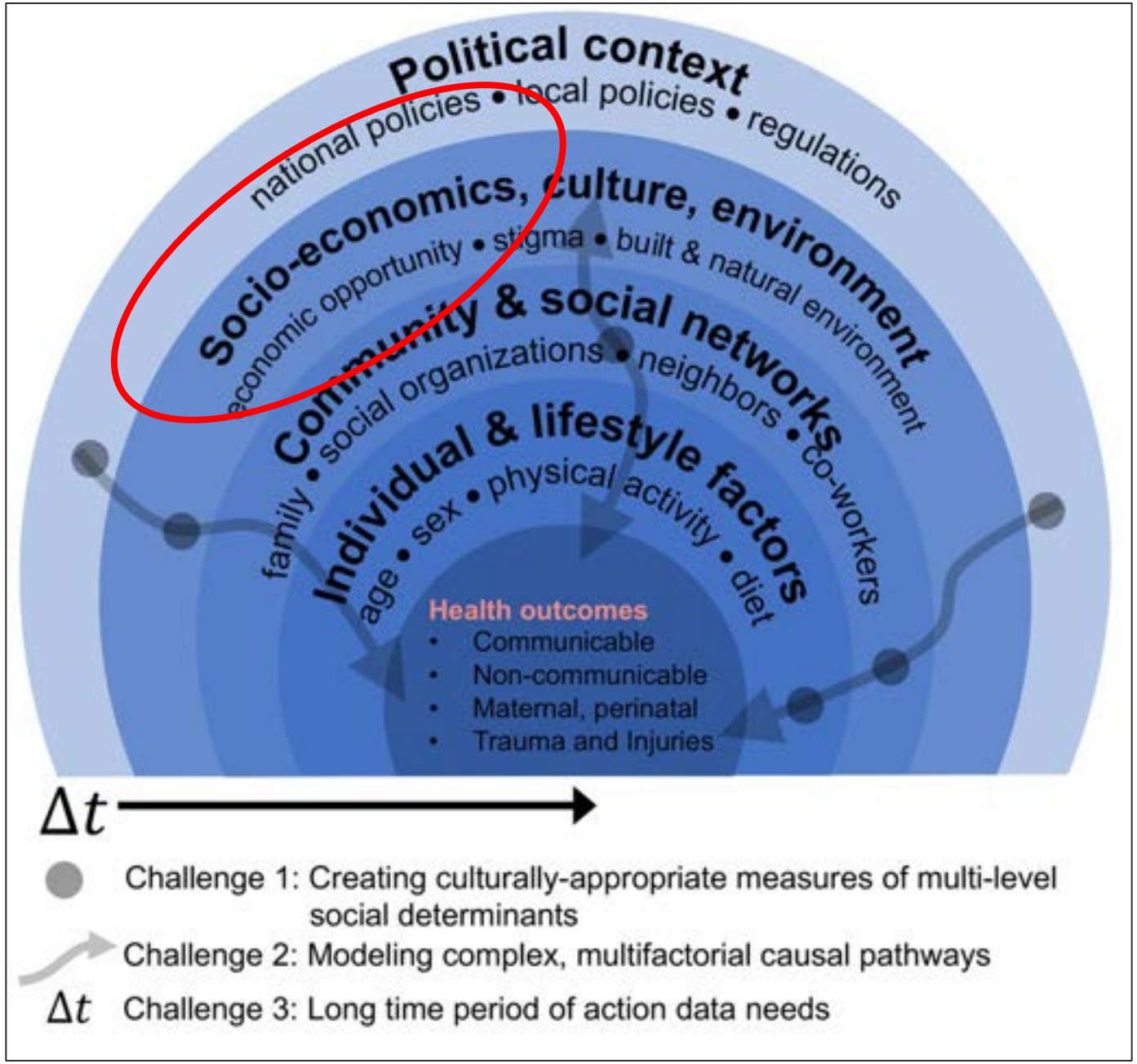

ampath
Leading With Care

AMPATH Consortium

- Advance the tripartite academic mission
- Lead with care
- Leverage care foundation for education and research
- Established HIV care program (2001)
- 200,000 patients living with HIV
- HIV as a chronic disease
- Leveraging HIV infrastructure for chronic disease care
- Implementation research
- Incorporate SDOH into health system strengthening

How to incorporate social determinants of health into NCD care?

NIH/NHLBI R01HL125487



Chunara et al. Lancet Digital Health (In Press)

Food and Income Security

Poultry

Farming

Business

Employment

Commitment accounts

Health Insurance

School fees

Farm Inputs

Social welfare

GISHE

Bridging Income Generation with Group Integrated Care

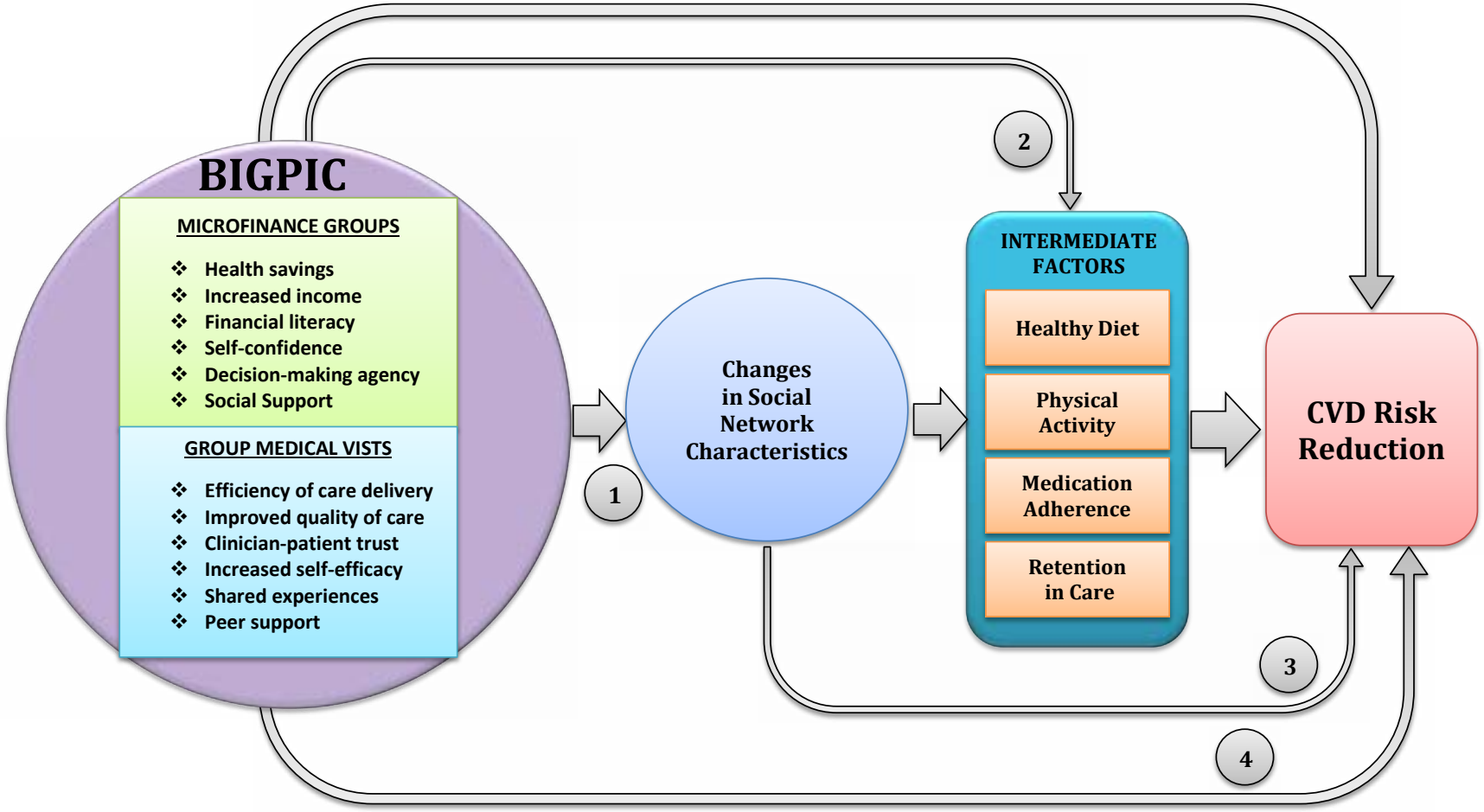
PI (USA): Rajesh Vedanthan, MD MPH

PI (Kenya): Jemima H. Kamano, Mmed

NIH/NHLBI R01HL125487

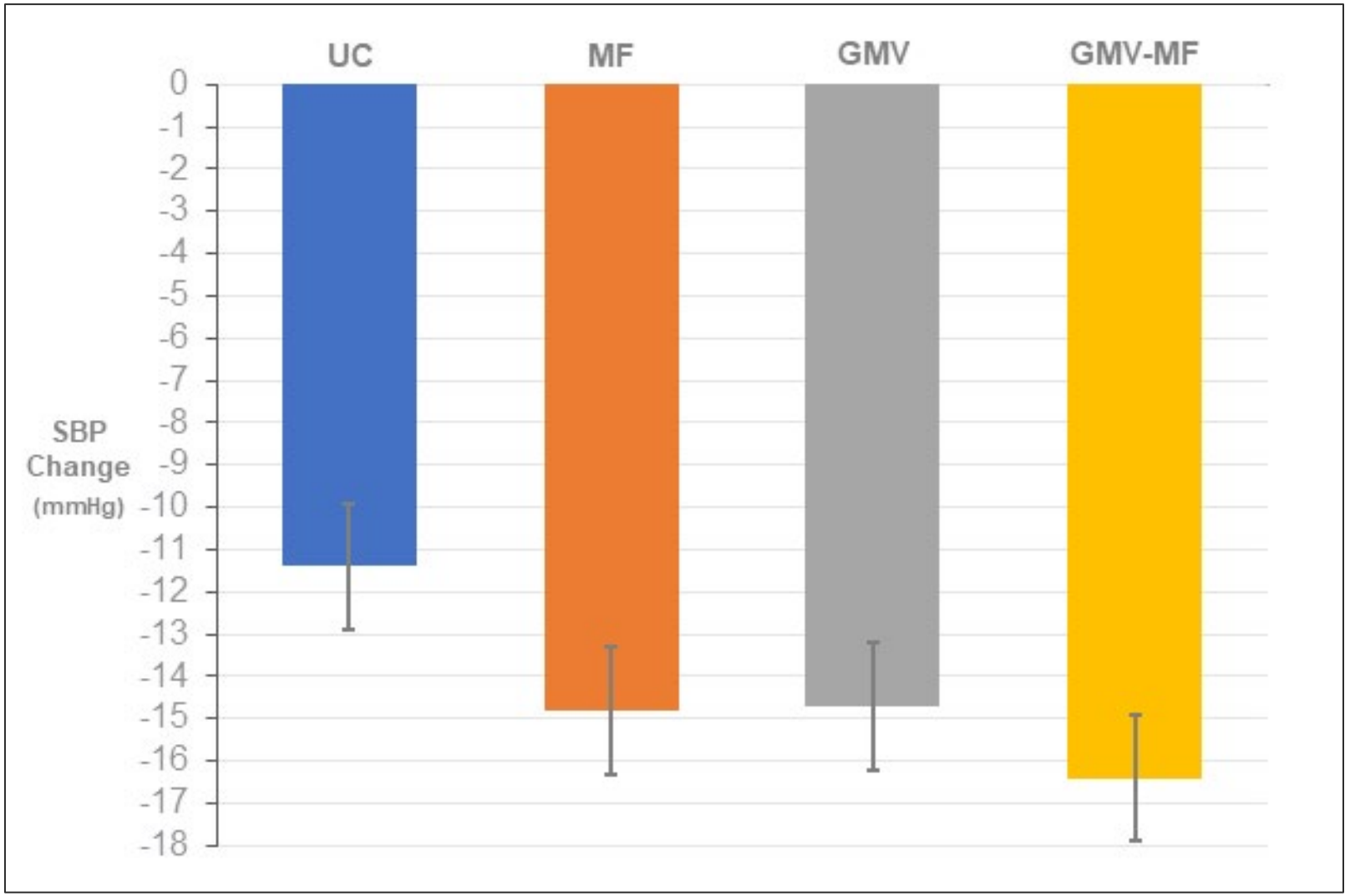
NYU Langone Health

GMV and MF for Hypertension Care



Vedanthan, et al, (2017) Am Heart J

SBP Change - 12 month vs. Baseline (unadjusted)



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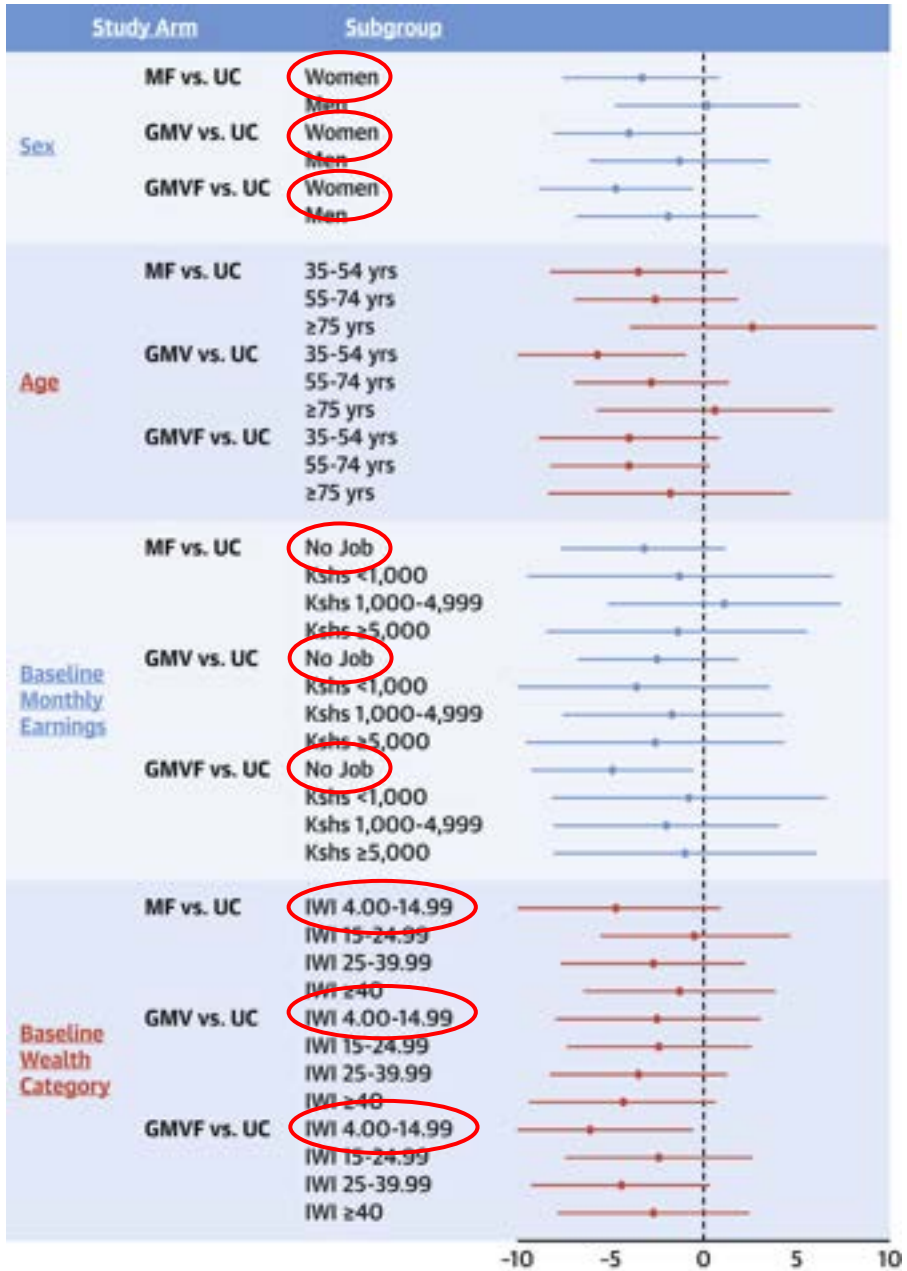
Vedanthan, et al. (2021) JACC

BIGPIC—Subgroup Analysis



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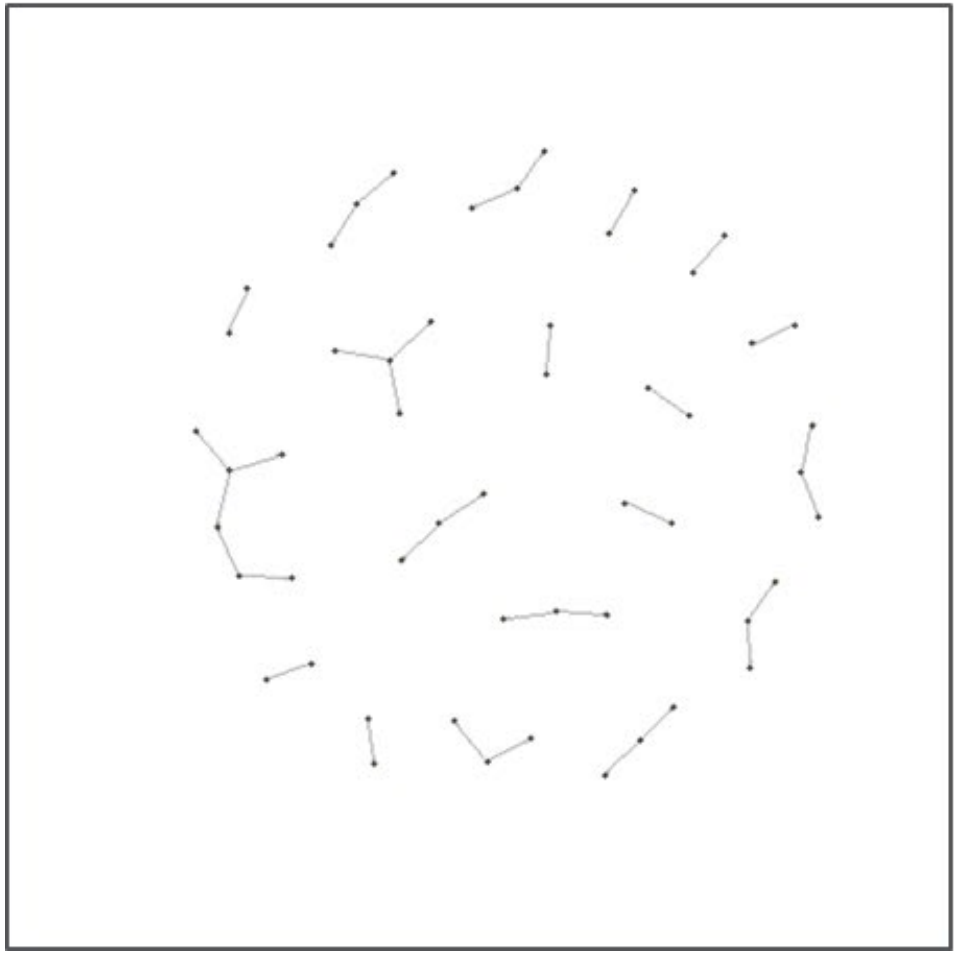
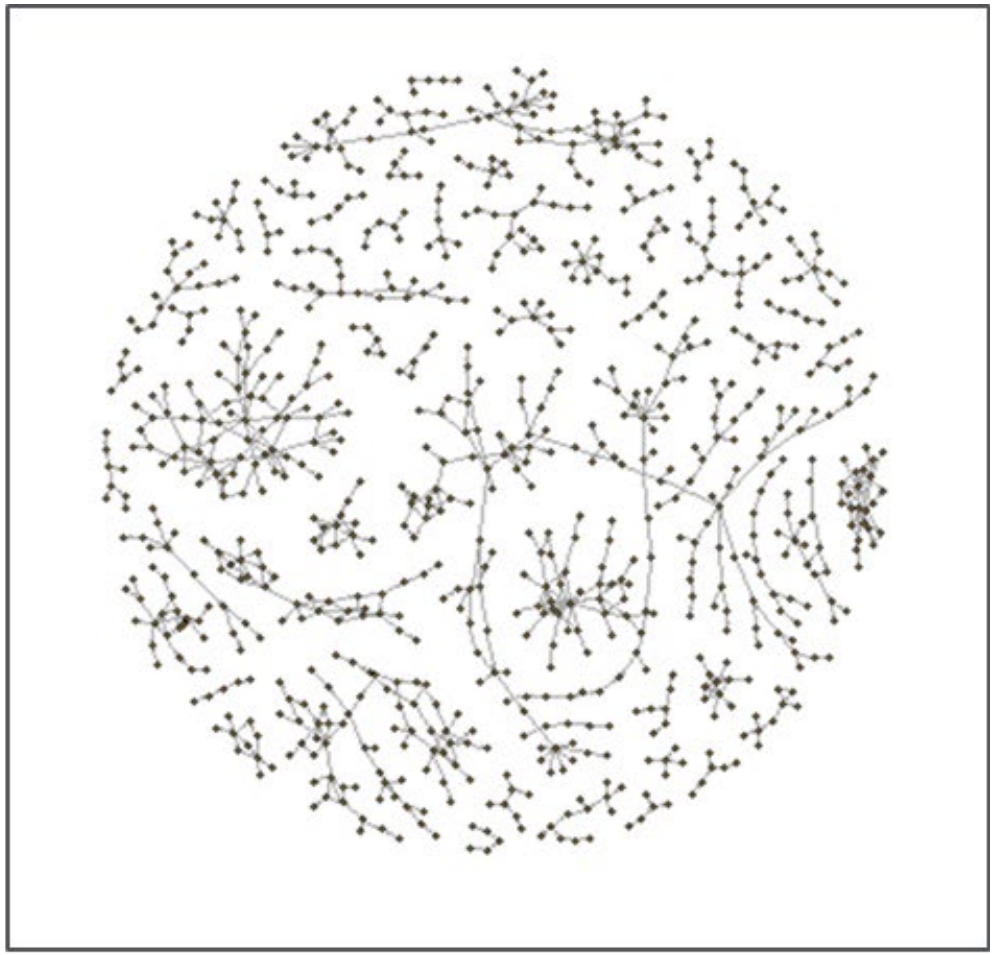
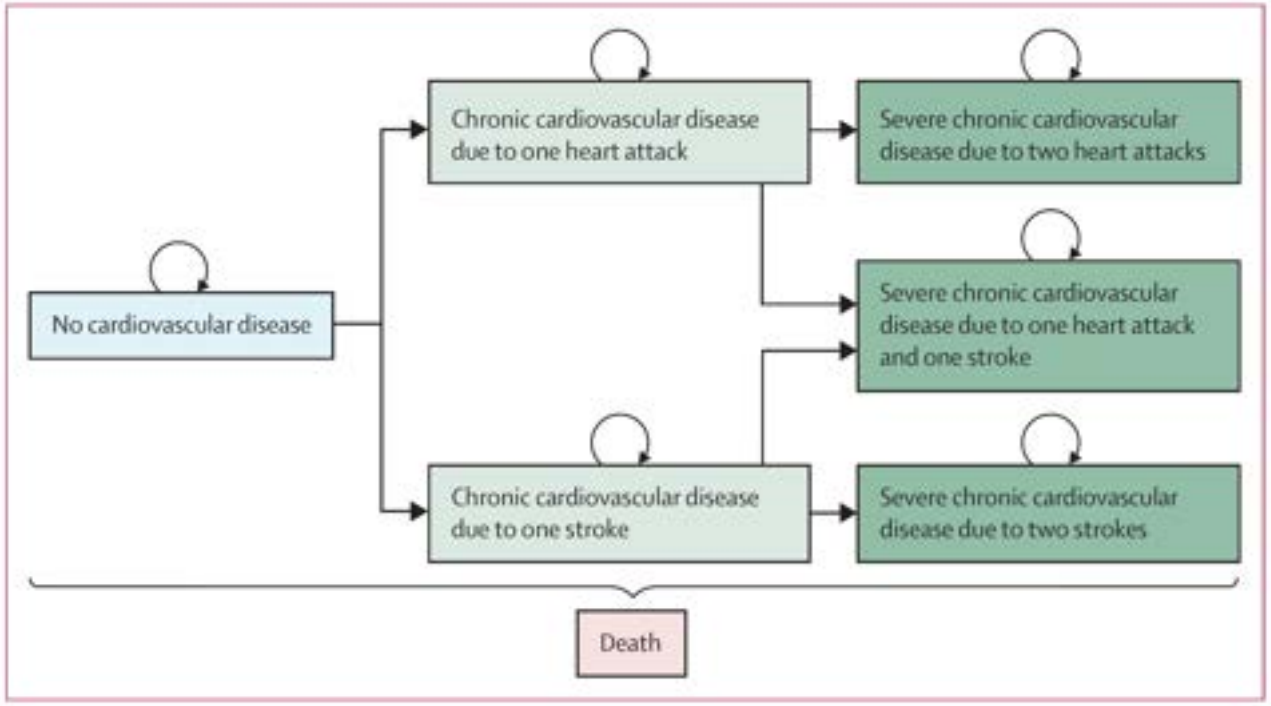
Vedanthan, et al. (2021) JACC

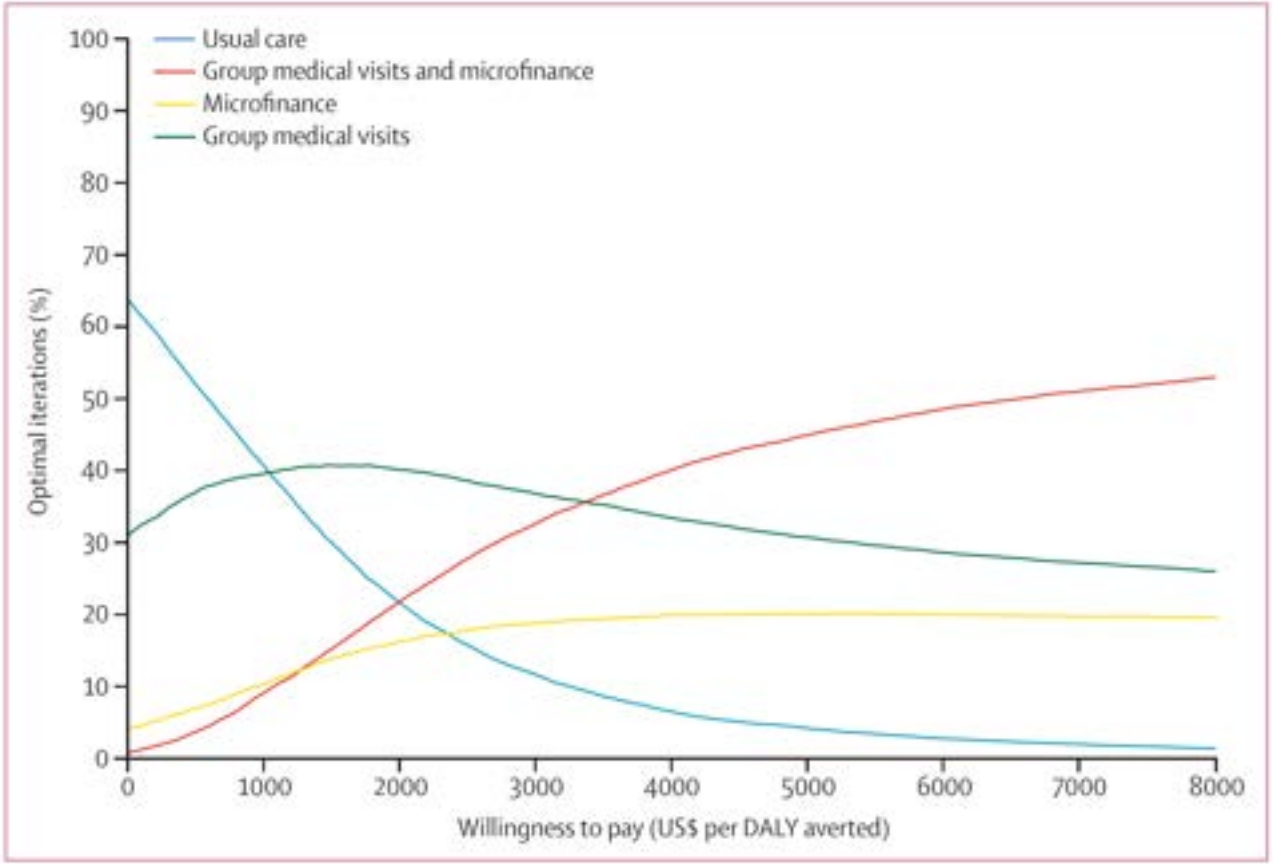
BIGPIC: Social Network Changes





Cost-Effectiveness Analysis





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Chay, et al. (2024) Lancet Global Health

Conclusions

- NCDs and NCD risk factors: a global problem
- SDOH are a dominant factor in NCD health
- Translate challenges into opportunities
- Incorporate SDOH into care delivery and interventions
- Importance of rigorous implementation research

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BIGPIC Research Team

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Nitish Naik

Dorairaj Prabhakaran

PURI-HF Research Team

NYU Langone Health

Thank you!

Section for Global Health

PROJECT SPOTLIGHT: DM04

Impact of the CHAP-Philippines project

Gina Agarwal, MBBS, MRCGP, CCFP, FCFP, PhD

Nominated Principal Investigator

Professor, McMaster University, Canada

Canada Research Chair, McMaster University

Ricardo Angeles, MD, MPH, MHPED, PhD

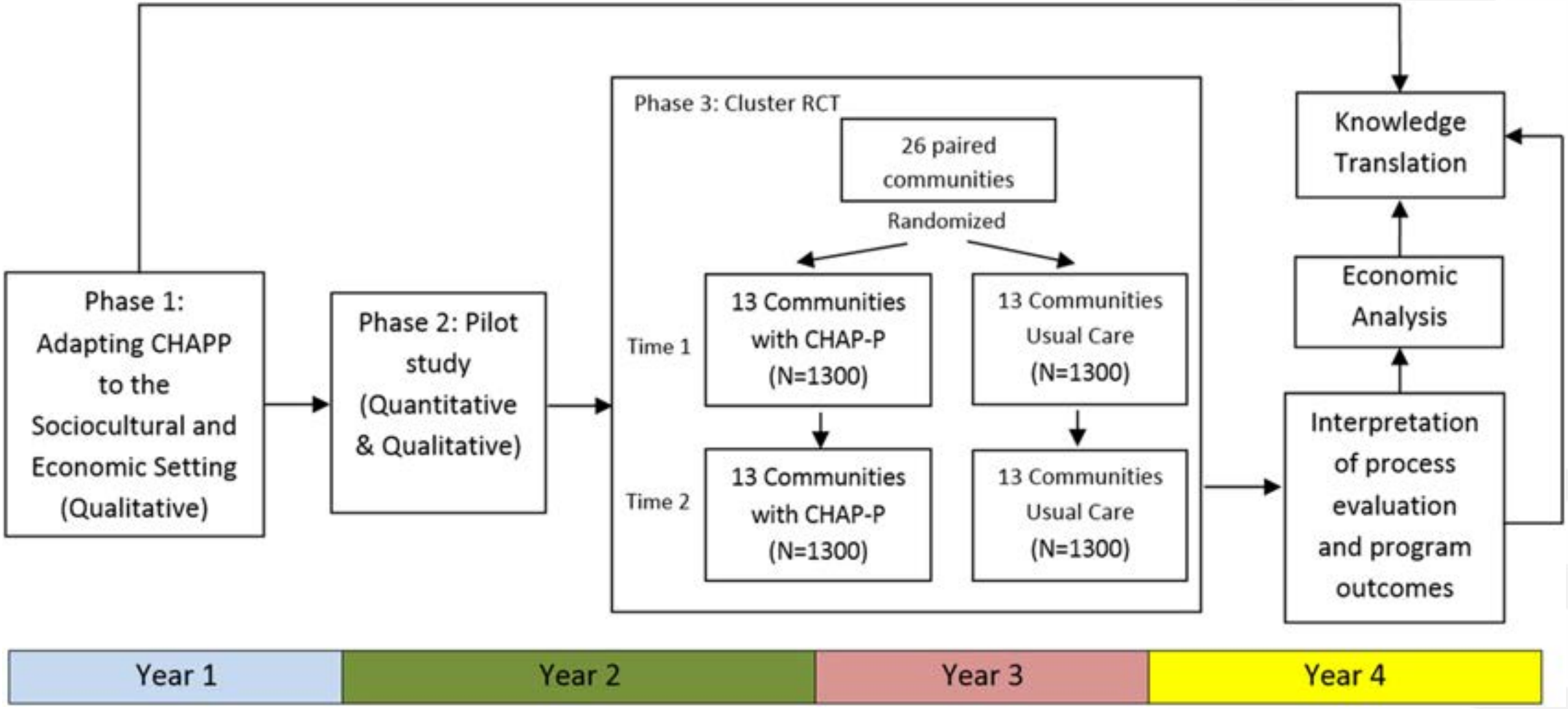
Co-Principal Investigator

Asst. Professor (part-time), McMaster University, Canada

CHAP in Canada – the development

- The Cardiovascular Health Awareness Program (CHAP) began in Canada in 2000 → proven effective
- Originally focused on hypertension and cardiovascular risk, it was extended to include diabetes (Community Health Awareness on Diabetes – CHAD)
- It is suited to low-resourced communities due to its low cost, implementability, and population-based health promotion and disease prevention

The multi-phase adaptation and evaluation



CHAP-P

The Community Health Assessment Program in the Philippines

CHAP's first full adaptation to an LMIC

Partnership between:

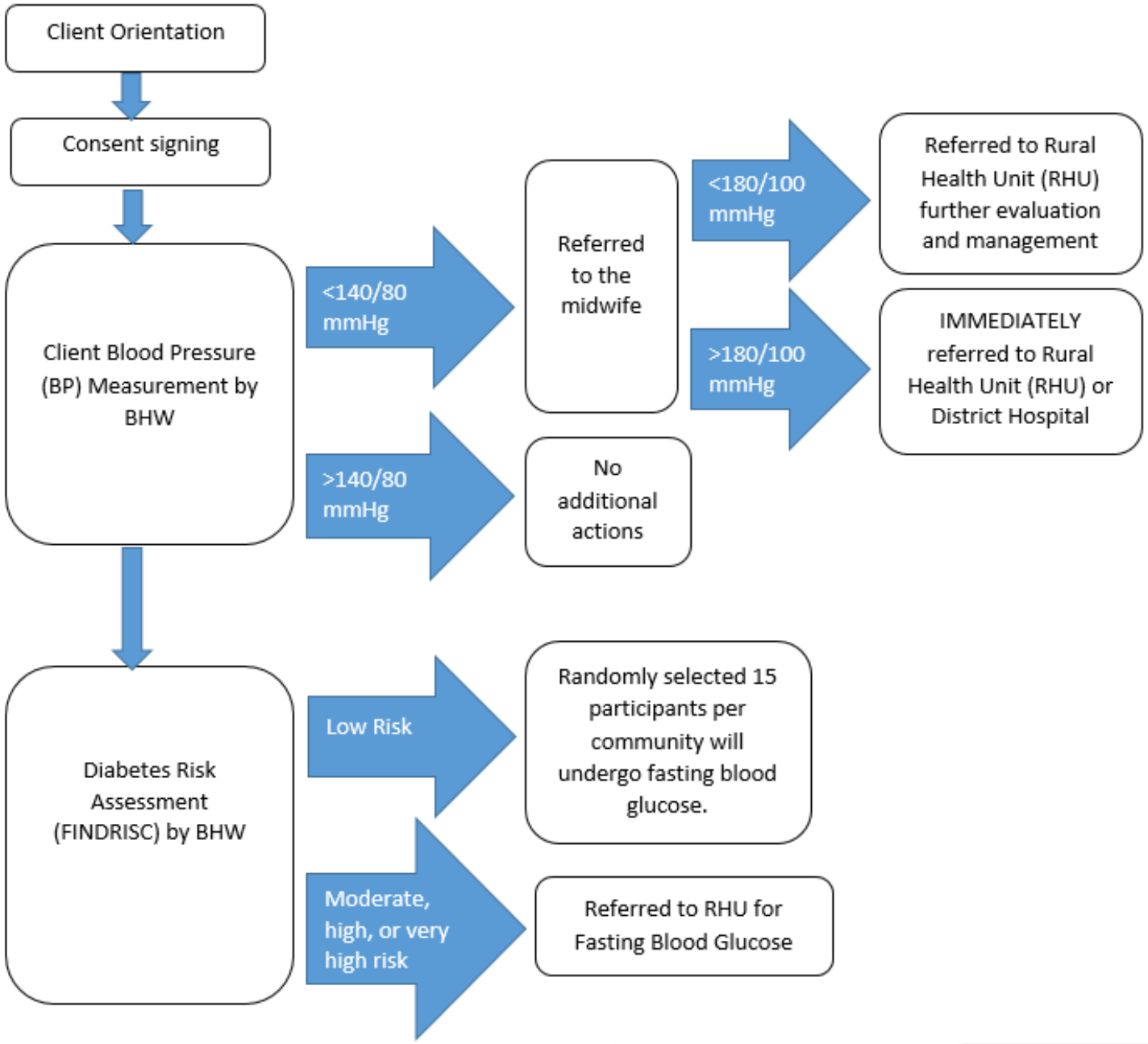
Ateneo de Zamboanga University (Philippines)

McMaster University (Canada)

Methods of the RCT

CHAP-P sessions and referral process

- CHAP-P sessions are bi-monthly, BHW led, free for participants (residents aged 40+), rotating in barangay locations
- Include: risk assessment (e.g., BP, diabetes risk); education; referrals when needed



Study design: RCT outcomes

Primary outcome

Mean difference in HbA1c at 6 months in intervention vs control

Study design: RCT outcomes

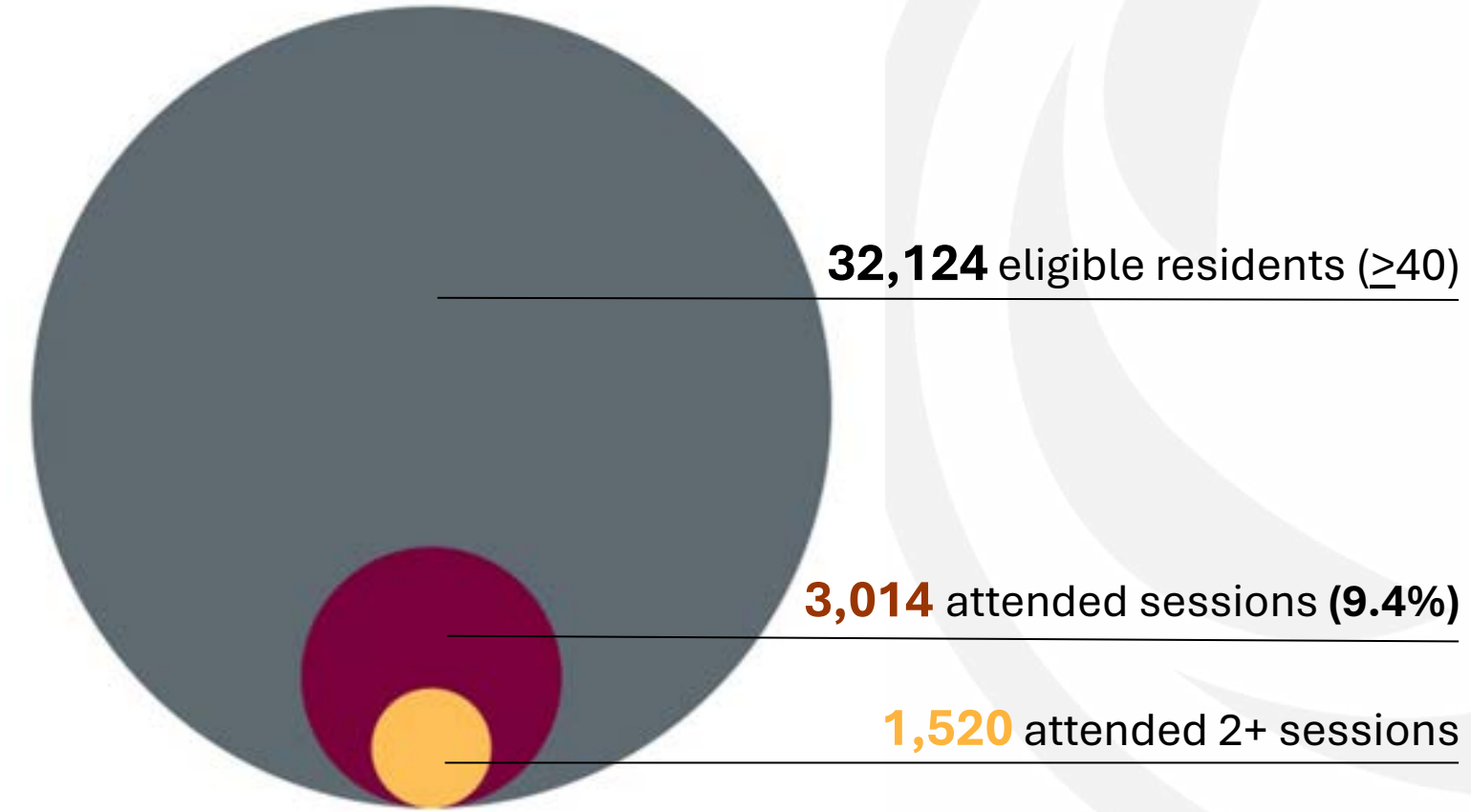
Secondary outcomes

- Blood pressure
- Quality-adjusted life years
- Risk factors for diabetes
- Knowledge of diabetes & hypertension
- Perceived concern and understanding of risk of diabetes and hypertension
- Perceived importance & confidence to undertake healthy habits

Results of the RCT

CHAP-P sessions

- Held in 13 barangays (villages) in 5 municipalities (2 urban, 3 rural)
- There was a higher participation rate in rural (27.7%) compared to urban (7.3%) communities



8,312 participants in the evaluation

- 3,014 CHAP-P session participants
- 5,229 community survey (RCT) participants
- 2626 at baseline
- 2603 six months later
- 68 implementers of CHAP-P sessions who participated in focus groups

CHAP-P attendees

Baseline characteristics

Variables	n (%), n=3,014
Age <45	431 (14.8)
45-54	848 (29.1)
55-64	837 (28.8)
64	795 (27.3)
Female	2,098 (71.5)
Overweight or obese	1,391 (46.2)
Elevated waist circumference	1,930 (66.3)
Elevated BP	1,178 (39.1)
Elevated FINDRISC	526 (33.8)

Outcomes over time

Visit	Outcome measures		
	Systolic	Diastolic	Weight (kg)
1	136.49	78.55	58.41
2	133.21*	81.55	57.35
3	131.15*	75.72	56.10*
4	130.54*	75.03	56.35*
5	130.80*	75.05	55.78*

**Significant change*

Descriptives:
RCT Community Survey (6 months)

Variables		Control* n=1299	Intervention* n=1303
Age	<45	272 (20.9)	214 (16.4)
	45-54	416 (32.0)	433 (33.2)
	55-64	324 (25.0)	331 (25.4)
	>64	287 (22.1)	325 (24.9)
Sex	Female	804 (61.9)	828 (63.6)
Education	Some high school or less	861 (66.3)	919 (70.5)
	Completed high school	199 (15.3)	201 (15.4)
	Some college or university	79 (6.1)	72 (5.5)
	College/university degree or higher	160 (12.3)	111 (8.5)
BMI	Normal (<25)	739 (56.9)	758 (58.2)
	Overweight (25-30)	409 (31.5)	391 (30.0)
	Obese (>30)	151 (11.6)	154 (11.8)
Elevated waist circumference (>102)		379 (29.2)	406 (31.2)

Descriptives: RCT Community Survey (6 months)

Variables		Control* (n=1299)	Intervention* (n=1303)
Low physical activity		327 (25.2)	269 (20.6)
Low fruit and vegetable intake		501 (38.6)	498 (38.2)
Smoker (occasional/daily)		248 (19.1)	279 (21.5)
FINDRISC Category (For those without diabetes C=1192, I=1137)	Low	492 (41.3)	505 (41.9)
	Slightly elevated	497 (41.7)	482 (40.0)
	Moderate	134 (11.2)	134 (11.1)
	High	65 (5.5)	81 (6.7)
	Very high	4 (0.3)	2 (0.2)
Has:	Heart problems	138 (10.6)	112 (8.6)
	High blood pressure	490 (37.7)	500 (38.4)
	High cholesterol	56 (4.3)	56 (4.3)
	Stroke	37 (2.8)	50 (3.8)
	Diabetes	107 (8.2)	99 (7.6)
Has (moderate or worse) problem with:	Mobility	70 (5.4)	84 (6.4)
	Self-care	25 (1.9)	27 (2.1)
	Doing usual activities	70 (5.4)	83 (6.4)
	Pain	179 (13.8)	200 (15.3)
	Anxiety and depression	106 (8.2)	117 (9.0)

Findings: Primary and secondary outcomes – RCT Community Survey

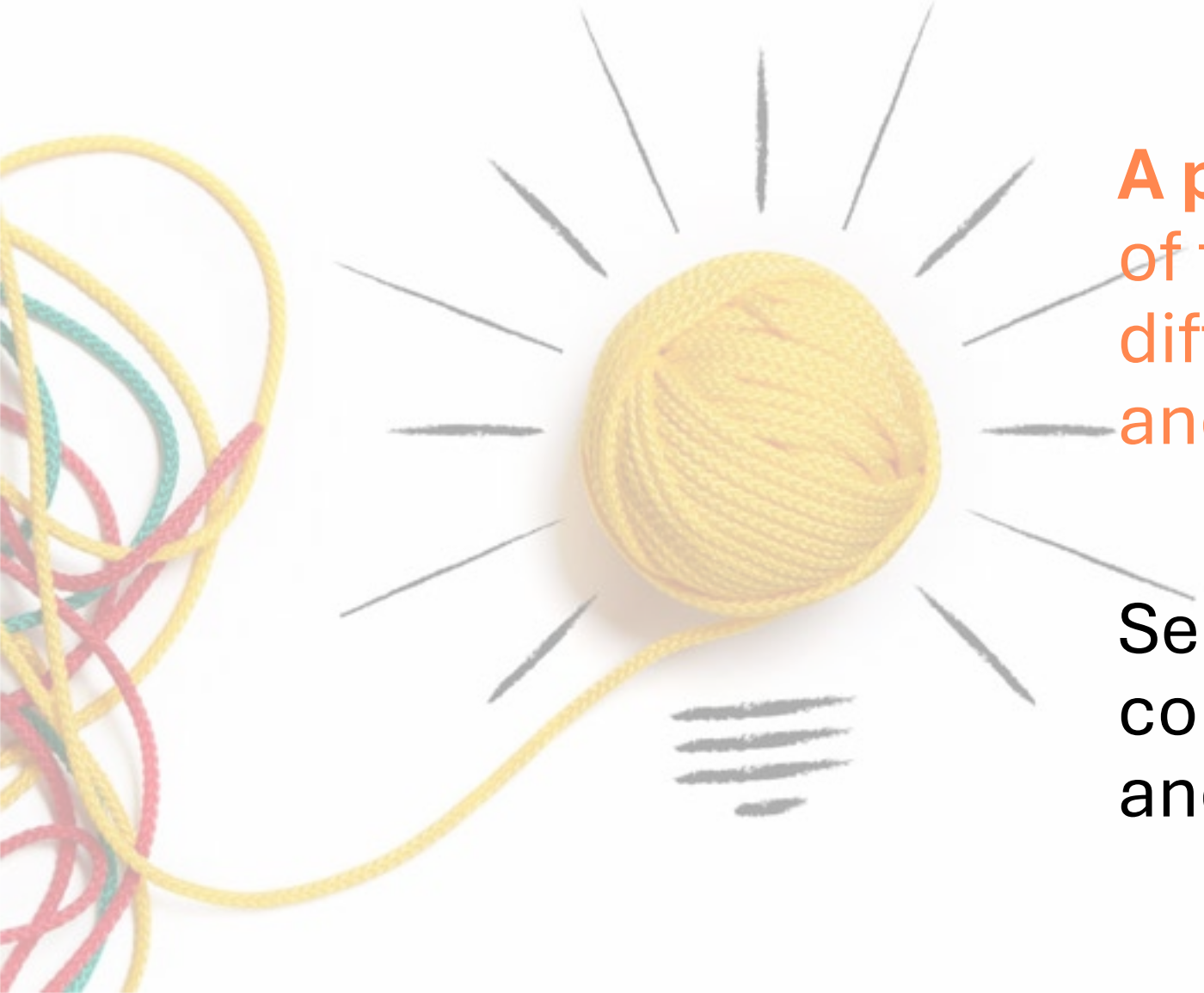
Outcomes	Mean (95% CI)		Mean Difference (I–C) (95% CI)	p-value
	Control, n=1299	Intervention, n=1303		
HBA1c	5.98 (5.86, 6.09)	5.84 (5.73, 5.96)	-0.13 (-0.32, 0.05)	0.164
Systolic blood pressure	134.31 (132.38, 136.25)	132.60 (130.67, 134.54)	-1.71 (-4.47, 1.04)	0.223
Diastolic blood pressure	80.49 (78.95, 82.04)	76.02 (74.48, 77.56)	-4.47 (-6.82, -2.12)	<0.001
QALY (EQ5D)	0.90 (0.89, 0.91)	0.90 (0.89, 0.91)	0.002 (-0.001, 0.012)	0.663
Knowledge score	80.80 (80.35, 81.26)	81.24 (80.79, 81.69)	0.44 (-0.20, 1.072)	0.181
FINDRISC score	7.99 (7.61, 8.38)	8.20 (7.82, 8.58)	0.20 (-0.42, 0.83)	0.525

Findings: Secondary outcomes – RCT Community Survey

Outcomes	Mean (95% CI)		Mean Difference (I–C) (95% CI)	p-value
	Control, n=1299	Intervention, n=1303		
Understands risk of high blood pressure	6.03 (5.96,6.09)	6.18 (6.12,6.25)	0.16 (0.07,0.25)[2]	0.001
Concerned about diabetes	5.95 (5.87,6.04)	6.13 (6.04,6.21)	0.17 (0.05,0.29)[2]	0.007
Understands risk of diabetes	6.01 (5.94,6.08)	6.22 (6.14,6.29)	0.21 (0.10,0.31)[2]	<0.001

GEE Adjusted for clustering, pairing, and mean community outcome value

Sensitivity Analysis: Urban vs rural



A priori theory: The effect of the program will be different between urban and rural communities

Sensitivity analysis was conducted to compare rural and urban communities

Findings: Primary and secondary outcomes – RCT Community Survey (urban vs rural sensitivity analysis)

Outcomes	**Urban** (n=1204)		**Rural** (n=1398)		Interaction p-value
	Mean difference (I-C) (95% CI)	p-value	Mean difference (I-C) (95% CI)	p-value	
HBA1c	0.16 (0.08, 0.32)[1]	0.001	-0.22 (-0.41, -0.03)[1]	0.023	<0.001
Systolic Blood Pressure	-6.15 (-10.37, -1.93)[1]	0.004	0.46 (-2.87, 3.79)[1]	0.785	0.017
Diastolic Blood Pressure	-6.83 (-9.08, -4.58)[1]	<0.001	-2.19 (-5.27, 0.89)[1]	0.164	0.008
QALY (EQ5D)	-0.01 (-0.02, 0.00)[2]	0.099	0.01 (-0.00, 0.03)[2]	0.089	0.015
Knowledge Score	-0.40 (-1.52, 0.72)[2]	0.487	1.14 (0.55, 1.74)[2]	<0.001	0.012
FINDRISC Score	0.56 (-0.10, 1.21)[1]	0.093	-0.10 (-0.98, 0.78)[1]	0.819	0.111

GEE Adjusted for clustering, pairing, and mean community outcome value

Findings: Secondary outcomes – RCT Community Survey (urban vs rural sensitivity analysis)

Outcomes	**Urban** (n=1204)		**Rural** (n=1398)		Interaction p-value
	Mean difference (I-C) (95% CI)	p-value	Mean difference (I-C) (95% CI)	p-value	
Concerned about high BP	-0.13 (-0.22, -0.04)[2]	0.007	0.25 (0.10, 0.39)[2]	0.001	<0.001
Concerned about diabetes	-0.03 (-0.15, 0.08)[2]	0.571	0.35 (0.19, 0.51)[2]	<0.001	<0.001
Understands risk of high BP	0.04 (-0.06, 0.14)[2]	0.442	0.26 (0.13, 0.39)[2]	<0.001	0.001
Understands risk of diabetes	0.11 (-0.00, 0.23)[2]	0.052	0.30 (0.12, 0.47)[2]	0.001	0.095
Importance of increasing fruits and vegetable	-0.120 (-0.376, 0.137)[2]	0.3602	0.20 (0.09, 0.32)[2]	0.001	0.020
Importance of increasing physical activity	-0.04 (-0.19, 0.12)[2]	0.661	0.11 (0.00, 0.22)[2]	0.049	0.121
Confident in ability to increase physical activity	-0.10 (-0.24, 0.04)[2]	0.170	0.14 (0.05, 0.23)[2]	0.002	0.002

Perspectives on implementing CHAP-P

Implementers felt they **could really help residents** in their communities

With training, lay volunteers were **able to manage technology** and other program elements

Lay volunteers **described the program positively** and felt both they and the clients wanted it to continue

The main challenge was the lack of availability of **medications**, **doctors**, and **supplies** in the region

Conclusions

- CHAP-P was **feasible** to implement and **appreciated** in communities
- Results were **in favour of the intervention** though most were not significant
- Results indicate that CHAP-P was **more effective in rural** over urban communities

CHAP-P

Community Health Assessment Program Philippines

McMaster University | Family Medicine

Ateneo de Zamboanga University
SCHOOL OF MEDICINE

PANEL DISCUSSION

The future of diabetes implementation research

Moderated by Morven Roberts – Chief Executive Officer, GACD

The future of diabetes implementation research

Johan Louw

South African Medical Research Council
South Africa

Anushka Patel

The George Institute for Global Health
Australia

Bianca Hemmingsen

World Health Organization

The future of diabetes implementation research

Gina Agarwal

McMaster University
Canada

María Lazo Porras

CRONICAS
Centro de Excelencia en Enfermedades Crónicas
Peru

Jennifer Manne-Goehler

World Health Organization

Closing remarks

Morven Roberts – Chief Executive Officer, GACD

Accompanying outputs

- Full report (open access)
- Key message flyers
- Full slide set
- Social media toolkit
- Coming next year… commentary publication

www.gacd.org/our-impact/diabetes-report

Lead author: Maisha Syed – GACD Research Assistant

On behalf of the GACD Programme Subcommittee: Patricia Ridgway – National Health and Medical Research Council, Australia

The GACD secretariat are indebted to the people who took the time and effort to collate data from across the duration of their project and kindly agreed to share it in the spirit of open collaboration.

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- Brian Oldenburg – Baker Heart & Diabetes Institute, Australia
- Francisco Salazar Gonzalez – Universidad De Monterrey, Mexico
- Josefien van Olmen – University of Antwerp, Belgium

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Thank you!

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