



Community Integrated Intermediary Care (CIIC) for Thai Older Adults: A cluster randomized controlled trial in Chiang Mai, Thailand

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Global observatory of long-term care
online event
International day of care of support 2024



Acknowledgement

Competing interests

The authors declare that they have no competing interests.

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Study website

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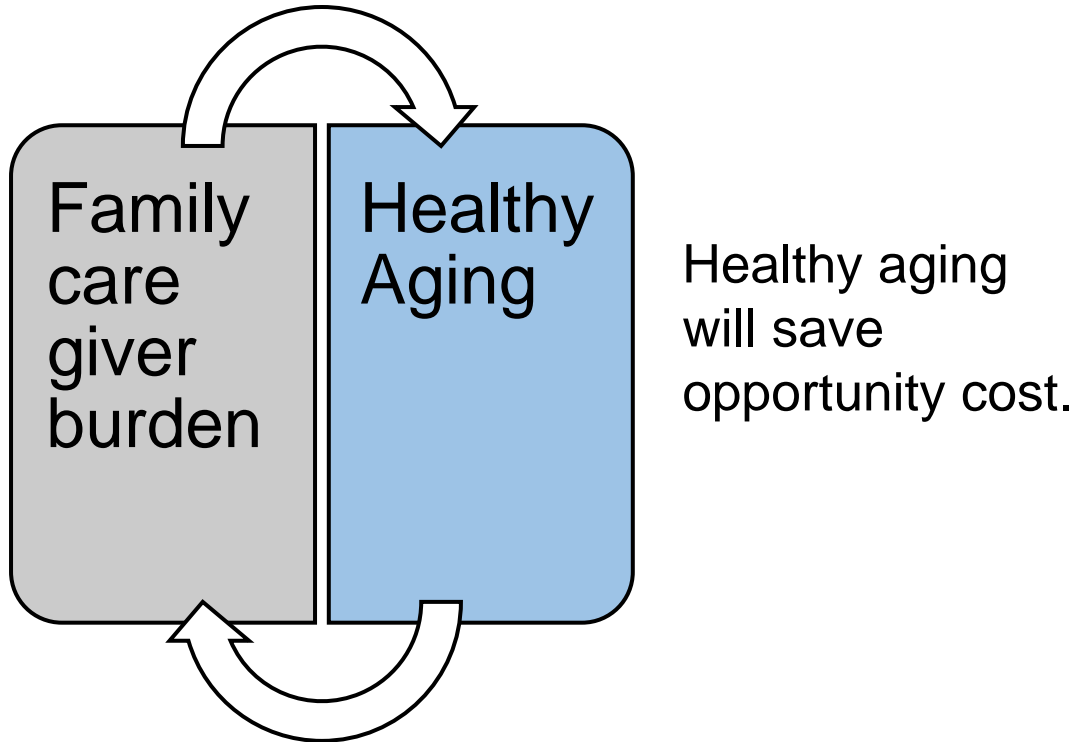
•Tokyo Ariake University

Siripen Supakankunti

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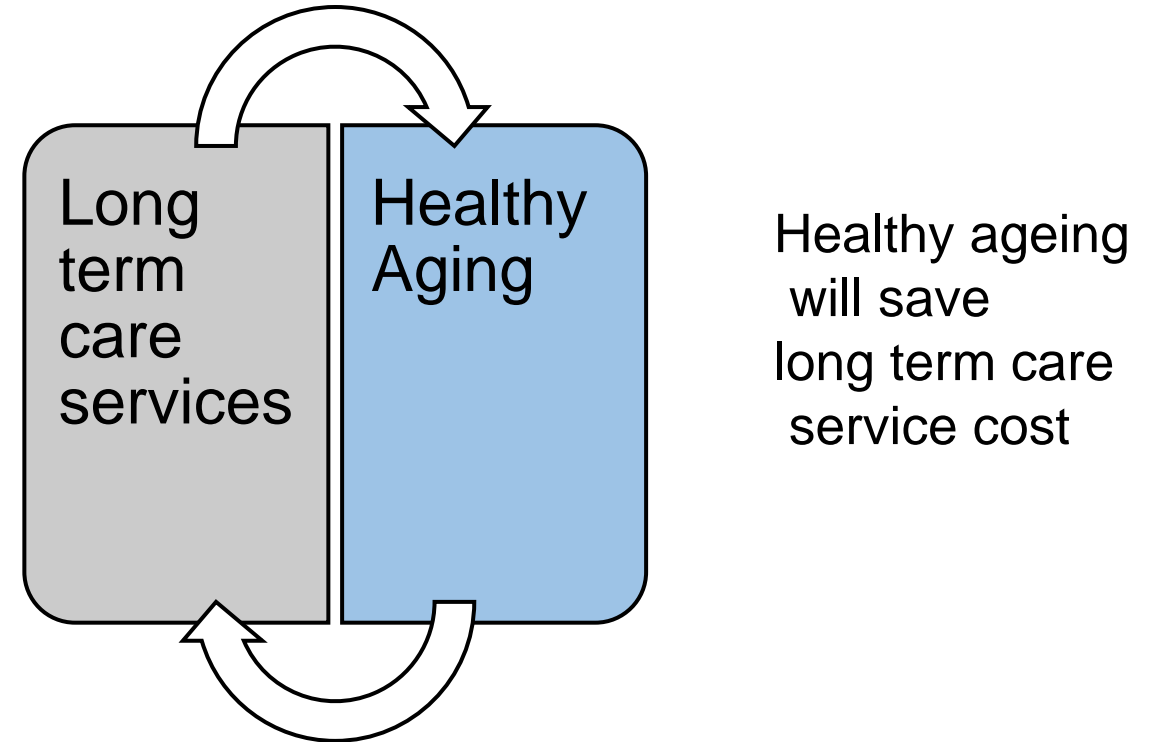
Healthy aging is an investment.

Long-term care system in most of the countries are **family-based**.



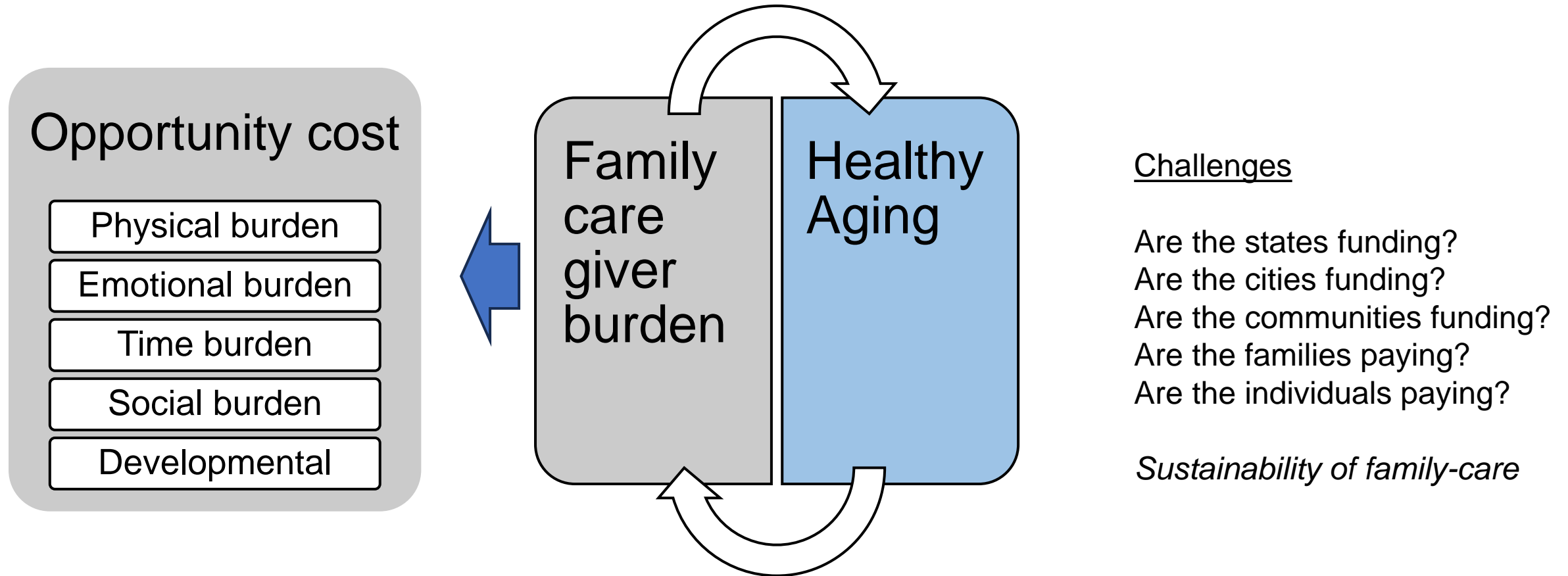
Eg. Thailand, Singapore, and many countries

Countries with advanced long term care **system and insurance** are few.



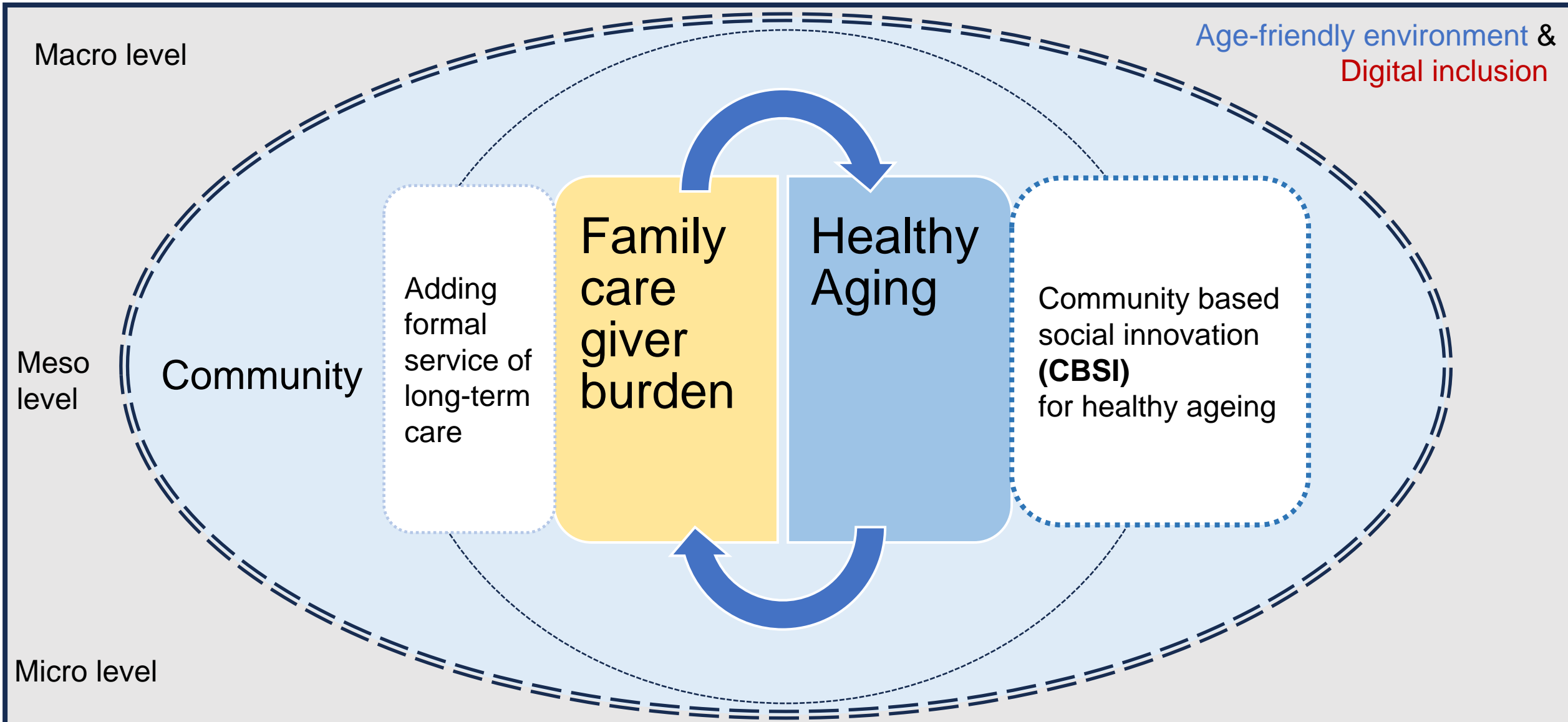
E.g. Japan, Republic of Korea

Long term care in most of the countries are family-based care system.

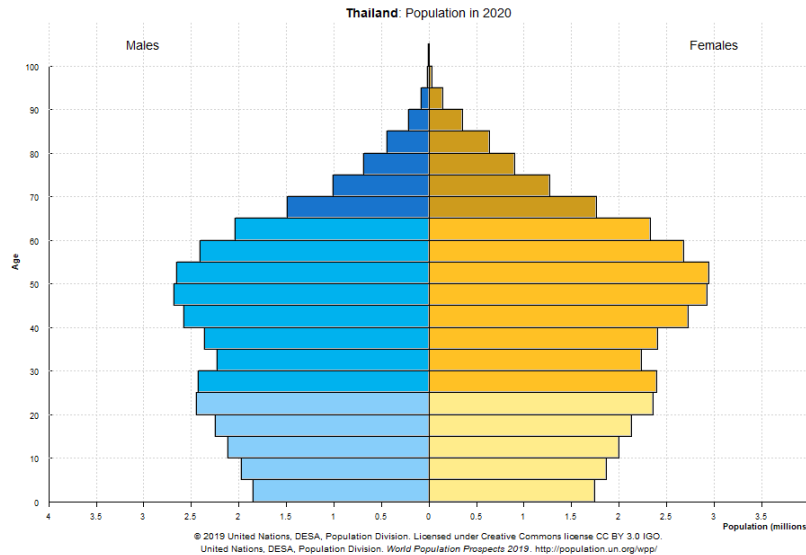


E.g. Thailand, Singapore, and many countries

Sustainability of **family-based** long term care system



Background



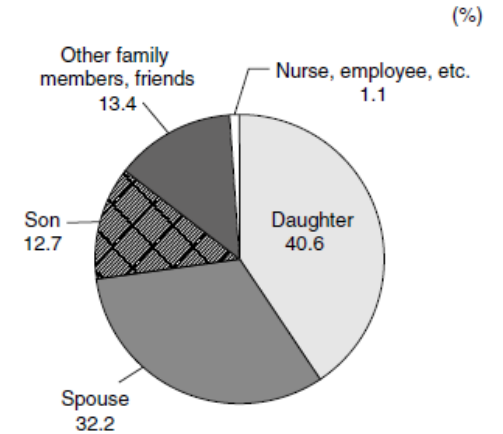
Older population, over 60

0.7 M (7.2%) in 2011

11.5M (17%) in 2020

Est (33%) in 2040

Families as main care providers for persons requiring care in Thailand



Source: National Statistical Office (2019)

This situation of population ageing and burden on the families is common to many low-middle income countries.

Population ageing in Thailand

Background

- Family-based long-term care (FLTC) is currently practised model for majority of long-term care in Thailand.
- Families are backbone of the long term care in many Southeast Asian countries .
- *(Knodel & Nguyen, 2015)*
- However, FLTC poses challenges in sustainability through human resource and technical need.

Challenges to caring families

Technical challenge

Different level of education

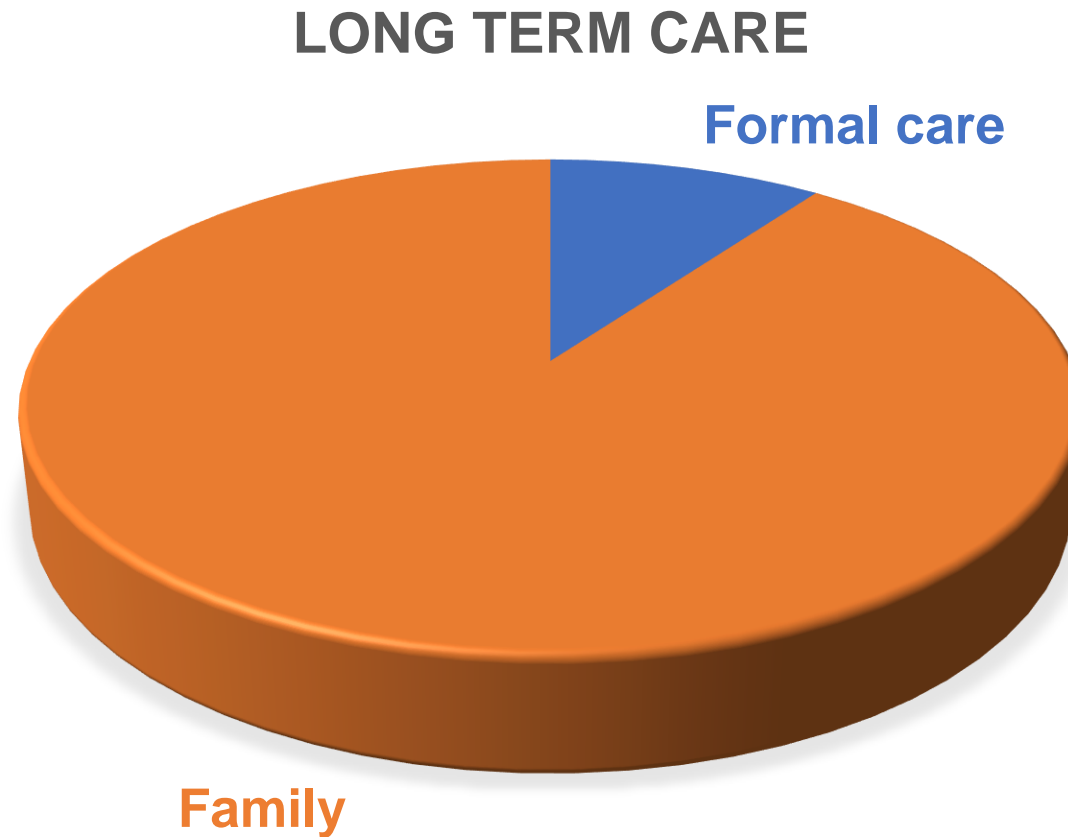
Difference in care competencies of family caregivers

Inequalities across the families in low-resource countries.

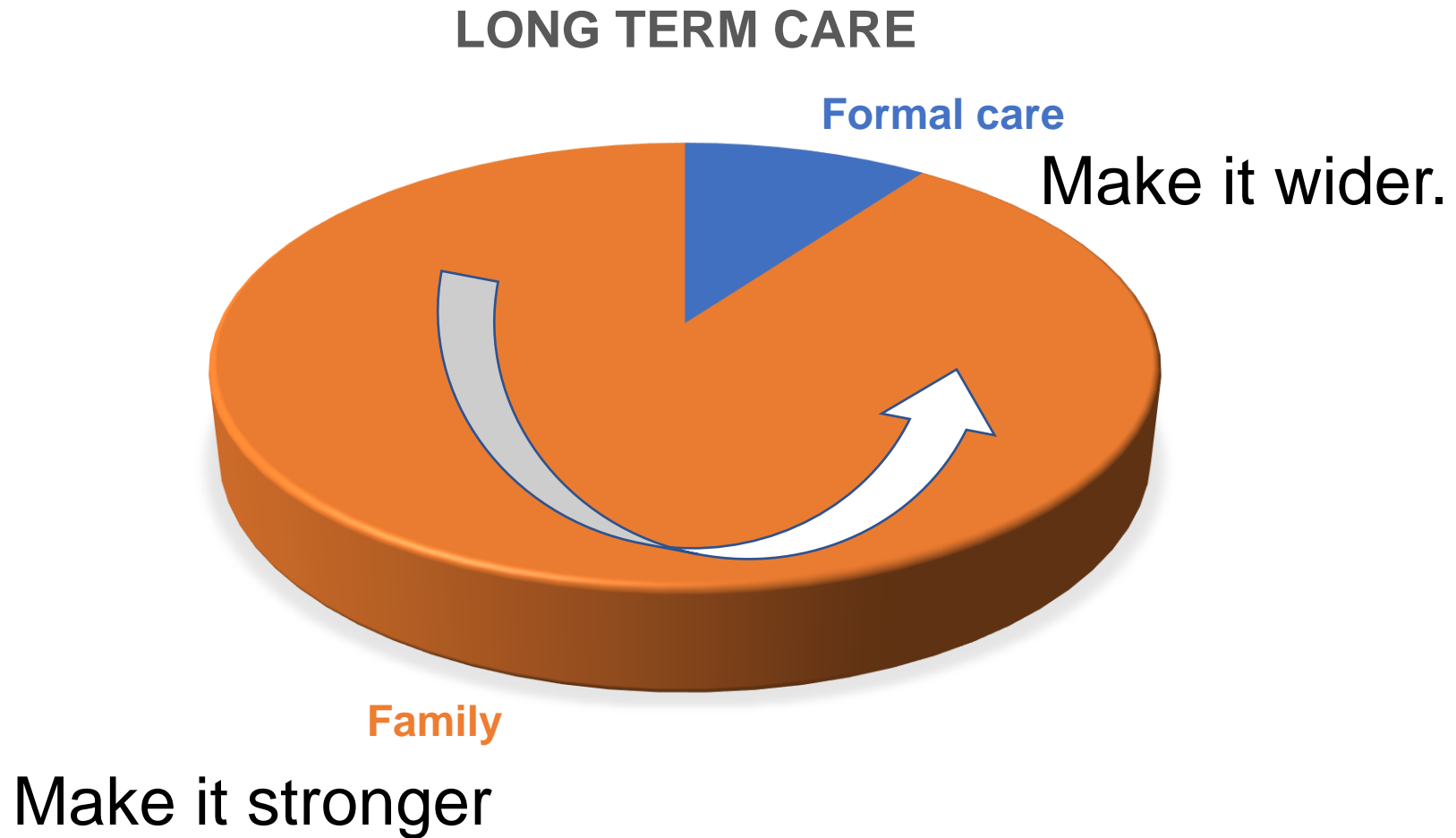
Human resource challenge

- Caregiver burden
- Job losses
- Opportunity cost
- Migration

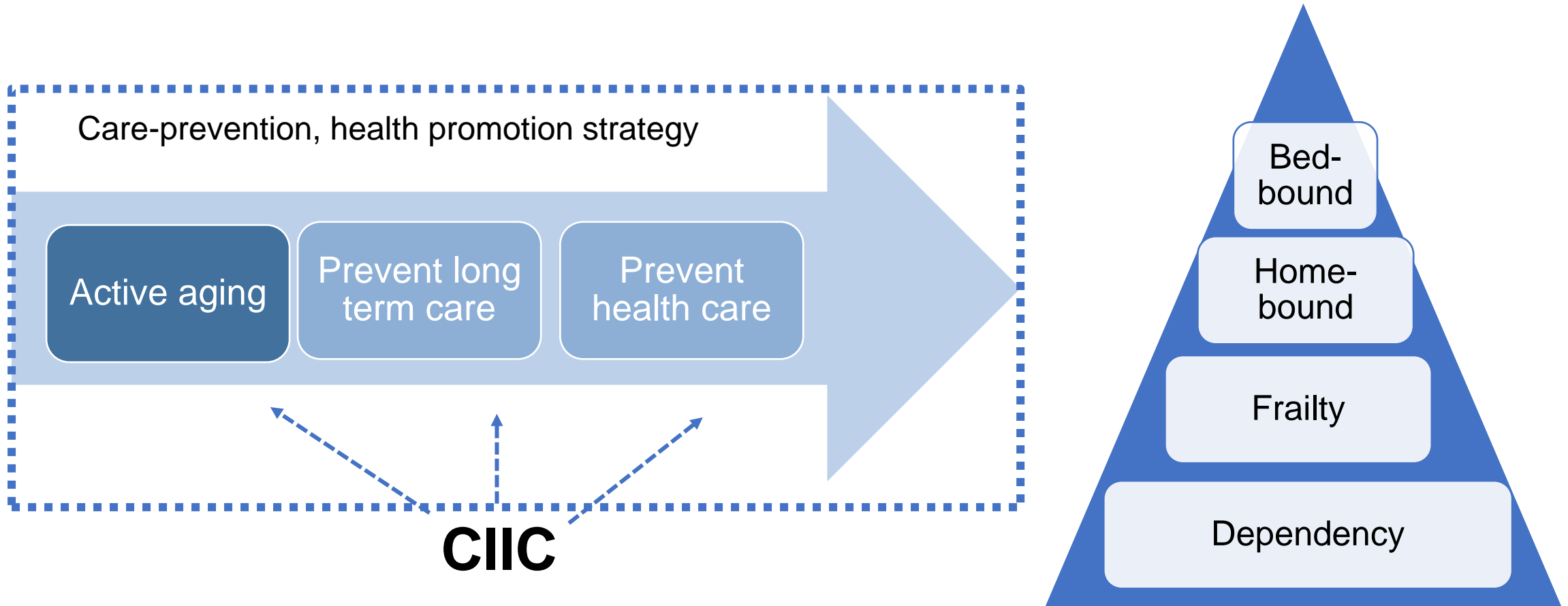
Concept to develop long term care in Thailand



Concept to develop long term care in Thailand

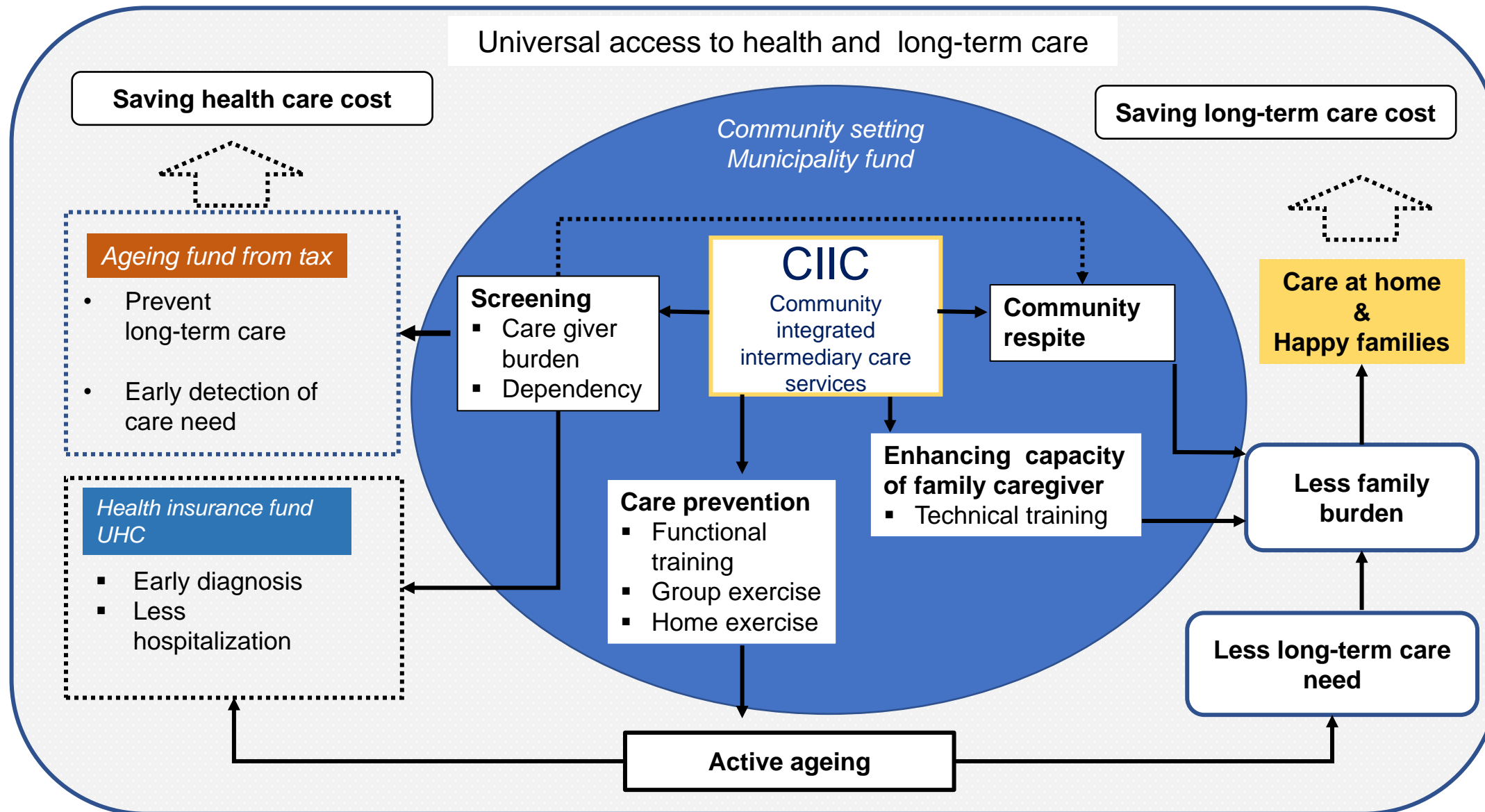


Preventing frailty through the health promotion is evidence-based and possible.



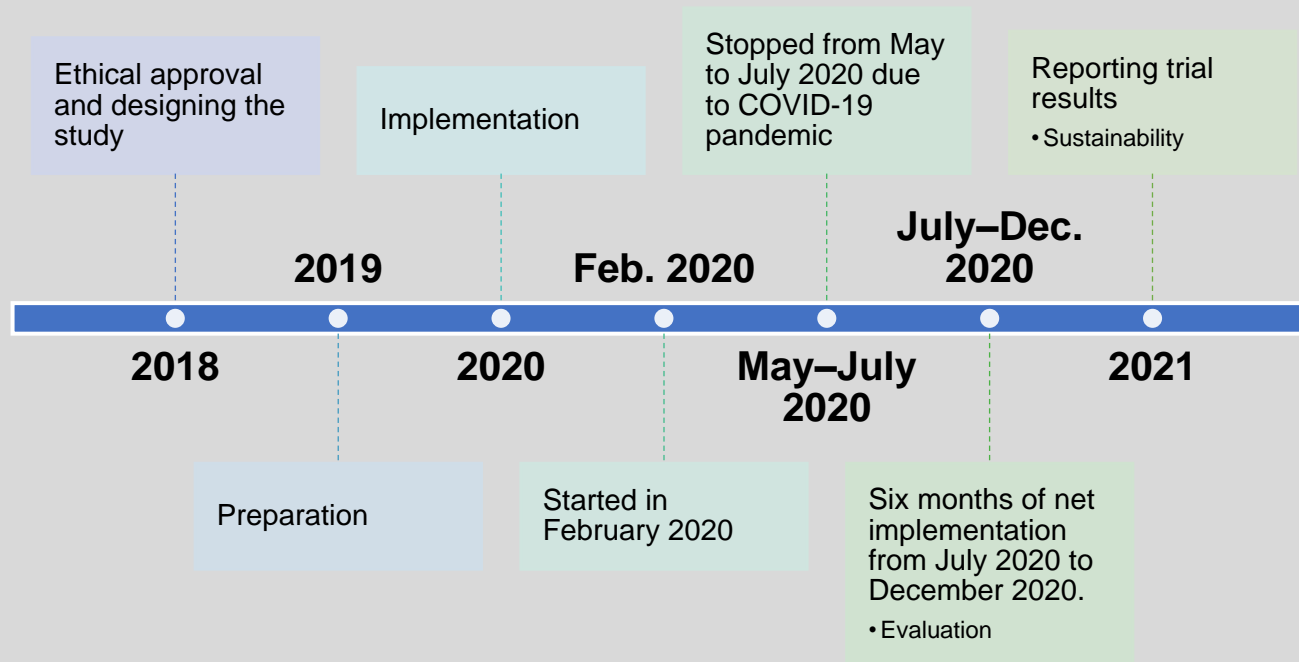
Universally accessible health care services in Thailand are overburdened with non-communicable diseases and age-related multiple morbidity. Population level intervention is required to prevent frailty and long-term care need in order to save health care cost and relieve the caregiver burden.

CIIC model: Services and Contributions



Affordable model enhancing family based long-term care toward healthy ageing

Timeline



2019 July: Thailand MOPH Official visiting Juntendo University



2020 February: Juntendo team at MOPH Thailand for CIIC scale up



2020 February: CIIC team and Maehia Vice-mayor and team JICA volunteers opening the CIIC facility

CIIC Interventions

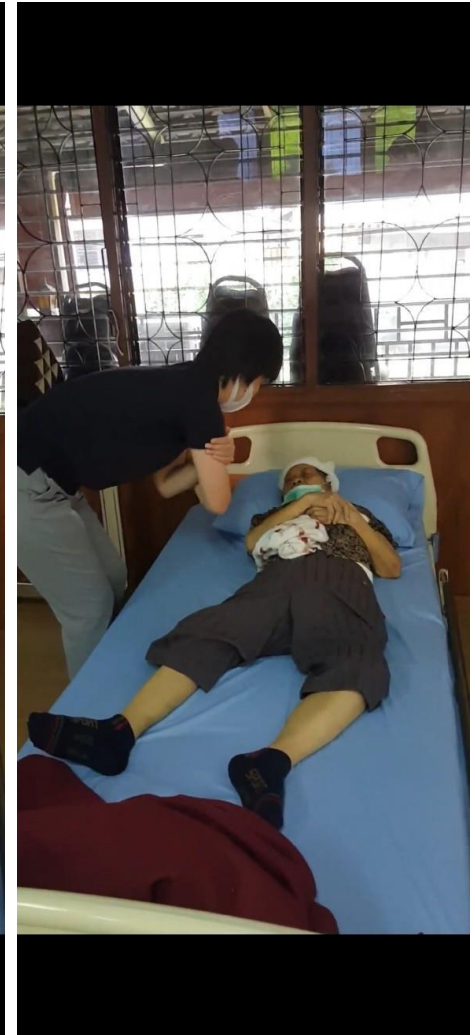
1. Functional training exercise for care prevention



3. Community respite home

2. Family capacity building for care

Care giver support;
Training family care
givers on request





CIIC team for community empowerment

- Preparation in 2019
- Empowerment of the community with
- Technique
- Equipment
- Training volunteer exercise group leaders

Community Integrated Intermediary Care (CIIC) project in Thailand

- Policy
- Advocacy
- Mediation
- Empowerment
- 1. Creating environment
- 2. Training volunteers
- 3. Community empowerment
- 4. Care prevention through intersectoral collaboration of city office, primary health care and community



1 Creating environment



2 Training volunteers for leading group exercise



3. Strengthening community action



4. Redirecting services from treatment to prevention: Care prevention

Empowering people to control their own health and create healthy lifestyle in Thai community

Functional training

Active aging

Prevention of long term care cost

Health promotion in Thailand, CIIC project 2020 February

Primary investigator, Dr. Myo Nyein Aung
Funded by WHO Kobe centre

Home Exercise

Home Exercise DVD, poster and dairy calendar are provided by CIIC. We prepared it for inclusion of people who do not like group activity. These became useful when the COVID-19 pandemic and social distancing measures came in 2020 onwards.



Photo: CIIC researcher and Maehia city municipality officer explaining how to perform home exercise using the poster and calendrer

Exercise Diary

MON
วันจันทร์

บริหารร่างกายสำหรับผู้สูงอายุ 3 นาที 7 วัน
แต่ละวัน 5 ท่าบริหาร ท่าละ 10 ครั้ง
ทำ 3 ครั้งต่อวัน (เช้า-กลางวัน-เย็น) ท่าทุกตัว
Home exercises for elderly

CIIC
Community Integrated
Innovative Care

ท่าที่ 1
ยืดเหยียดกล้ามเนื้อ (Stretch)
ท่านี้ช่วยยืดเหยียดกล้ามเนื้อ
ที่คอและไหล่

ท่าที่ 2
ลุกนั่ง (Squat)
ช่วยเพิ่มความแข็งแรงของกล้ามเนื้อ
ขาและข้อเข่า

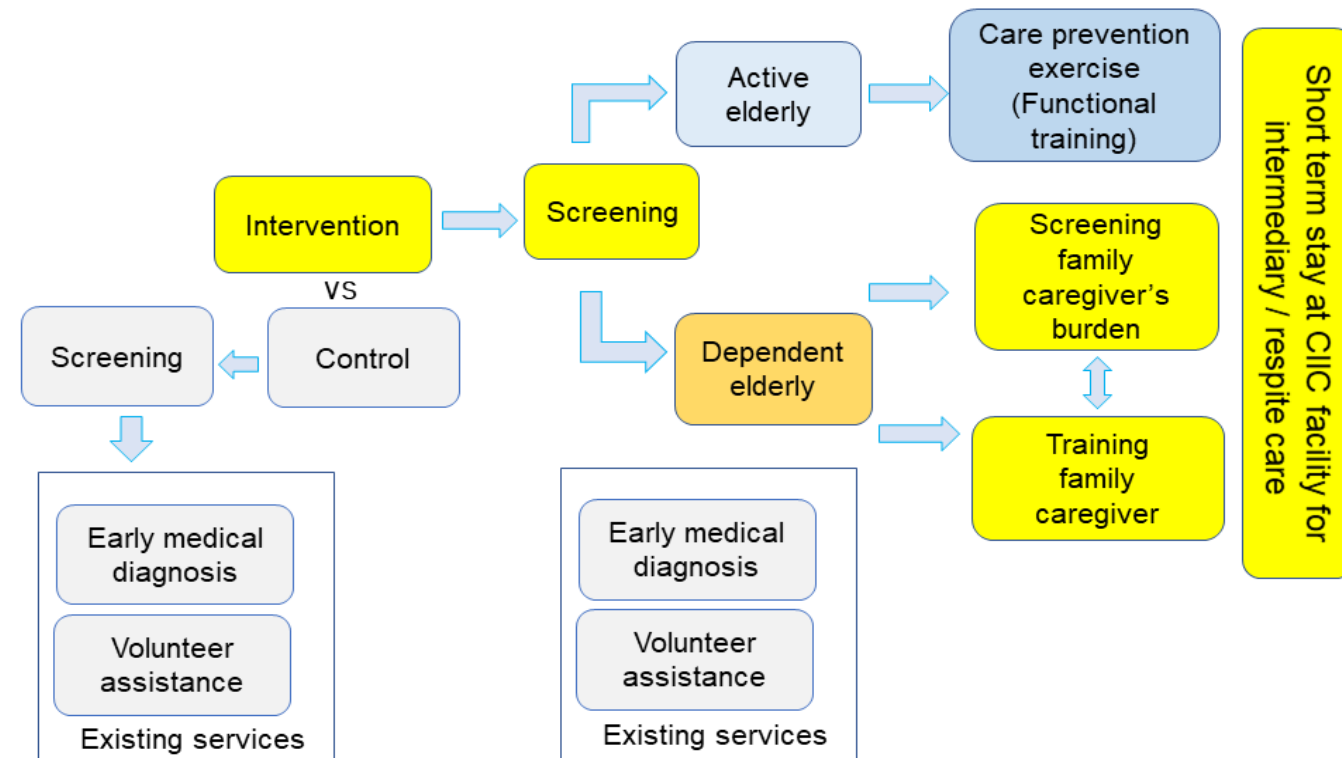
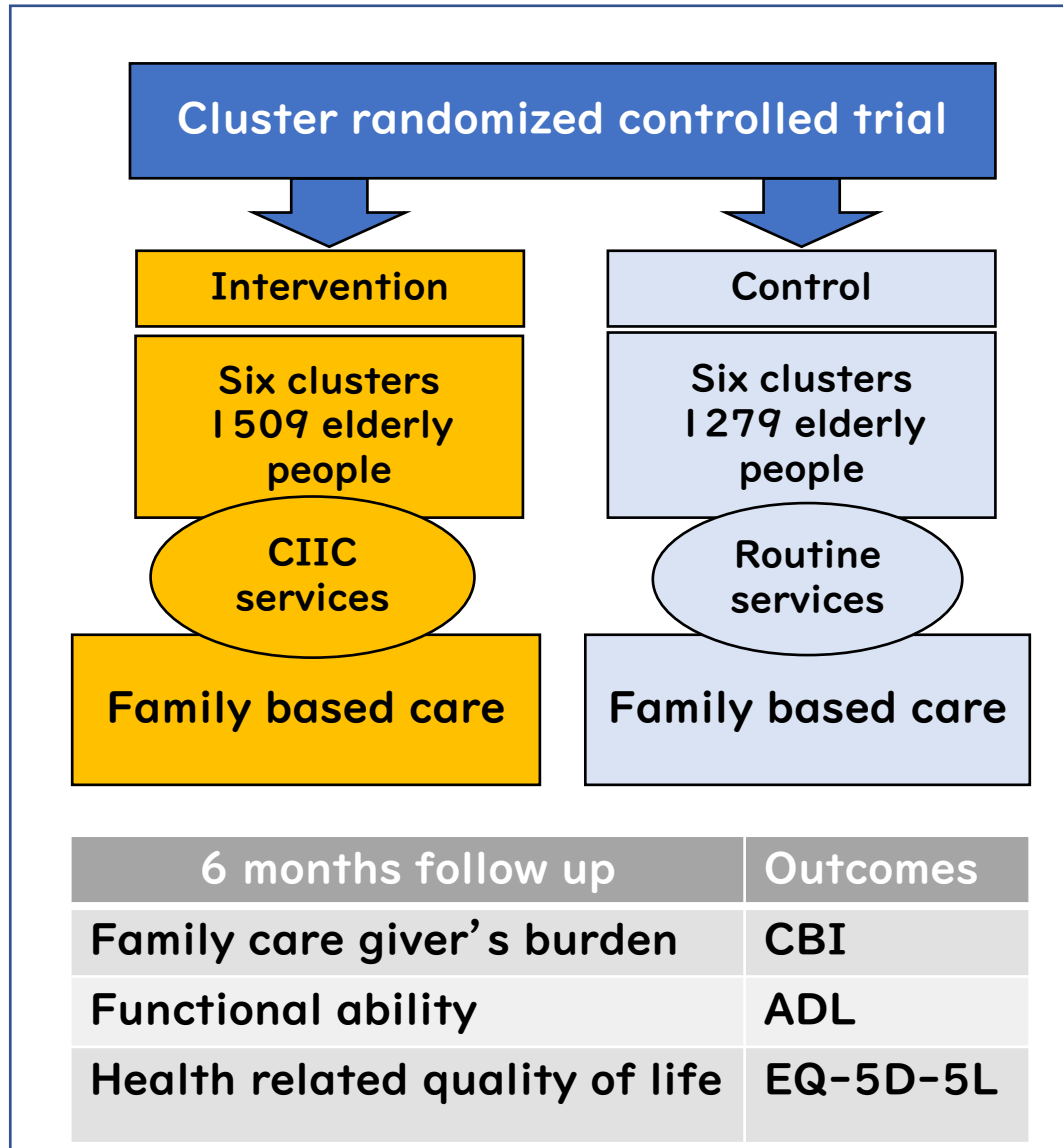
ท่าที่ 3
บริหารลำตัว (Trunk)
ท่านี้ช่วยเพิ่มความแข็งแรงของกล้ามเนื้อ
ที่หลังและคอ

ท่าที่ 4
บริหารร่างกายส่วนบน (Upper limb) (ใช้แขน)
ท่านี้ช่วยเพิ่มความแข็งแรงของกล้ามเนื้อ
ที่แขนและไหล่

ท่าที่ 5
บริหารร่างกายส่วนล่าง (Lower limb)
ท่านี้ช่วยเพิ่มความแข็งแรงของกล้ามเนื้อ
ที่ขาและข้อเข่า

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Method, design and intervention



All analysis in intention to treat approach.
All analysis in cluster level.

Result : Baseline evaluation at randomization

- ADL activity of daily living
- GDS geriatric depression
- EQ euro QOL

Primary outcome

Care giver burden index

Secondary outcome

ADL

GDS

EQ

Characters

Age

Sex

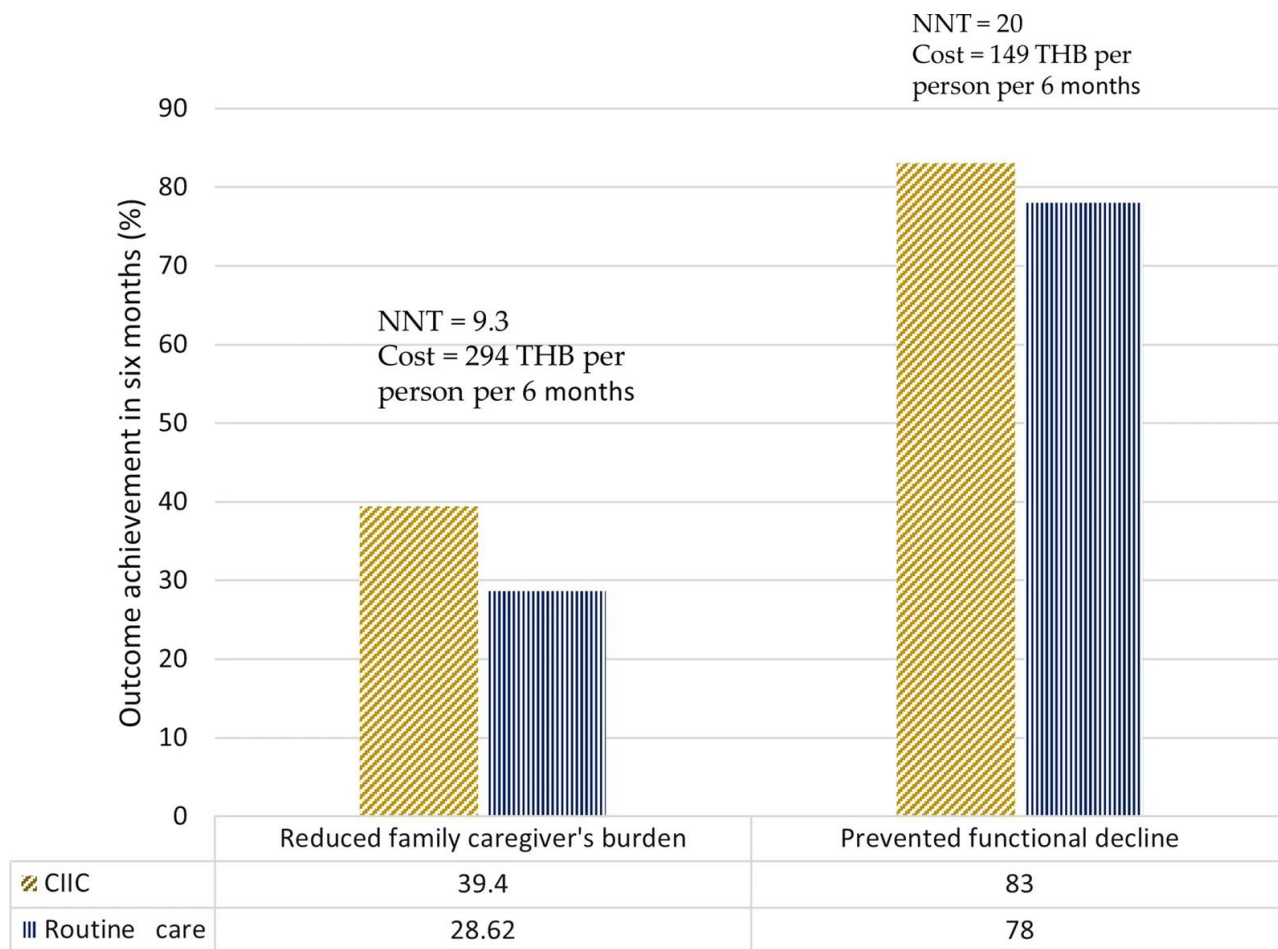
Baseline characteristic in the cluster randomized controlled trial

	Cluster	CBI		ADL		GDS		EQ index	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
icc									
Intervention	1	2.81	6.38	19.28	2.48	1.35	2.25	0.83	0.20
	2	14.36	13.16	19.43	1.97	2.11	2.32	0.72	0.23
	3	2.36	6.09	19.34	2.30	1.03	2.13	0.86	0.20
	4	1.48	4.67	19.23	2.30	1.14	1.99	0.89	0.16
	5	1.56	7.21	19.40	2.45	0.78	1.30	0.85	0.23
	6	6.63	9.83	18.76	3.17	2.76	2.69	0.75	0.28
	Mean		4.37	9.07	19.23	2.50	1.57	2.29	0.81
Control	7	4.43	8.61	18.99	3.21	1.44	2.31	0.78	0.26
	8	4.36	9.17	19.40	2.15	0.92	1.58	0.81	0.21
	9	4.69	9.94	19.33	2.34	0.85	1.46	0.84	0.16
	10	3.80	10.00	19.52	1.85	1.06	1.60	0.83	0.25
	11	3.90	9.31	19.06	2.76	0.97	1.61	0.78	0.24
	12	3.66	8.61	19.21	2.24	2.13	3.09	0.79	0.24
	Mean		4.15	9.46	19.25	2.46	1.23	2.07	0.81
icc		0.052		0.017		0.019		0.047	
P		0.67		0.69		0.35		0.79	
MANOVA value	0.08								

Mean age of the study is 69.53 years.

Sixty percent were female. Baseline indicators did not differ statistically between intervention and control clusters.

Result: Cost and effectiveness of CIIC



Although CIIC was implemented during the COVID-19 pandemic, it achieved effective outcome with low cost.

Intervention Cost of CIIC

The Number Needed to Treat (NNT) for reducing the family burden was 9.5 and the NNT for care prevention was 20.

The cost to provide care prevention intervention is 149 THB per six months per person.

In relation to reducing the family burden, the cost of providing family caregiver capacity-building and standby respite care is 669 THB per six months per person and

294 THB per six months per person without respite care.

2023 January, Presenting CIIC results to Officials and policy makers at Ministries of Public Health Thailand



Conclusion



A scalable model of LTC in Thailand and LMIC

Cores to implement the CIIC model

Community empowerment

advocacy

volunteerism