

THE CHOLESTEROL DILEMMA

The **CLINICAL BURDEN** of **DYSLIPIDEMIA**




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Disclosures

- I deliver academic talks and handle scientific symposia for various institutions and industries in health and medicine.
- This presentation was developed in coordination with colleagues in the healthcare profession but independently of any particular industry. It represents both personal insights and perspectives based on scientific evidence as well as clinical experience.
- The cascading of well-founded knowledge and relevant information to colleagues, students and co-learners in the profession will be the primary goal of this presentation.

SESSION OUTLINE

gaps in
CLINICAL
detection of FH exist

Awareness on FH
Access to testing
Health-seeking behavior

1

the local
BURDEN
is unique

Global burden of FH
Regional prevalence
Lipid profile of Filipinos

2

the CV impact of
DYSLIPIDEMIA
is established

CV complications
Recognition and referral
Benefits of early treatment

3

gaps in
CLINICAL
detection of FH exist

Awareness on FH
Access to testing
Health-seeking behavior

1

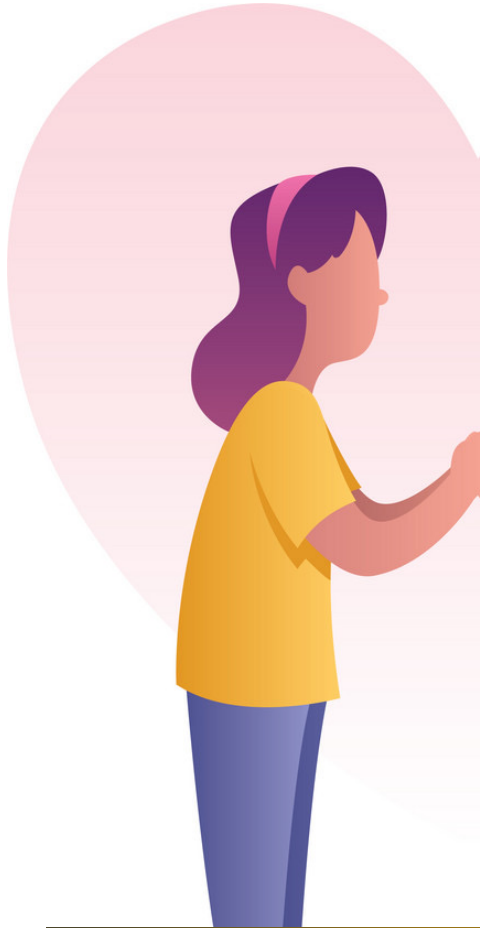
Awareness on FH
Access to testing
Health-seeking behavior



A Tale of Two Sisters: Recognizing Familial Hypercholesterolemia

by Dr. Lourdes Ella Santos

Clinical scenario



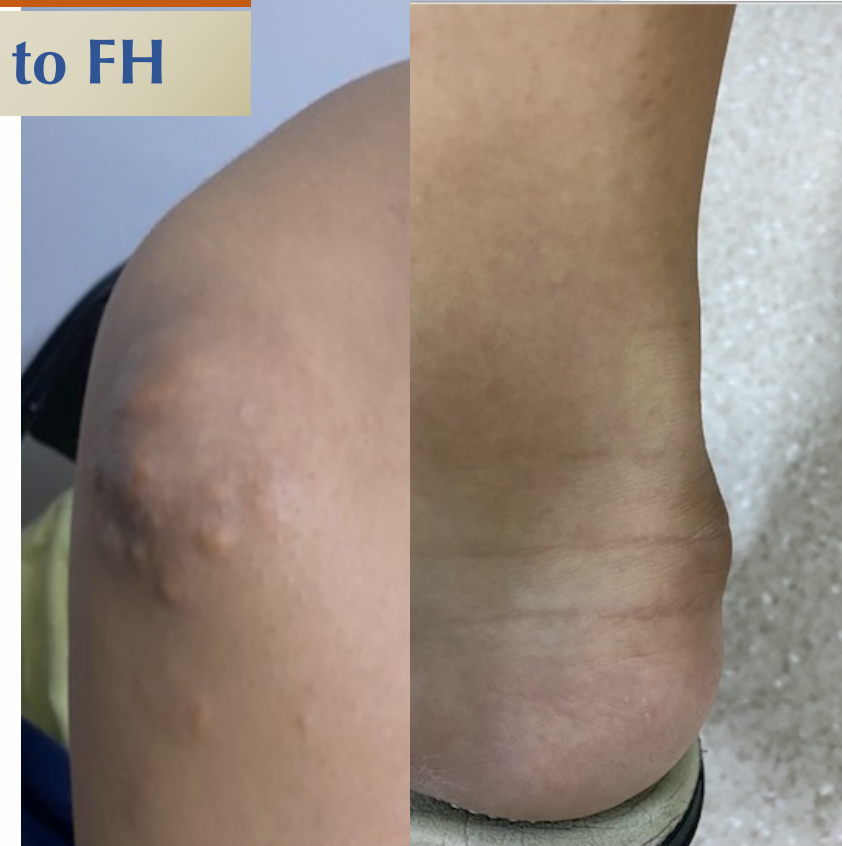
Sister A
16 years old



arcus cornealis

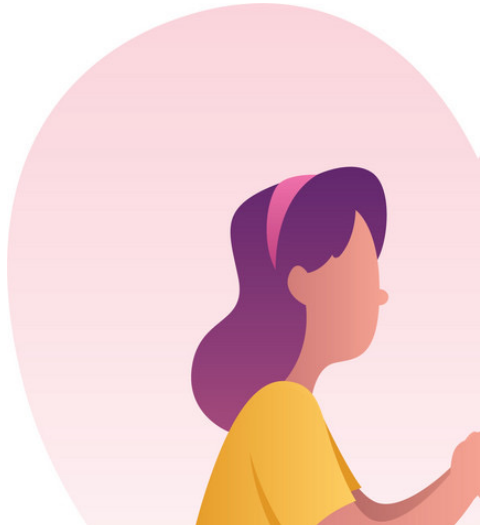
FH stigmata

PE clues to FH



Tuberous/tendon xanthoma

Clinical scenario



LDL > 160 (pedia)
LDL > 190 (adult)

LDL level in FH
watch out for really high LDL

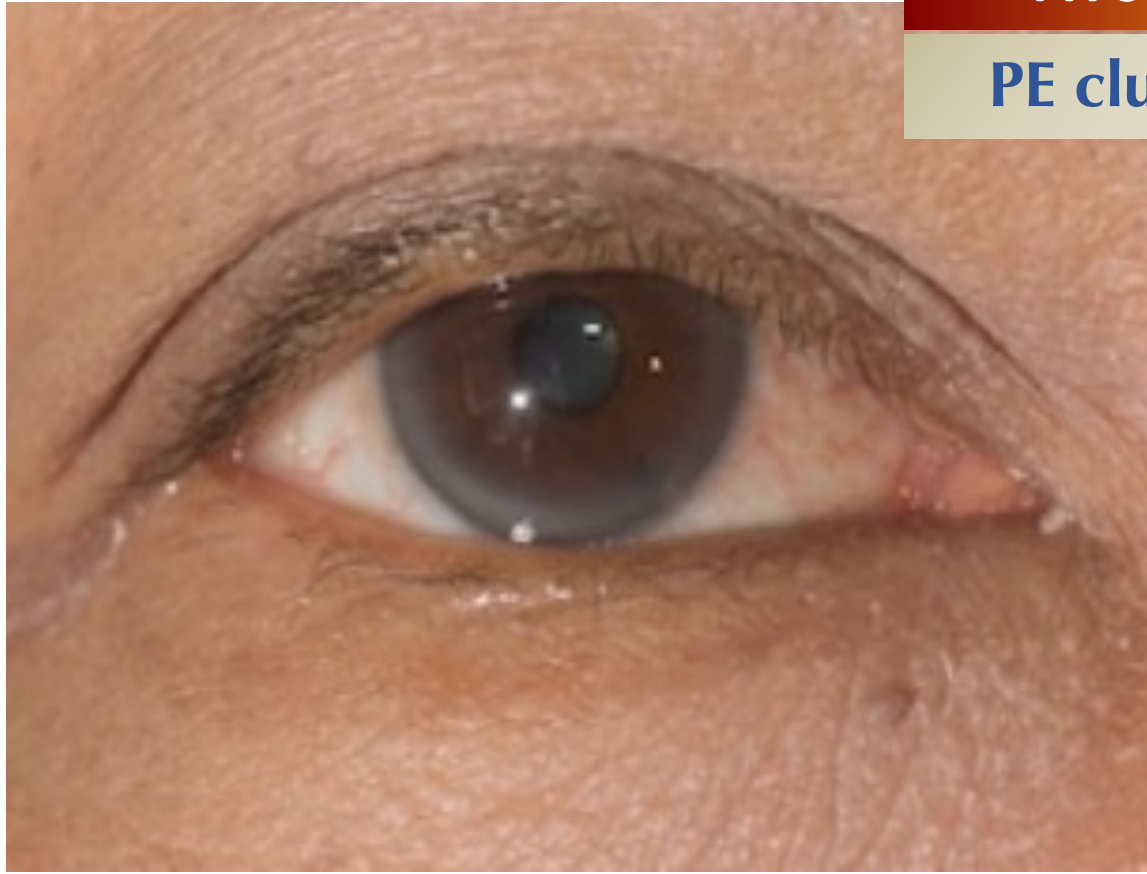
Sister A
16 years old

Test	Patient's value	Lab cut-offs
Total cholesterol	↑ 454	149 – 200 mg/dL
Triglycerides	77	0 – 150 mg/dL
HDL cholesterol	48	30 – 85 mg/dL
LDL cholesterol	↑ 390	89 – 159 mg/dL

Clinical scenario

FH stigmata

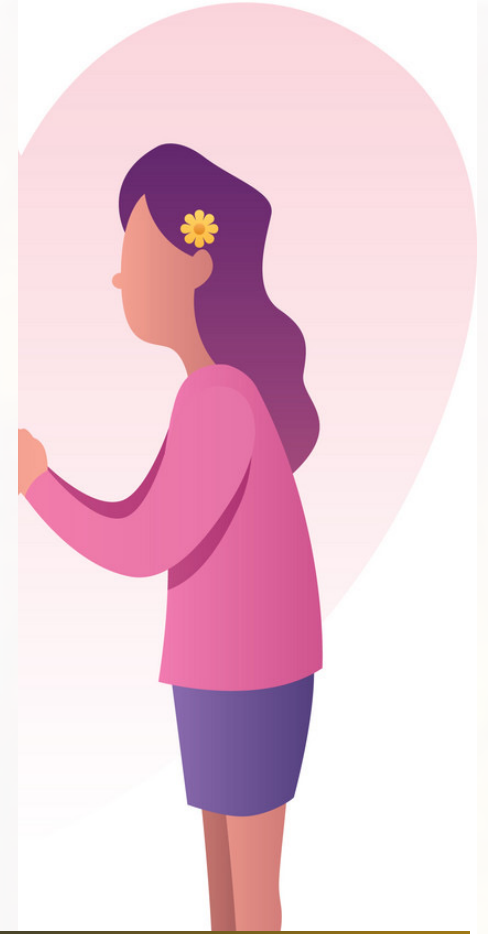
PE clues to FH



arcus cornealis



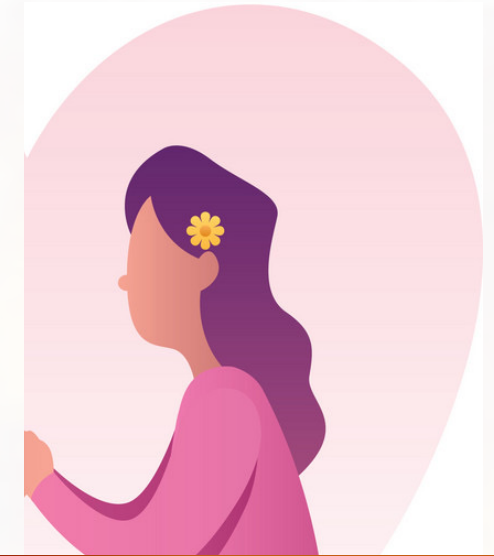
tuberous xanthoma



**Sister B
22 years old**

Clinical scenario

Test	Patient's value	Lab cut-offs
Total cholesterol	↑ 363	149 – 200 mg/dL
Triglycerides	67	0 – 150 mg/dL
HDL cholesterol	42	30 – 85 mg/dL
LDL cholesterol	↑ 307	89 – 159 mg/dL



LDL > 160 (pedia)

LDL > 190 (adult)

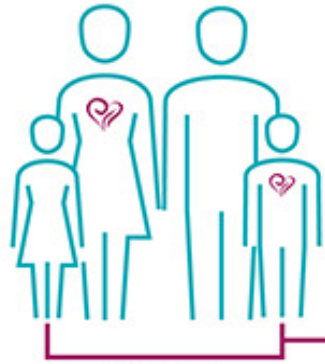
LDL level in FH

watch out for really high LDL

Sister B

22 years old

Genogram for CV profiling

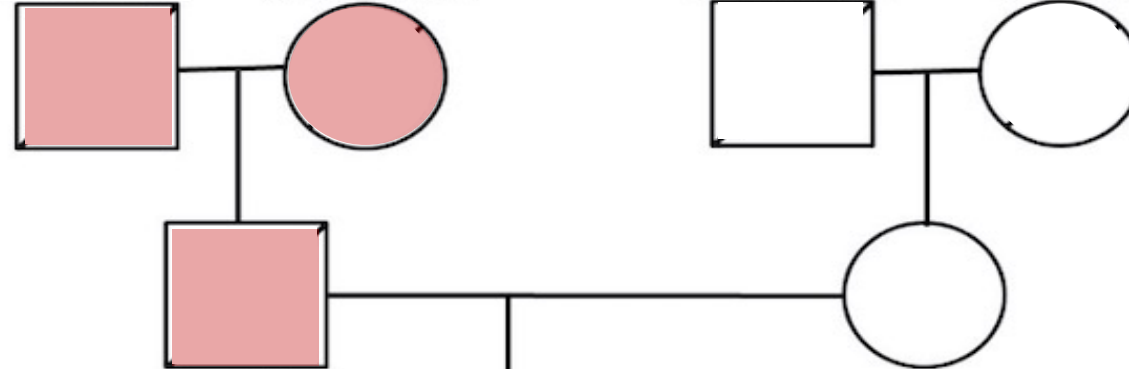


If **YOU** have FH,
your **CHILDREN**
have a 50% chance
of inheriting FH.

50%

<https://thefoundation.org/familial-hypercholesterolemia>

Heart attack 75 Heart attack 65 Lung disease 83 Uterine cancer 48

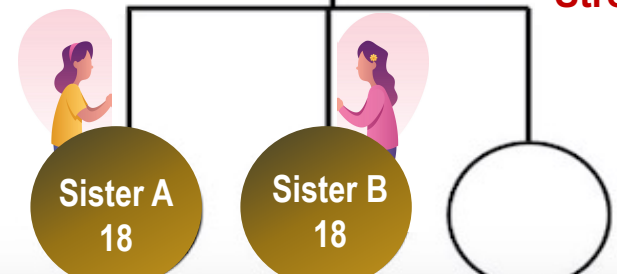


Heart attack 52

Heart attack 45

Heart attack 48

Stroke 44



Sister A
18

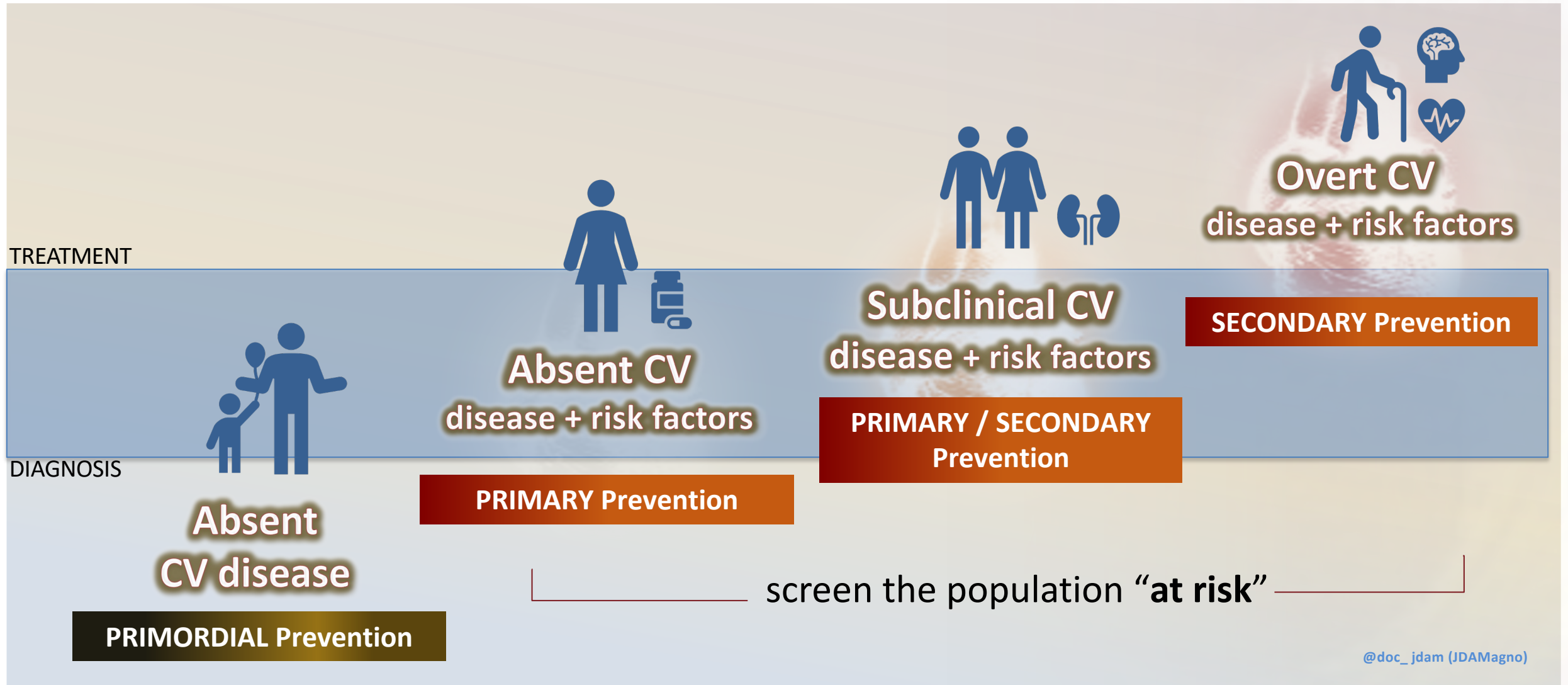
Sister B
18

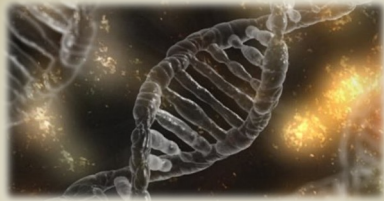


80% of people with FH are still undiagnosed.

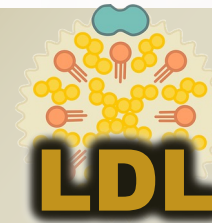
<https://thefoundation.org/familial-hypercholesterolemia>

Spectrum of CV prevention and disease





genetic



LDL-cholesterol

FAMILIAL

HYPERCHOLESTEROLEMIA

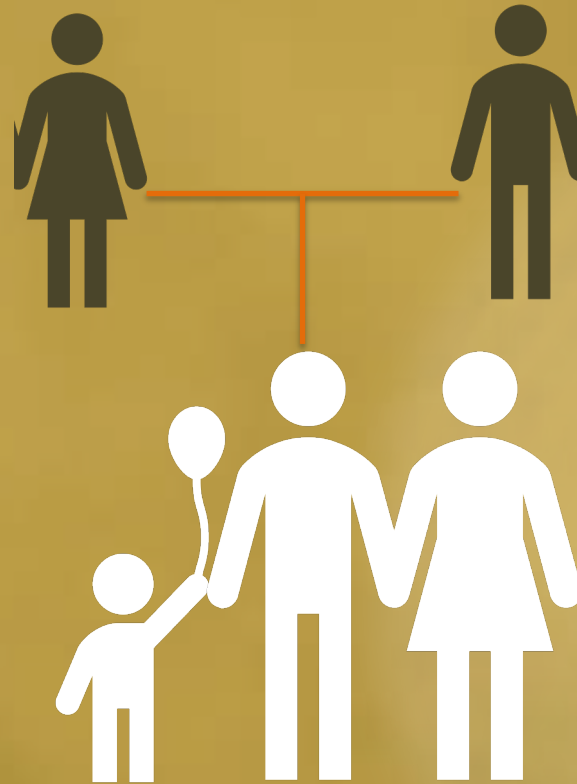


clinical syndrome



early ASCVD

FAMILY HISTORY



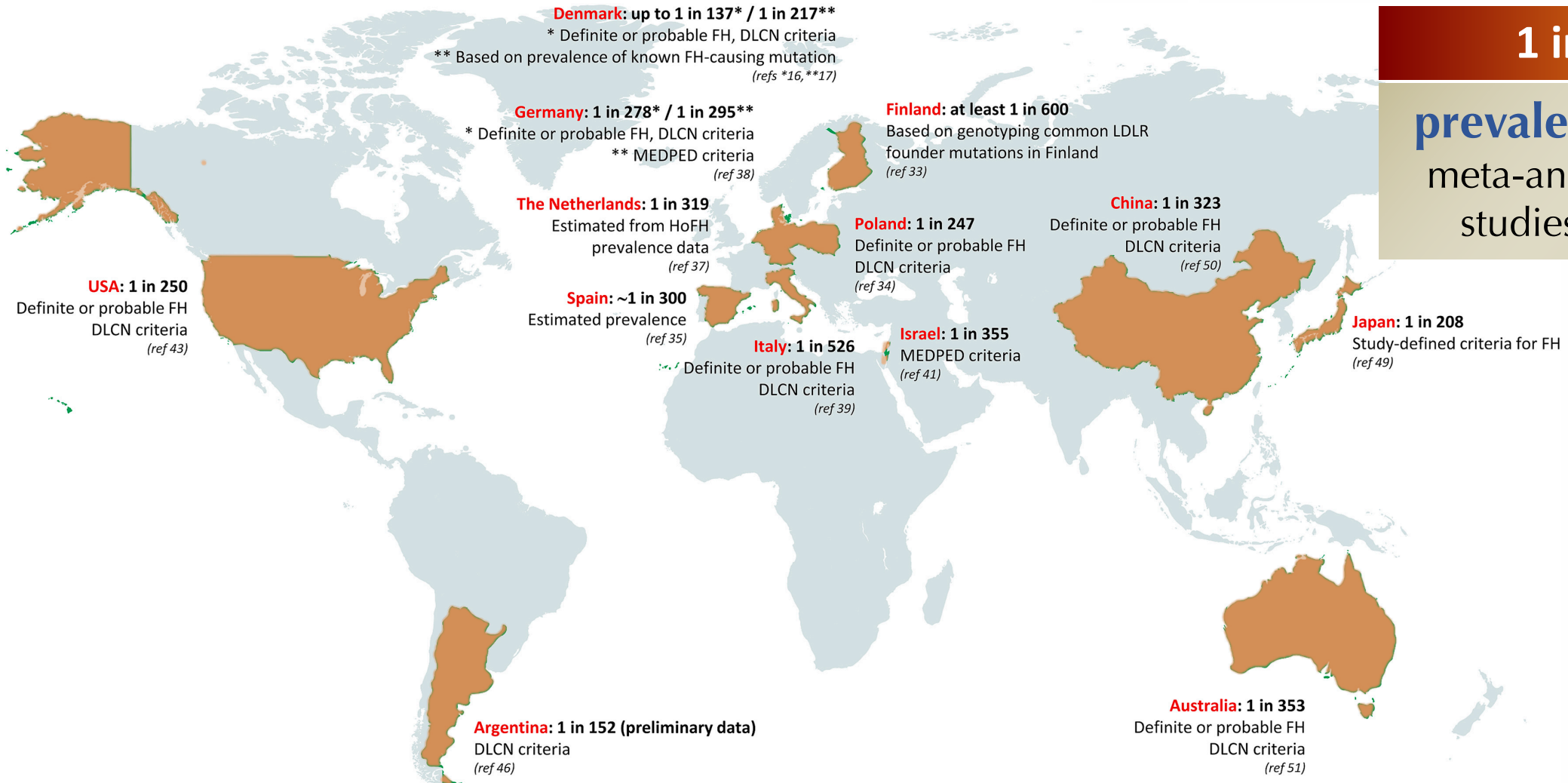
the local
BURDEN
is unique

Global burden of FH
Regional prevalence
Lipid profile of Filipinos

2

Global burden of FH
Regional prevalence
Lipid profile of Filipinos

Global prevalence of FH



1 in 250
prevalence of FH
meta-analysis of 19
studies globally

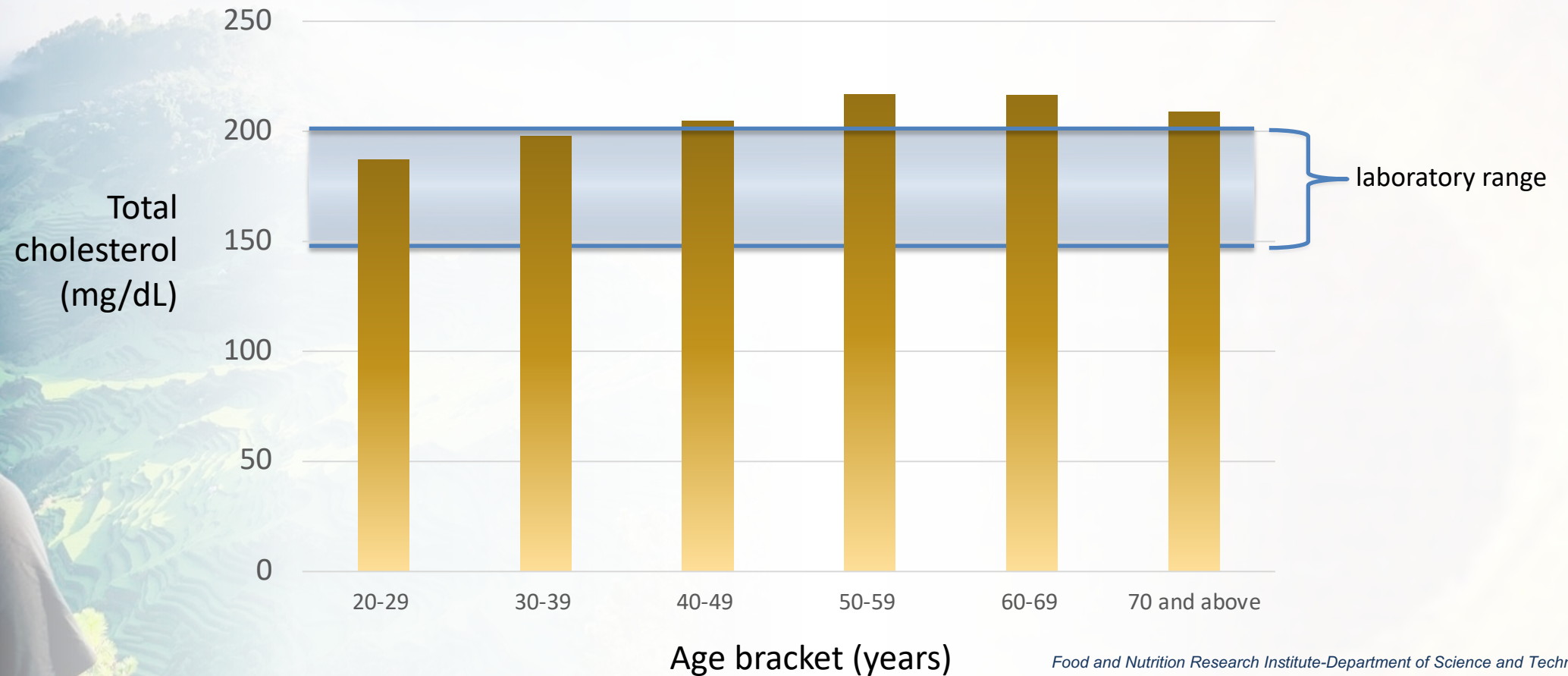
Lipid profile in the ASEAN region

Low HDL in Filipinos
Compared to ASEAN counterparts

	Philippines	Indonesia	Malaysia	Thailand
	3072	1589	2533	3293
	35.49	39.36	35.83	41.89
	186 ± 42	207 ± 42	210 ± 41	223 ± 41
HDL-C, mmol/L	45 ± 13	52 ± 12	56 ± 14	52 ± 12
LDL-C, mmol/L	115 ± 37	137 ± 37	128 ± 39	150 ± 37
Triglycerides, mmol/L	127 ± 78	135 ± 88	121 ± 81	132 ± 91

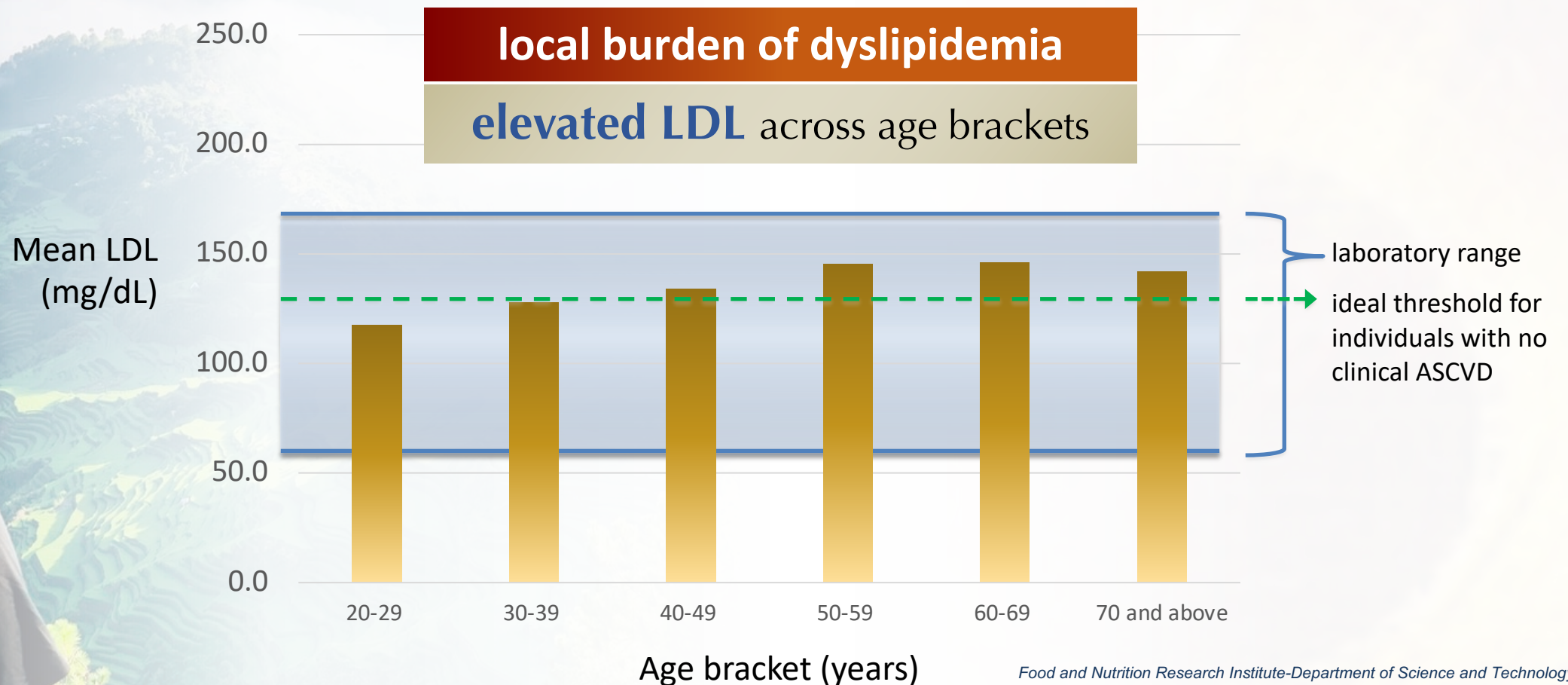
Lipid profile of Filipinos

Total cholesterol level of Filipinos according to age bracket (8th National Nutrition Survey, DOST-FNRI)*



Lipid profile of Filipinos

Mean LDL level of Filipinos according to age bracket
(8th National Nutrition Survey, DOST-FNRI)*



F FRAGILE **H** HEART



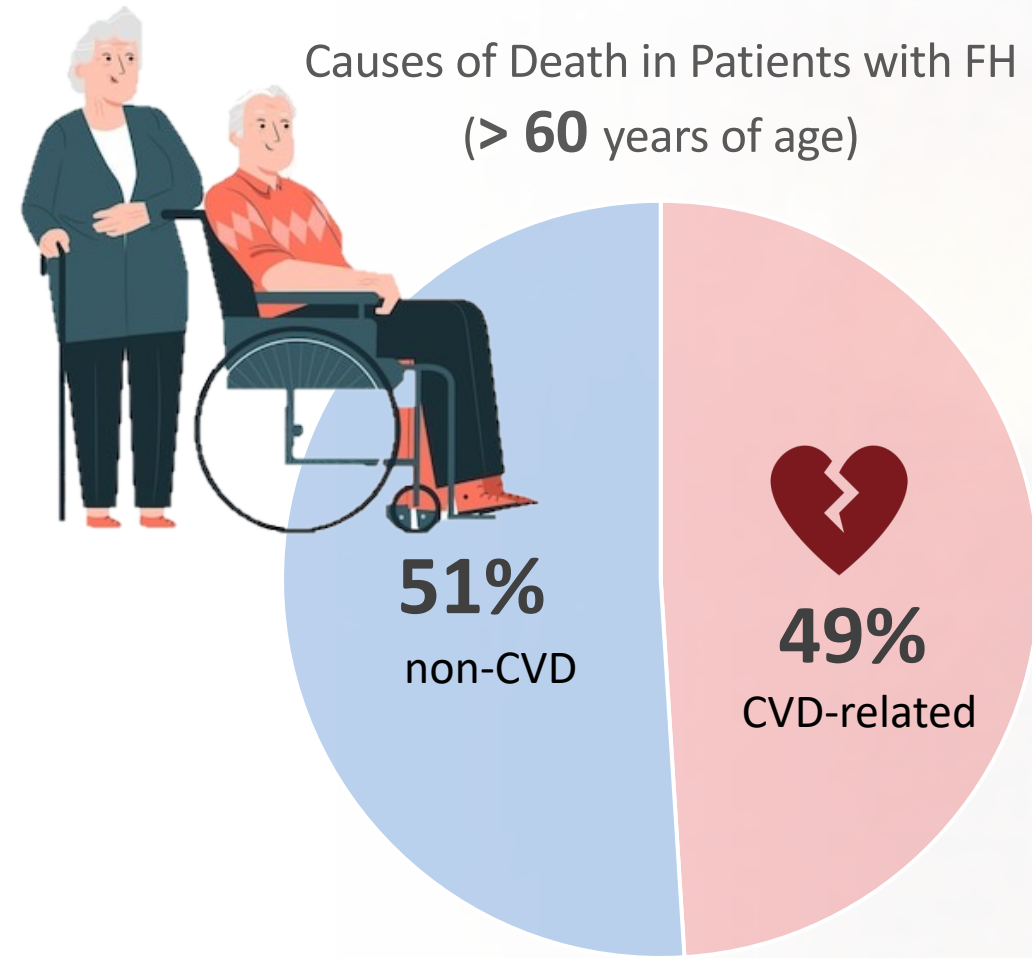
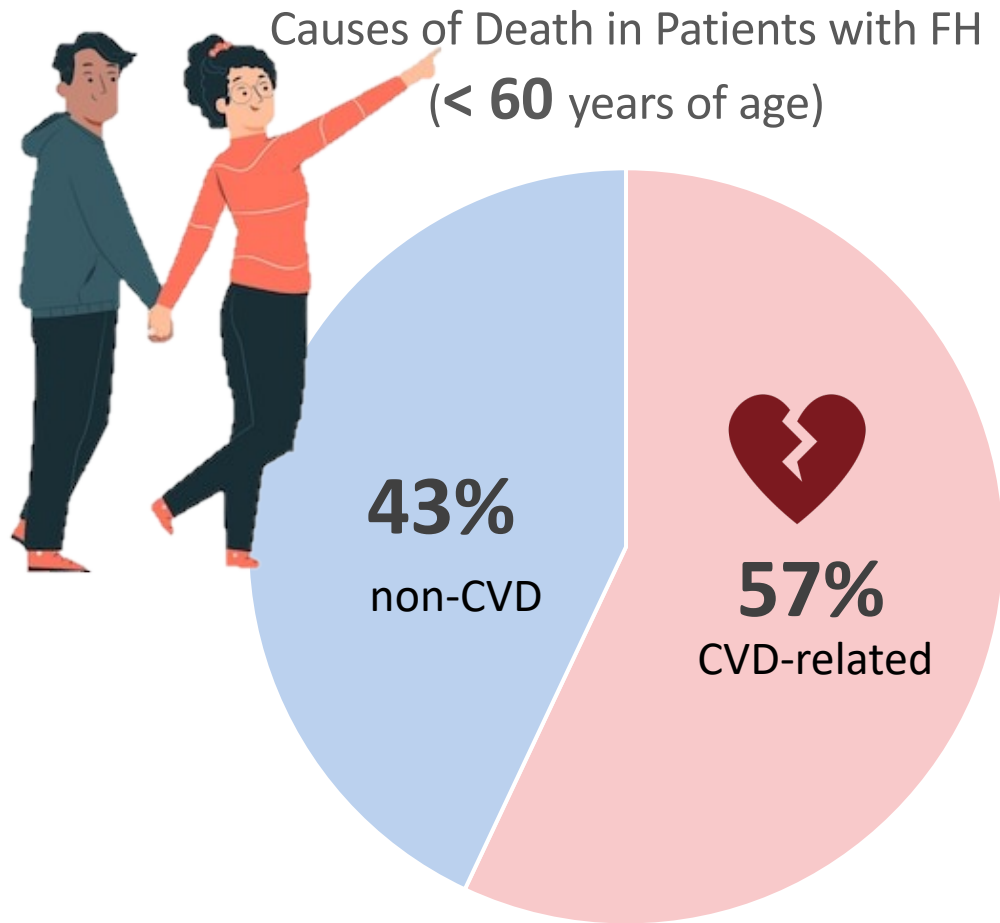
the CV impact of
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CV complications
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Benefits of early treatment

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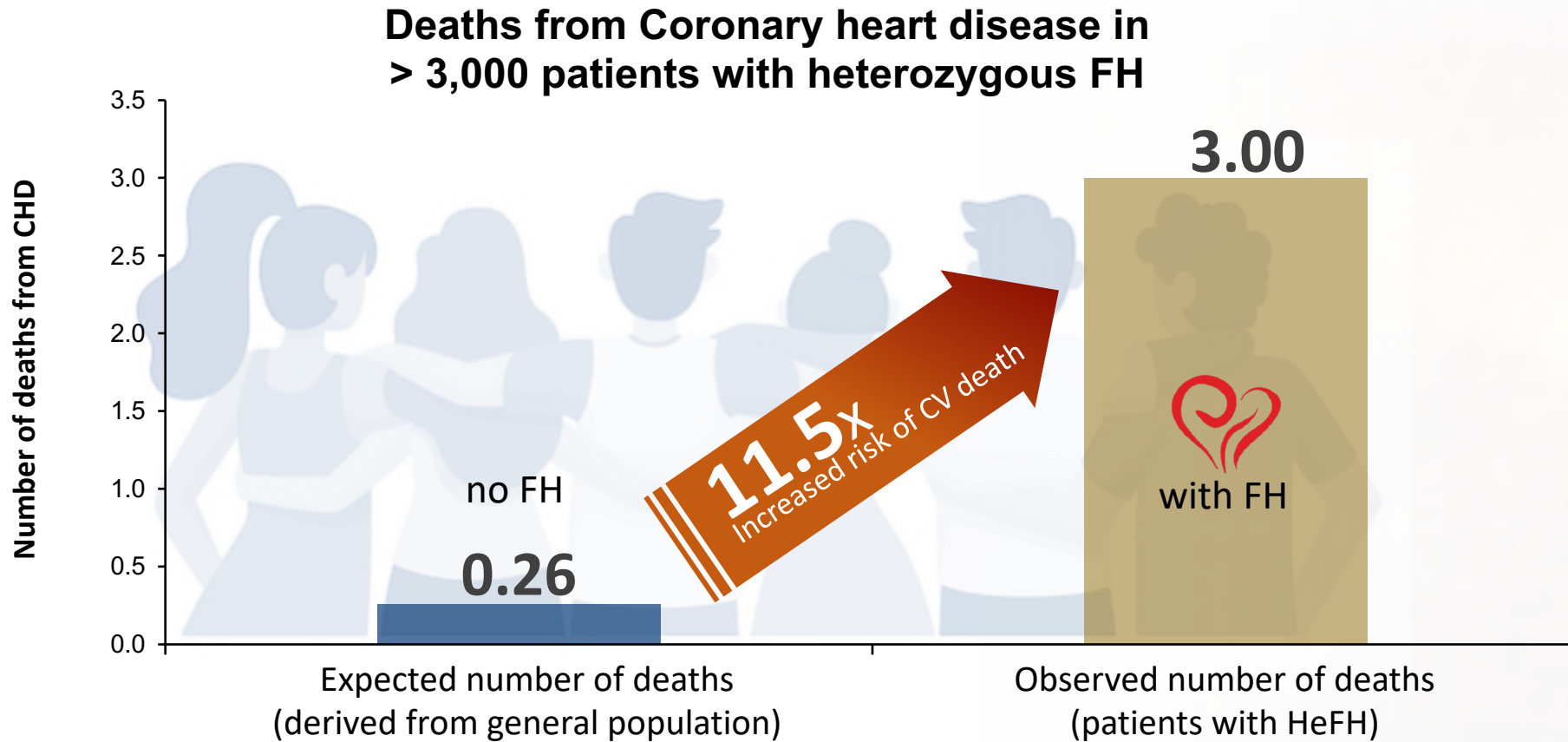
CV complications
Recognition and referral
Benefits of early treatment

Cardiovascular disease is the major cause of death in FH



Cohort of Norwegian patients with FH
(n = 66, from 1989 to 2010)

Risk of CV-death is increased in young adults with FH



Median follow-up: 14.5 years for men and 14.1 years for women.

CHD, coronary heart disease; FH, familial hypercholesterolemia; HeFH, heterozygous familial hypercholesterolemia.

Neil A, et al. *Eur Heart J.* 2008;29;2625-2633.

Grappling with the Guidelines?



PHILIPPINE

2020 PLAS

Clinical Practice Guidelines
for the Management of
Dyslipidemia in the
Philippines



AMERICAN

2018 ACC/AHA

Multisociety Guidelines
for the Management of
Blood Cholesterol



EUROPEAN

2019 ESC/EAS

Guideline for the
Management of
Dyslipidaemias

1. <https://philippinelipid.org.ph/announcements/2020-clinical-practice-guidelines-for-management-of-dyslipidemia-in-the-philippines-series-3/>
2. Grundy SM et al. 2018 AHA/ACC/AACVPR/AAPA/ABC/ACPM/ADA/AGS/APhA/ASPC/NLA/PCNA Guideline on the Management of Blood Cholesterol: Executive Summary: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. J Am Coll Cardiol. 2019 Jun 25;73(24):3168-3209. doi: 10.1016/j.jacc.2018.11.002. Epub 2018 Nov 10.
3. Mach F et al. ESC Scientific Document Group. 2019 ESC/EAS Guidelines for the management of dyslipidaemias: lipid modification to reduce cardiovascular risk. Eur Heart J. 2020 Jan 1;41(1):111-188. doi: 10.1093/eurheartj/ehz455. PMID: 31504418.

Local Guidance on Dyslipidemia

2020 Clinical Practice Guidelines for the Management of Dyslipidemia in the Philippines



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Writer



FOCUSED

HEALTHCARE APPROACH

FAMILIAL

Family history

Features

HYPERCHESTEROLEMIA

Heart conditions

High LDL

THE CHOLESTEROL DILEMMA

gaps in
CLINICAL
detection of FH exist

Increased awareness and good family history are vital to early recognition of FH.

1

the local
BURDEN
is unique

The presence of FH raises risk of a fragile heart, especially in the local setting.

2

the CV impact of
DYSLIPIDEMIA
is established

Efforts must be focused to screen and promptly treat to lead to better CV outcomes.

3

Acknowledgements

- Rody Sy
- Louella Santos
- Cecile Jimeno
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- Philippine Heart Association

ABOUT THE PRESENTATION

CONTENT

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J.D.A. Magno (April 2022)