



# *New Frontiers in CVD* *Aging / Disease - Youth / Health*

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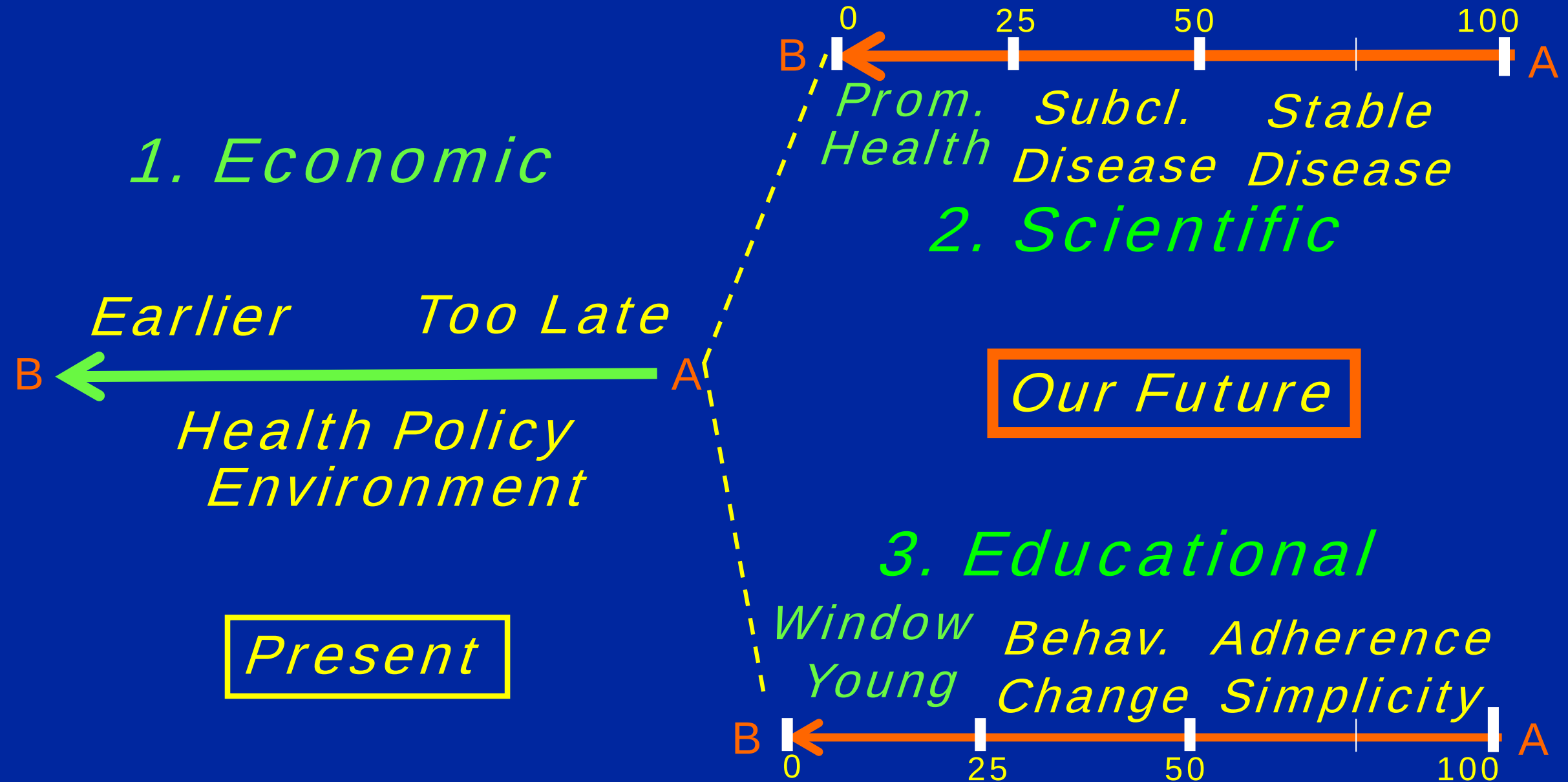
*Science Health Education*

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*ACC New York, Dec 10, 2017*

*No Disclosures*

# Aging / Disease - Youth / Health



# From Aging / Disease to Youth / Health

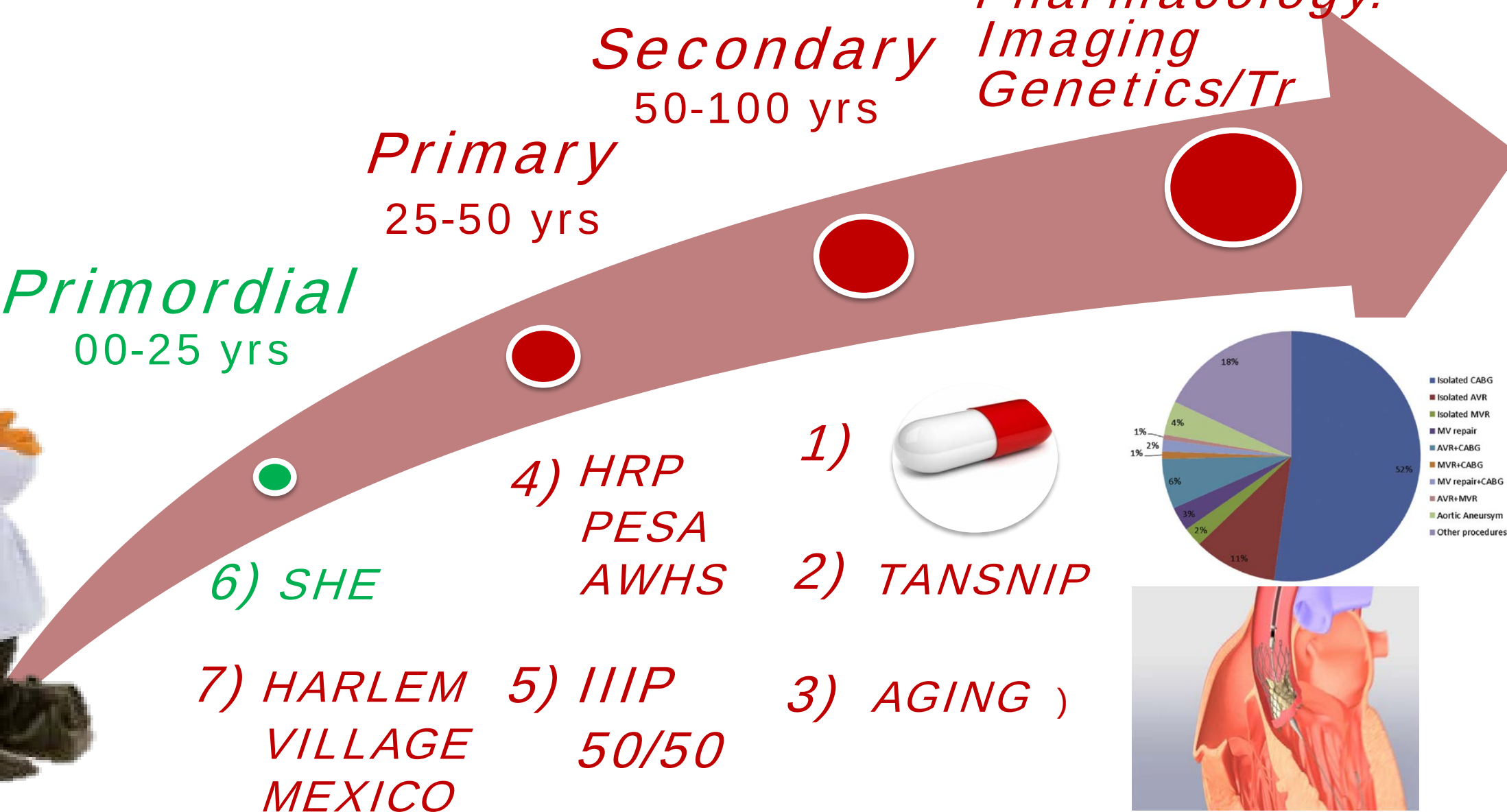
NHLBI \$-1

*Surgery  
Intervention  
Pharmacology.  
Imaging  
Genetics/Tr*

*Secondary*  
50-100 yrs

*Primary*  
25-50 yrs

*Primordial*  
00-25 yrs



6) *SHE*

4) *HRP  
PESA  
AWHS*

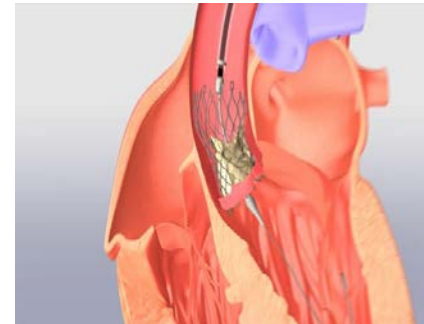
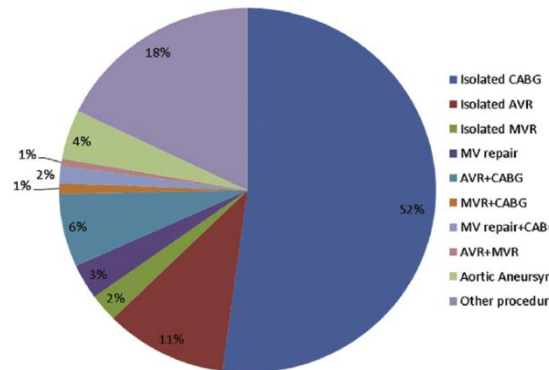
1) *TANSNIP*



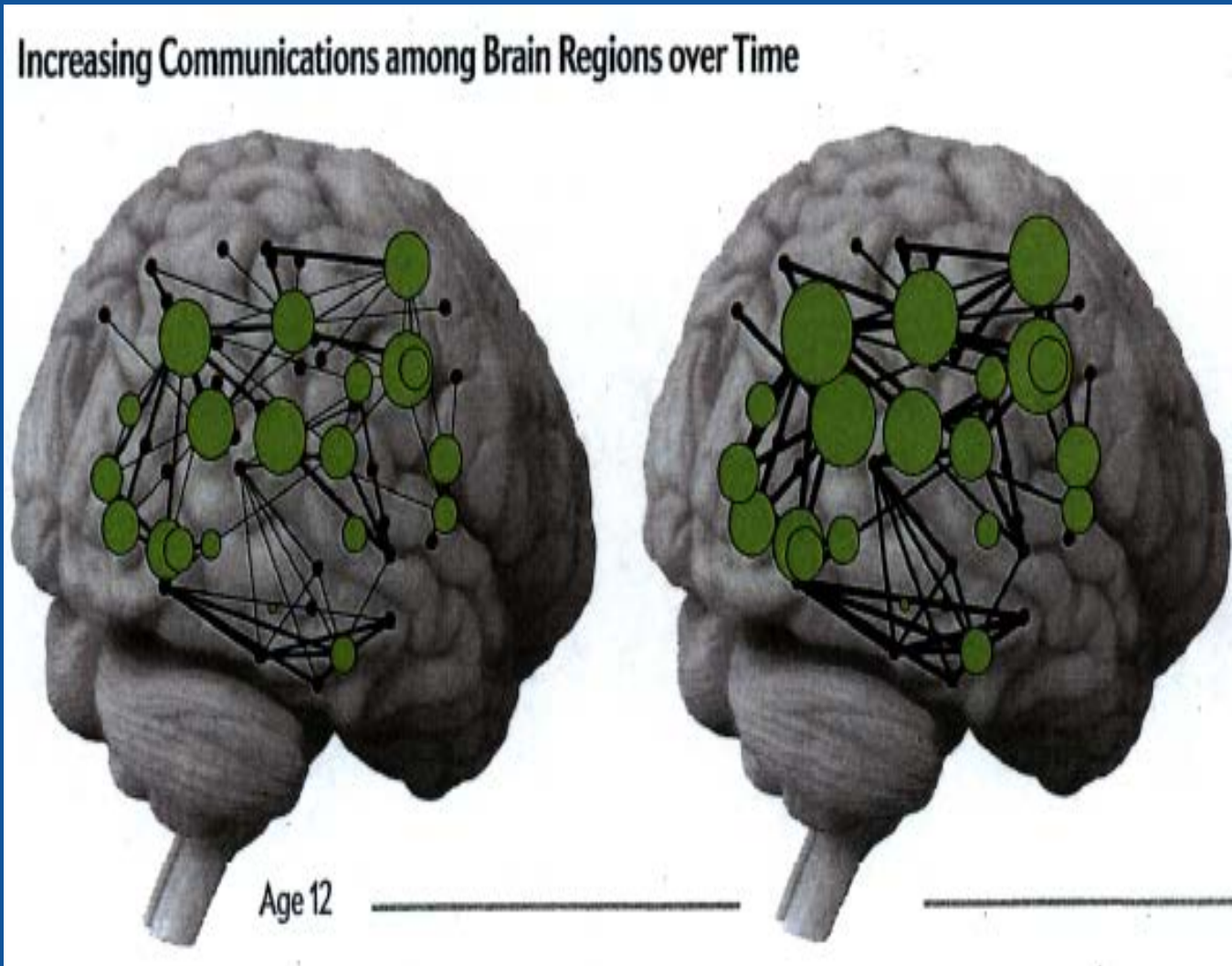
7) *HARLEM  
VILLAGE  
MEXICO*

5) *IIIP  
50/50*

3) *AGING )*



## 6). *Child's Brain Development Less Networking Brings Attention*



JN Giedd. *Scientific American* 2015;312:32



# 6a). COLOMBIA – CHILDREN'S PROGRAM



**HOW YOUR BODY  
& HEART WORK**



**HEALTHY FOOD  
HABITS**



**PHYSICAL  
ACTIVITY**



**EMOTIONAL  
HABITS TO AVOID  
ADDICTIONS**

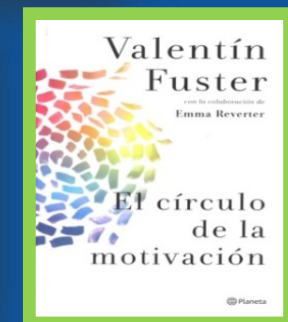
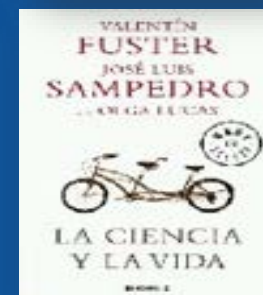
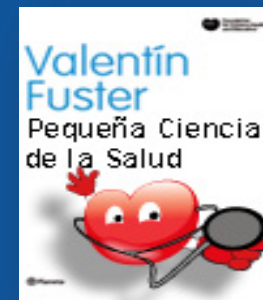
**EDUCATIVE GOAL: HEALTHY HABITS FOR CHILDREN BETWEEN 3 & 5 YRS**

**CHILDREN**

**3-5**

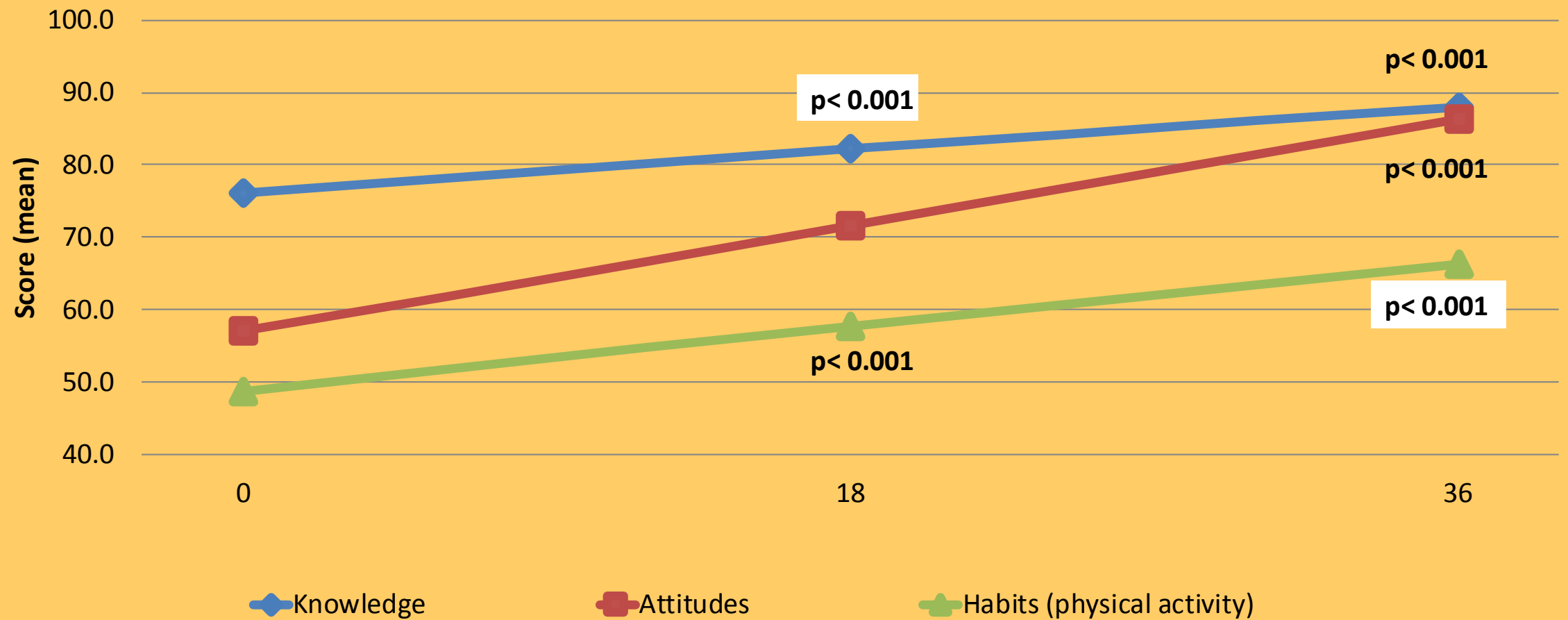
**6-8**

**9-14**



**GENERAL  
PUBLIC**

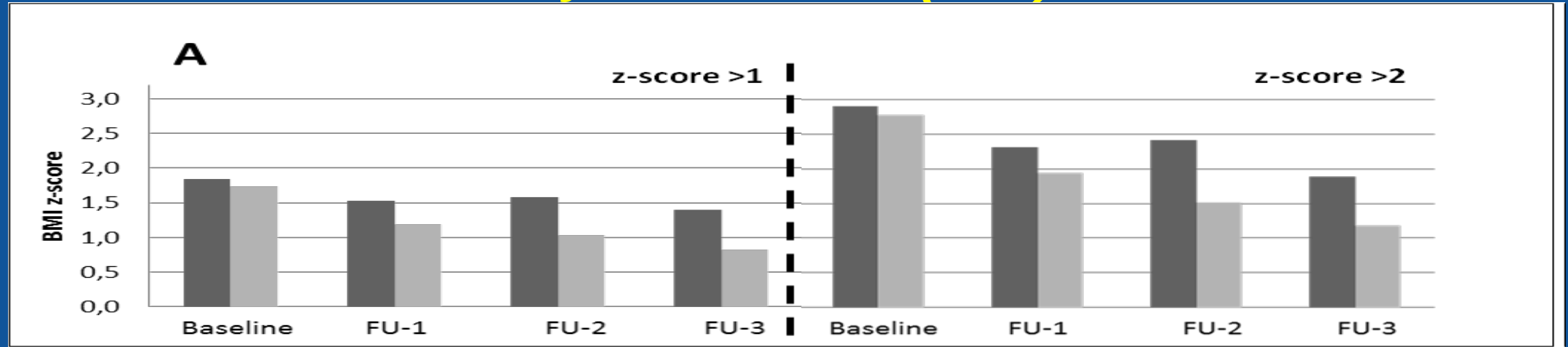
# *In Children's KAH Mean Scores\**



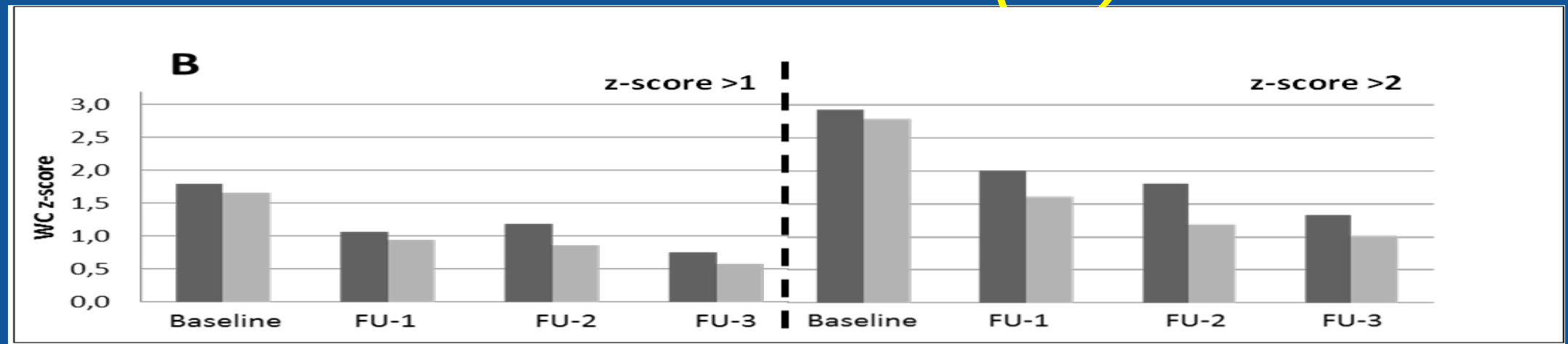
*The Amer J of Med 2012; 126, 27*  
*The Amer J of Med 2013;126:1122*  
*Bogota – 25,000*

## 6b). Changes In Anthropometric Variables At Each FU In Overweight Children

### Body Mass Index (BMI)



### Waist Circumference (WC)

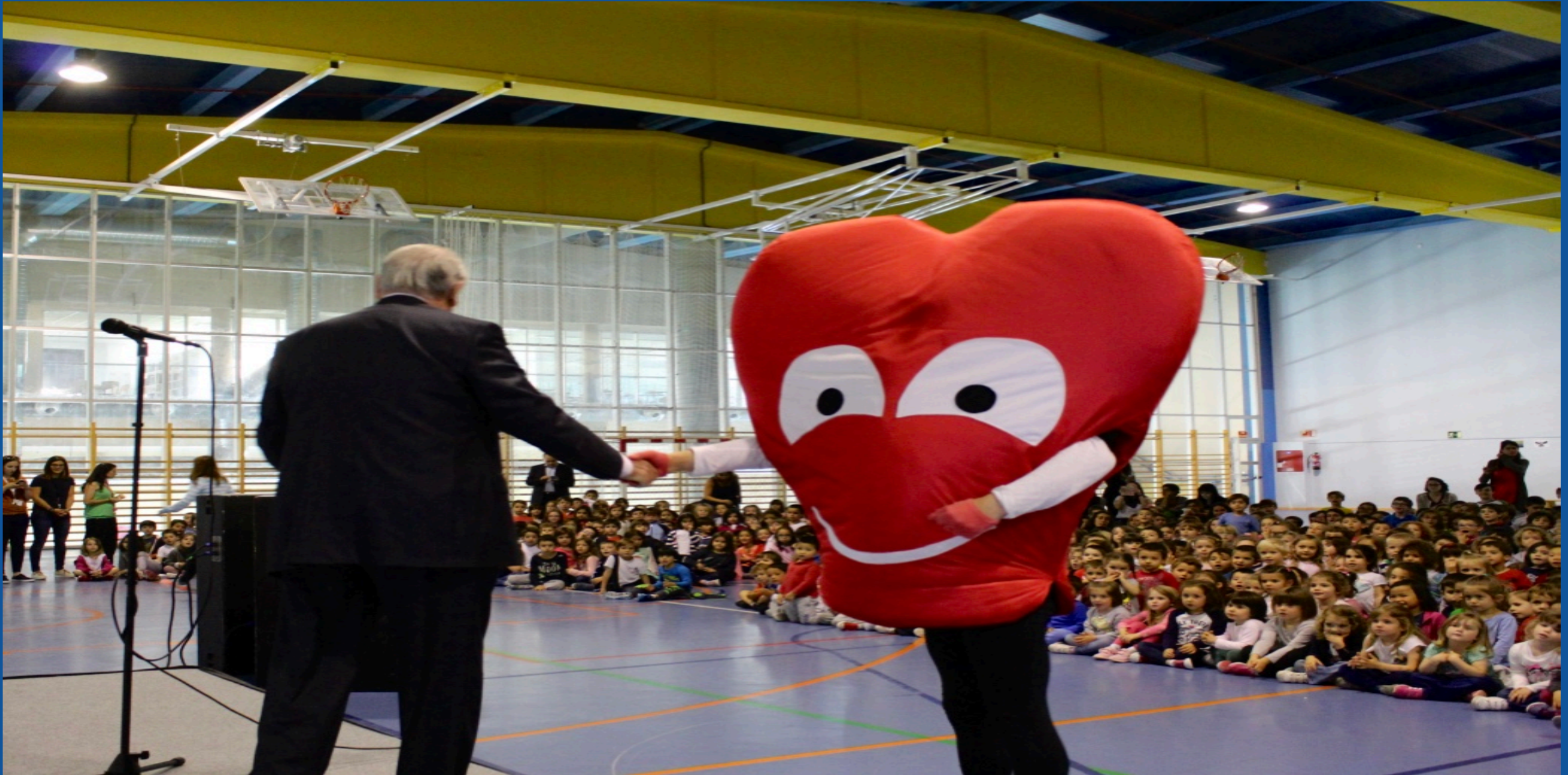


■ Control ■ Intervention

JL Peñalvo, V Fuster et. al. JACC 2015;65:1065. - 10,000,



*CHILDREN'S – BOGOTA, SPAIN, NEW YORK – N = 50,000*



*The Amer J of Med 2013;126:1122 - J. Amer. Coll. Card. 2015;65:1065  
J. Amer. Coll. Card. 2017(In Press)*







# From Aging / Disease to Youth / Health

Si!

NHLBI \$-1

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SHE Foundation for Science, Health and Education

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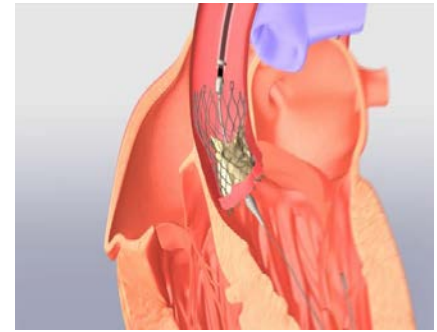
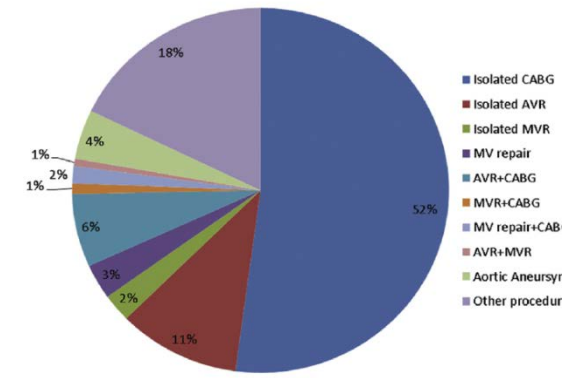
5) IIIP  
50/50

1)



2) TANSNIP

3) AGING )







**Mount  
Sinai**  
*Heart*

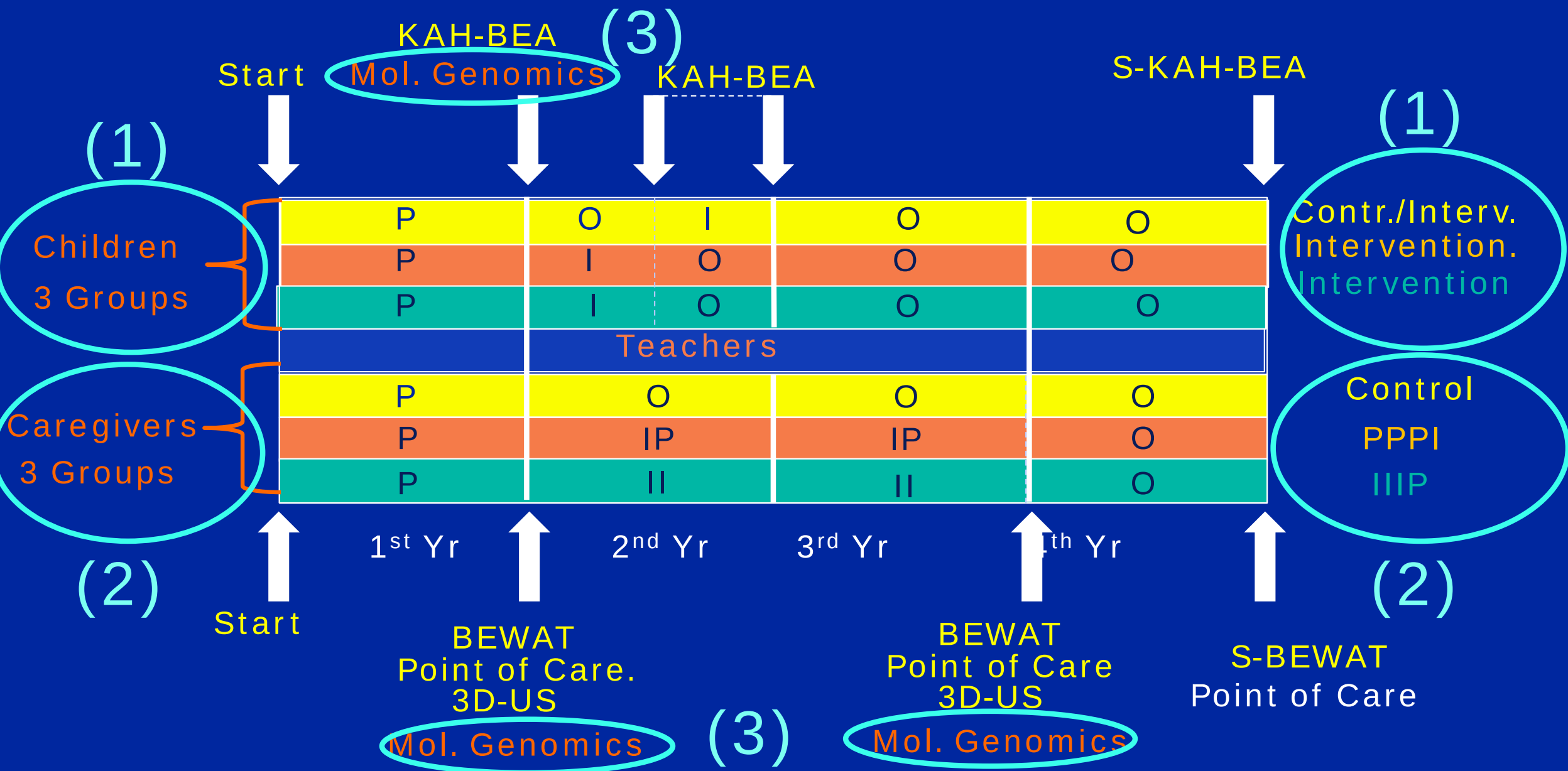
# BARRIERS TO IMPLEMENTATION OF A HEALTH PROMOTION PROGRAM IN HARLEM, NY

## THE FAMILIA STUDY

An AHA Strategically Focused Research Network Study

Sameer Bansilal, MD, MS, Rajesh Vedanthan, MD, MPH, Risa Jaslow, MS, RDN,  
Martha Hadley, PhD, Amy Siskind, PhD, Carmina Marcial, MA, Ana Victoria Soto,  
MD, Claire Kofler, BS, Zahi A Fayad, PhD, Valentin Fuster, MD, PhD





**KAH-BEA = Knowledge, Attitude, Habit, -BMI, Exercise, Alimentation ;**

**FUSTER-BEWAT = BP, Exercise, Weight, Alimentation, Tobacco ; S=Sustained**

# Interactive “Circle of Health” - App

Actividades previstas

Fundación procnic | Icahn School of Medicine at Mount Sinai

The Circle of Health

The app helps you improve your cardiovascular health

The app displays various screens including: The Circle of Health, Introduction, Information, and Motivation.

[www.thecircleofhealth.org](http://www.thecircleofhealth.org)



National Heart, Lung,  
and Blood Institute

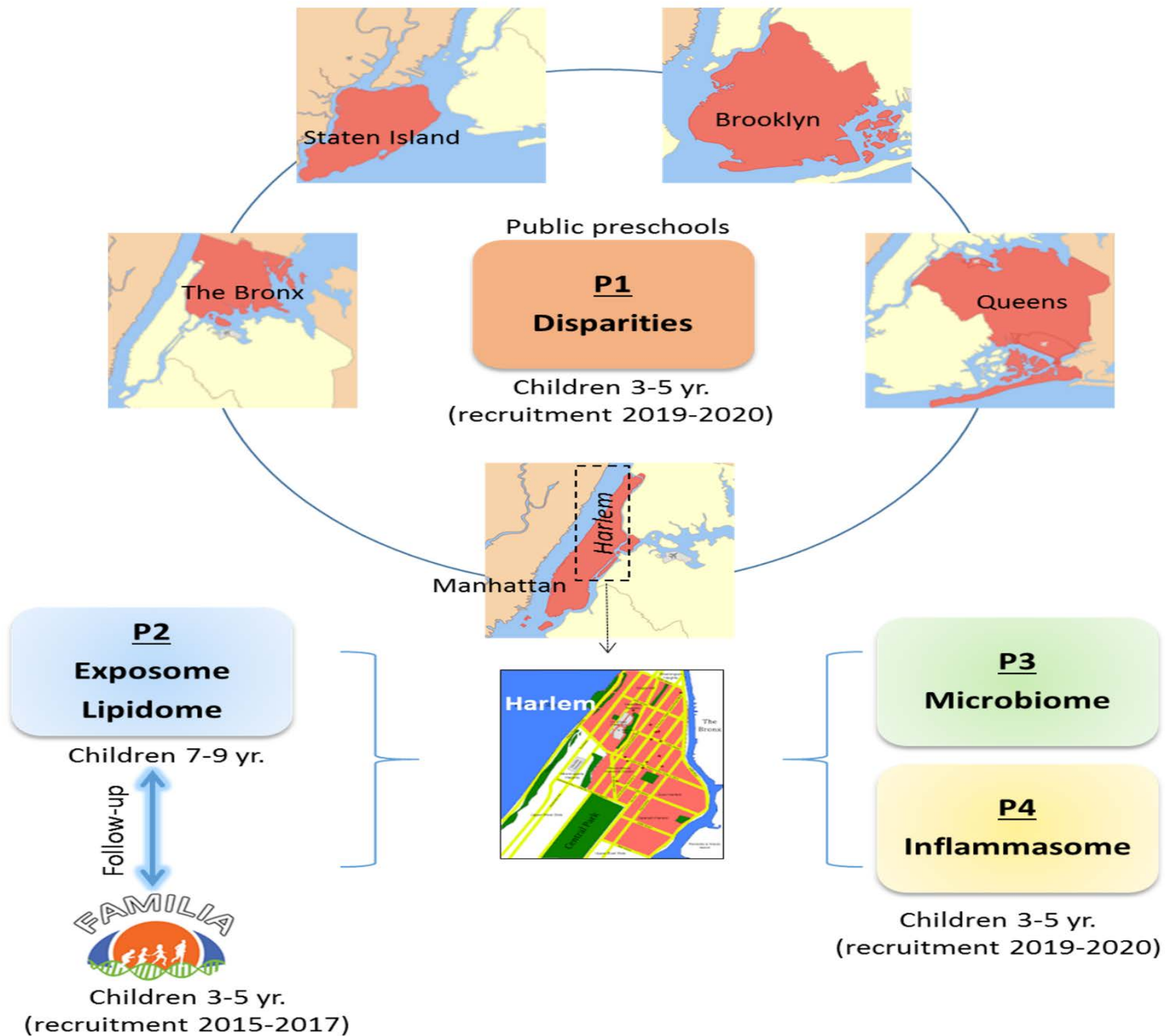


# Children's Health & Biology: The Effect of Disparities

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Icahn School of Medicine at Mount Sinai (ISMMS)

December 13<sup>th</sup>, 2017

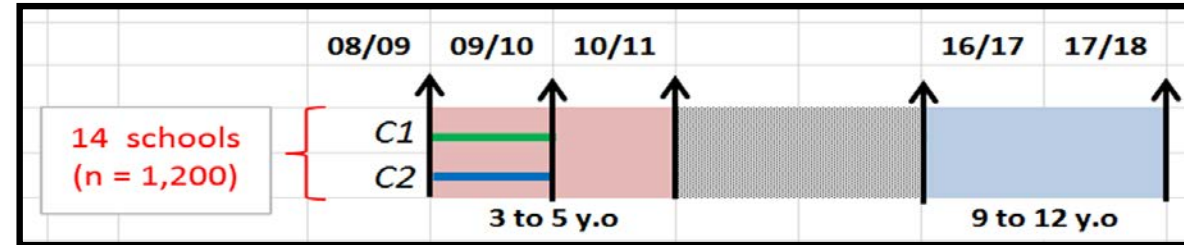




# Project I: Background

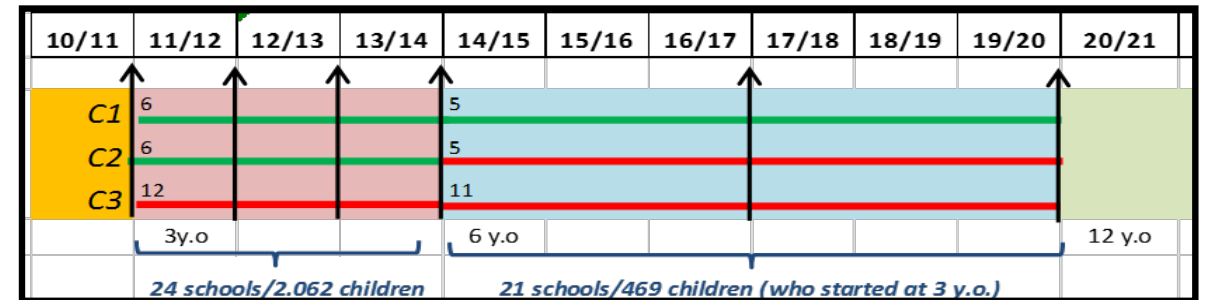
Colombia

Fuster V et al. *Am J Med.*  
2013;126(1):27-35



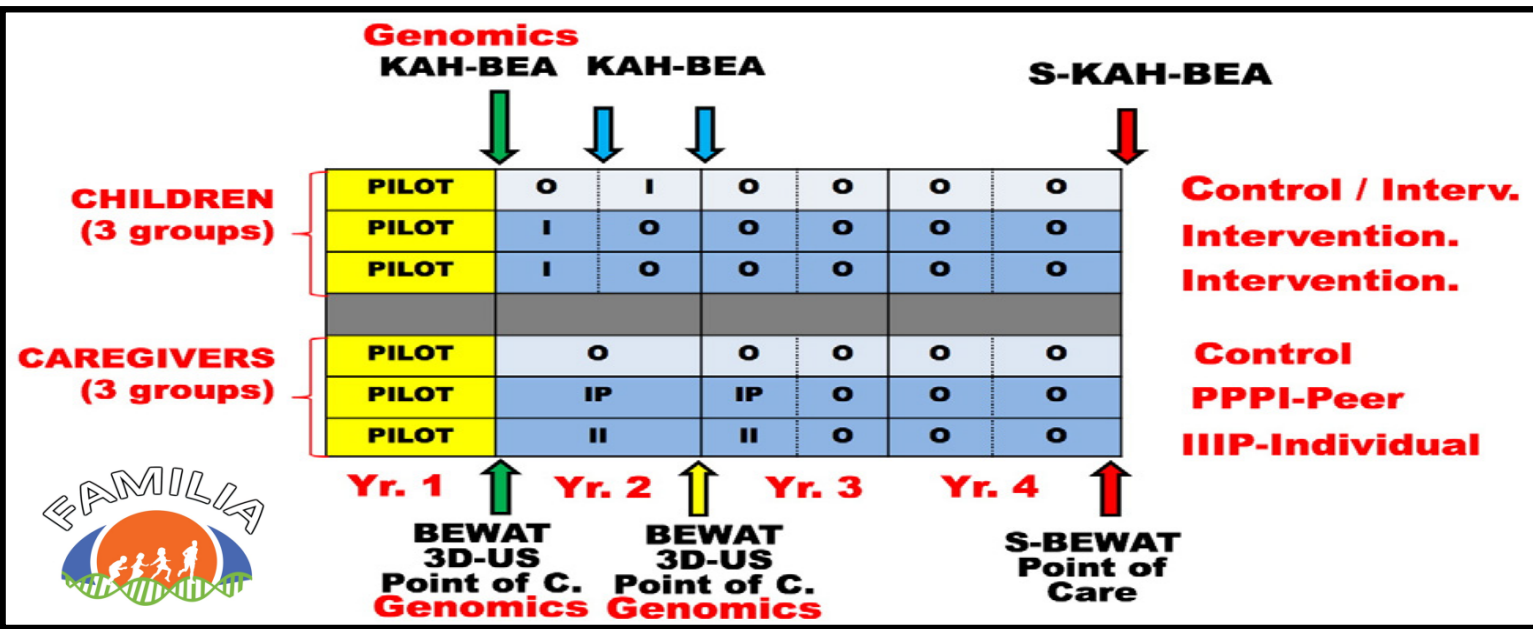
Spain

Fuster V et al. *J Am Coll Cardiol.*  
2015;66(14):1525-34



Harlem, NY

Fuster V et al. *Am Heart J.*  
2017;187:170-181



# Project I: Aims

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**Objective:** The effect of disparities on **CHILDREN's HEALTH** outcomes following a health promotion educational intervention in preschool children.

Variables modulating such outcomes:

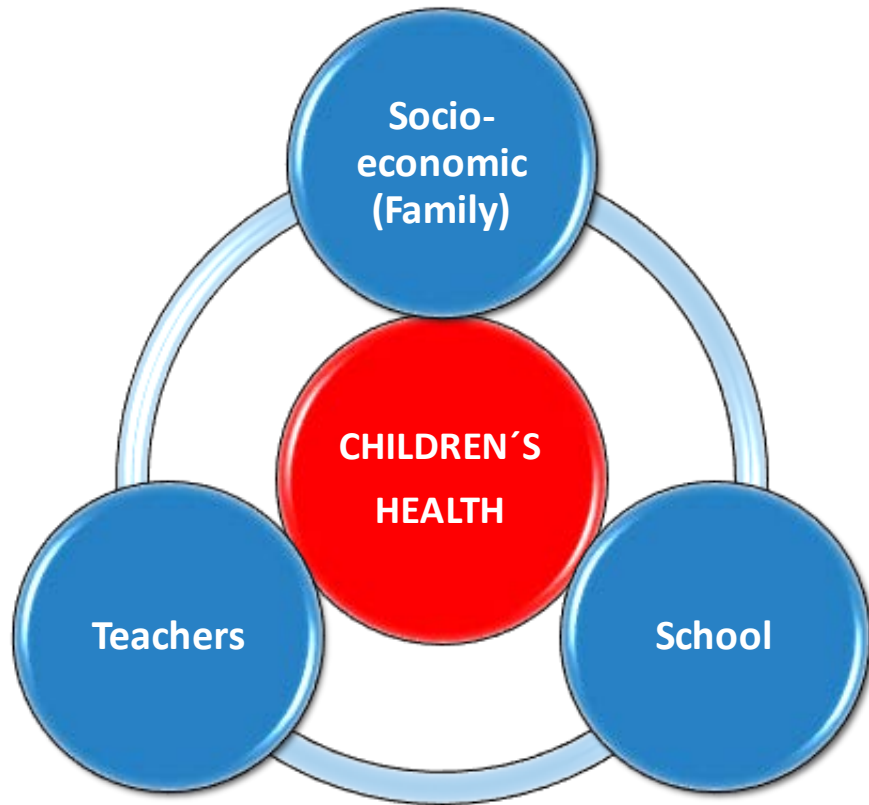
**Aim 1.** Impact of socio-economic differences at the family level.

**Aim 2.** Factors that impact the teachers' efficacy in implementing the educational intervention and health outcomes in children.

**Aim 3.** Effect of school environment in implementing the educational intervention and health outcomes in children.

# Project I: Methods and Feasibility

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- Prospective educational intervention
  - Public preschools in all five boroughs of NYC
  - Children between 3 and 5 years of age
  - Evidence-based health promotion educational curriculum
  - Duration of intervention: 5 months
  - Follow-up: 24 months
- Variables impacting children's health
  1. Socio-economic
  2. Teachers
  3. School environment

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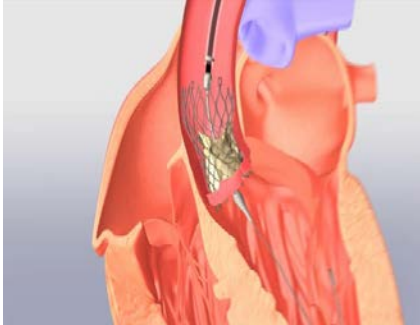
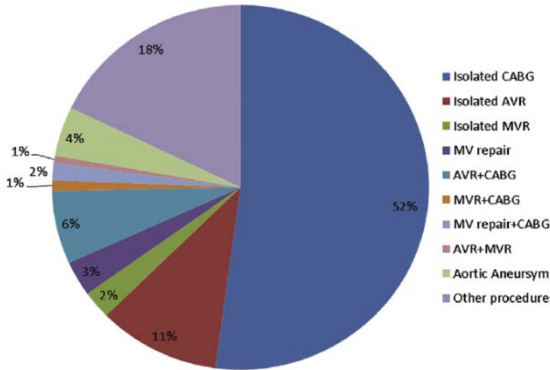
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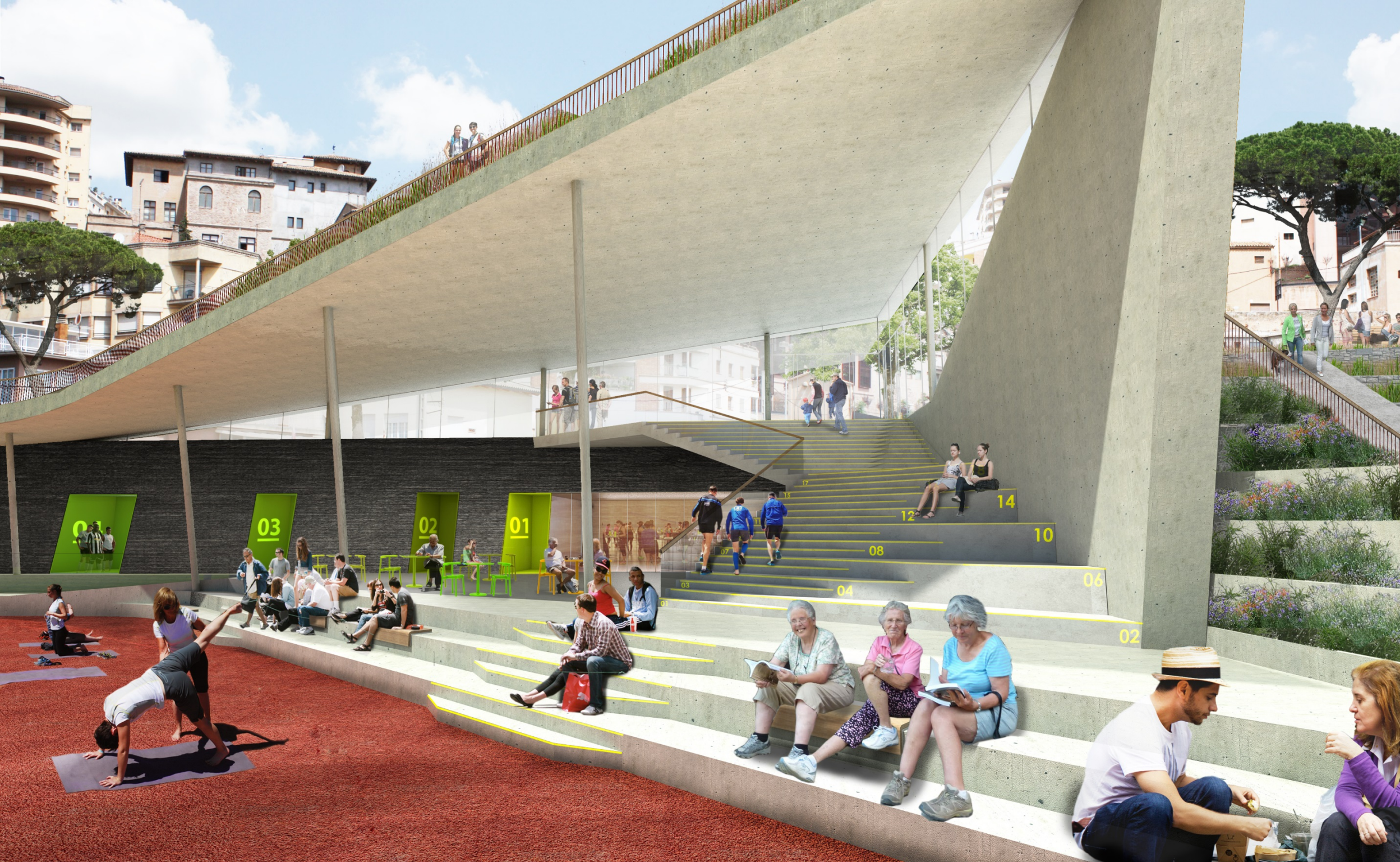
# *CARDONA MEXICO PERU ?*





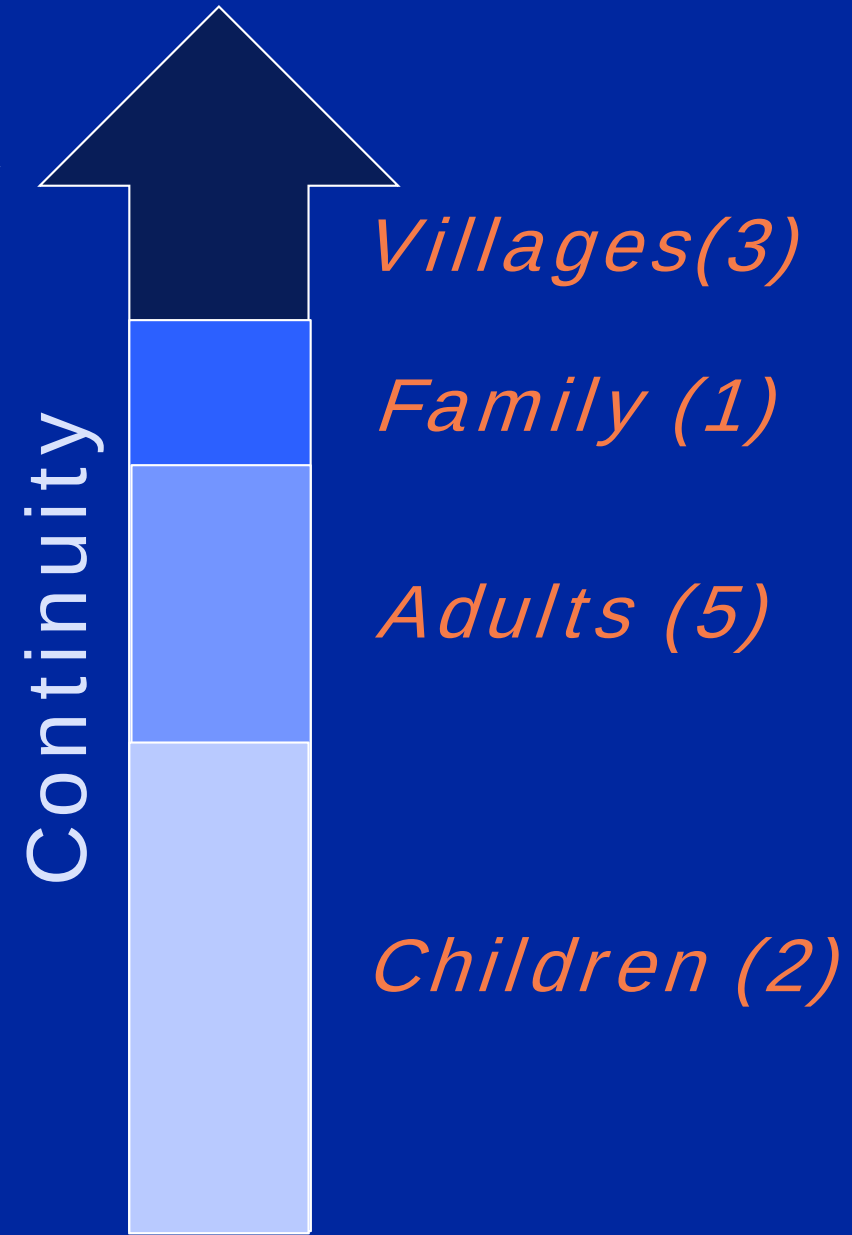








## *EDUCATION (7)*



*CONCEPTS, SCIENTIFIC STUDIES, NPOs*



# *Global Health Future Role of the United States*



*National Academies of Sciences, Engineering & Medicine  
New Engl. J. Med. 2017; 377:1292 - JACC 2017 (In Press)*

# *Report Conceptual Model*

SECURING AGAINST  
GLOBAL THREATS

ENHANCING PRODUCTIVITY  
AND ECONOMIC GROWTH

Global  
Health  
Security

Continuous  
Communicable  
Threats

Saving  
and  
Improving  
the Lives  
of Women  
and  
Children

Promoting  
Cardiovascular  
Health and  
Preventing  
Cancer

Maximizing Return

Catalyzing Innovation

G.H. Leadership

Smart Financing

## Advancing Early Childhood Development: from Science to Scale 1

### Early childhood development coming of age: science through the life course

Maureen M Black, Susan P Walker, Lia C H Fernald, Christopher T Andersen, Ann M DiGirolamo, Chunling Lu, Dana C McCoy, Günther Fink, Yusra R Shawar, Jeremy Shiffman, Amanda E Devercelli, Quentin T Wodon, Emily Vargas-Barón, Sally Grantham-McGregor\*, for the Lancet Early Childhood Development Series Steering Committee†

*Lancet* 2017; 389: 77

## Advancing Early Childhood Development: from Science to Scale 2

### Nurturing care: promoting early childhood development

Pia R Britto, Stephen J Lye, Kerrie Proulx, Aisha K Yousafzai, Stephen G Matthews, Tyler Vaivada, Rafael Perez-Escamilla, Nirmala Rao, Patrick Ip, Lia C H Fernald, Harriet MacMillan, Mark Hanson, Theodore D Wachs, Haogen Yao, Hirokazu Yoshikawa, Adrian Cerezo, James F Leckman, Zulfiqar A Bhutta, and the Early Childhood Development Interventions Review Group, for the Lancet Early Childhood Development Series Steering Committee\*

*Lancet* 2017; 389: 91

## Advancing Early Childhood Development: from Science to Scale 3

### Investing in the foundation of sustainable development: pathways to scale up for early childhood development

Linda M Richter, Bernadette Daelmans, Joan Lombardi, Jody Heymann, Florencia Lopez Boo, Jere R Behrman, Chunling Lu, Jane E Lucas, Rafael Perez-Escamilla, Tarun Dua, Zulfiqar A Bhutta, Karin Stenberg, Paul Gertler, Gary L Darmstadt, with the Paper 3 Working Group and the Lancet Early Childhood Development Series Steering Committee\*

*Lancet* 2017; 389: 103



# *Cardiovascular Health Promotion*

## *Eight Factors to be Addressed*

- 1. Nutrition & Diet*
- 2. Healthy Weight*
- 3. Exercise & Physical Activity*
- 4. Tobacco-Free Lifestyle*
- 5. Blood Pressure*
- 6. Cholesterol*
- 7. Blood Sugar*
- 8. Psychological Health*

# *Cardiovascular Health Promotion*

## *Four Questions to be Answered*

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- 1. Pathophysiological Effects: Detrimental impact that adverse RFs & behaviors can cause to the CV system, from molecular to clinical levels*
  - 2. Mechanistic/Triggering Factors: Desmotivators of good health: at personal, community or societal levels.*
  - 3. Role of Preventive Action: Motivators of good health: at personal, community/educational or societal/authoritative*
  - 4. Competencies for training: Standarized methods of education that impact on health promotion.*
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# *New Frontiers in CVD* *Aging / Disease to Youth / Health*

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*Science Health Education*

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*ACC New York, Dec 10, 2017*

*No Disclosures*