
The Nutrition Transition in Thailand

FROM PAST, PRESENT EXPERIENCES TO FUTURE

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PAST NUTRITION ACHIEVEMENTS IN THAILAND

- **An integral part of Basic Health Package included MCH/F.P., EPI, Safe drinking Water and Sanitation**
- **Past key successful factors were**
 - Commitment of Village Health Volunteer**
 - Intersectoral Collaboration**
 - Community Involvement**

Past experiences

- **First National MCH program started in 1949.**
- **Reduction of Maternal Mortality Rate, Infant Mortality Rate and Under 5 Mortality.**
- **IMR dropped from 25.5 in 1970 to 4.5 in 1999.**
- **Successful Family Planning program in the last 3 decades.**
- **Total Fertility Rate decreased from 6.41 in 1965 to 3.46 in 1982 and 1.7 in 1998.**



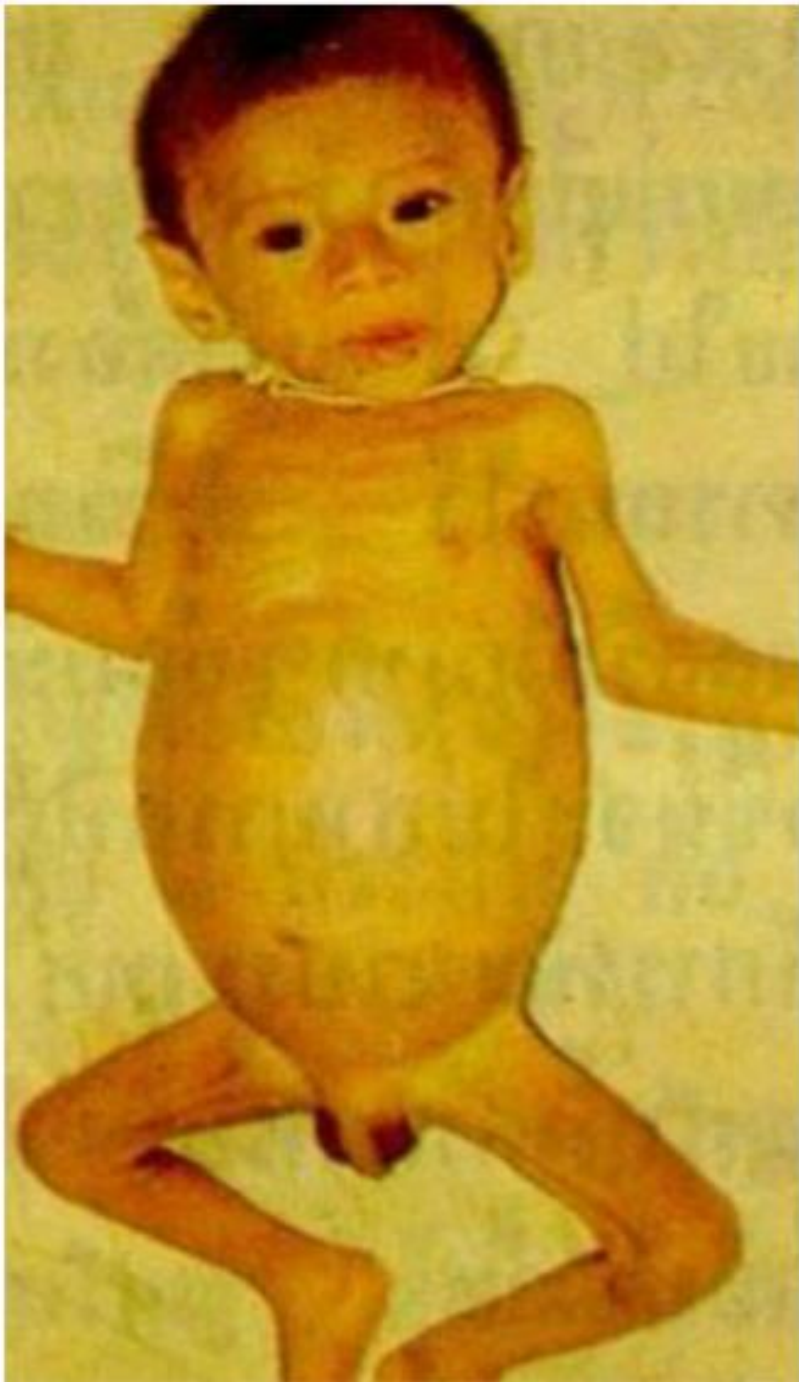


การอบรมผดุงครรภ์วิชาชีพ
สตรีที่ศูนย์พัฒนา
สุขภาพ 2551

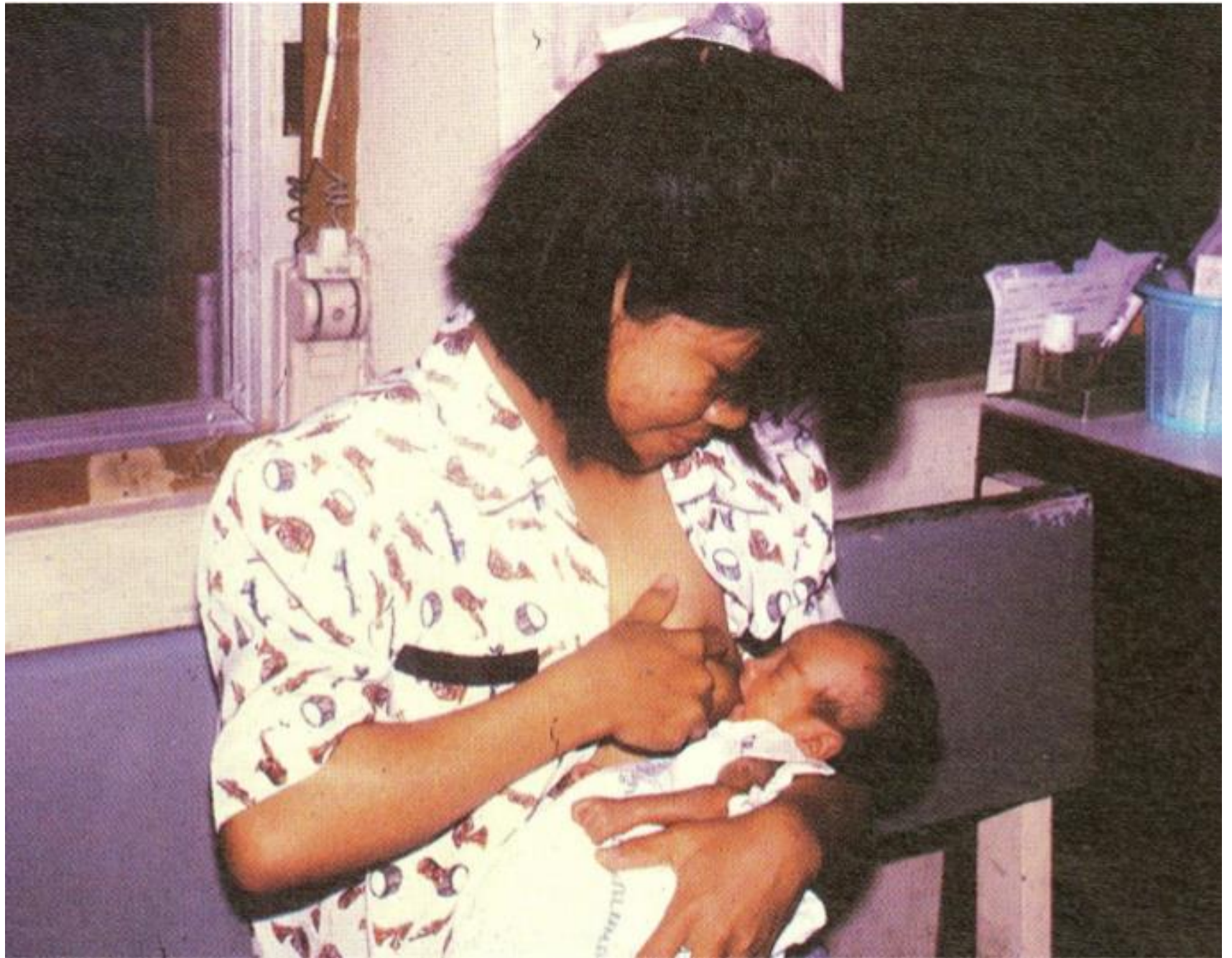












RESULTS

- **Elimination of 2nd and 3rd PEM Malnutrition and severe forms of Iodine Deficiency Disorders – Cretinism
Vitamin A deficiency – Xerophthalmia**
- **Facing Double Burden namely
Undernutrition and Overweight/Obesity**

PRESENT NUTRITIONAL ACTIVITIES IN SOUTHEAST ASIA

- **Present Nutritional Approaches**
 - **A Comprehensive package of maternal, infant and young children.**
 - **Targeted Supplementation to vulnerable groups and food fortification.**
 - **Community – based programs for moderate and severe acute malnutrition.**

Prevalence of underweight in children under five in ASEAN Member States

Country	Prevalence Underweight	MDG target 1c	Country	Prevalence Underweight	MDG target 1c
Brunei Darussalam	11%	Data not available	Myanmar	23%	After 2025
Cambodia	24%	By 2018	Philippines	20%	After 2025
Indonesia	20%	By 2020	Singapore	Data not available	Data not available
Lao People's Democratic Republic	27%	After 2025	Thailand	9%	Achieved
Malaysia*	12%	Achieved	Viet Nam*	15%	Achieved

Note: Countries have been colour-coded, based on the status for achieving the MDG target for underweight (Red: target not achieved, Yellow: on track to halve underweight before 2025, Green: target achieved). Assessments in column "MDG target 1c" originate from the Global Nutrition Report's assessment of trends and status, which is based on data from WHO's global targets tracking tool (available at <http://www.who.int/nutrition/trackingtool/en/>).²⁸

Figure 5: Percentage of children under five who are stunted in ASEAN Member States

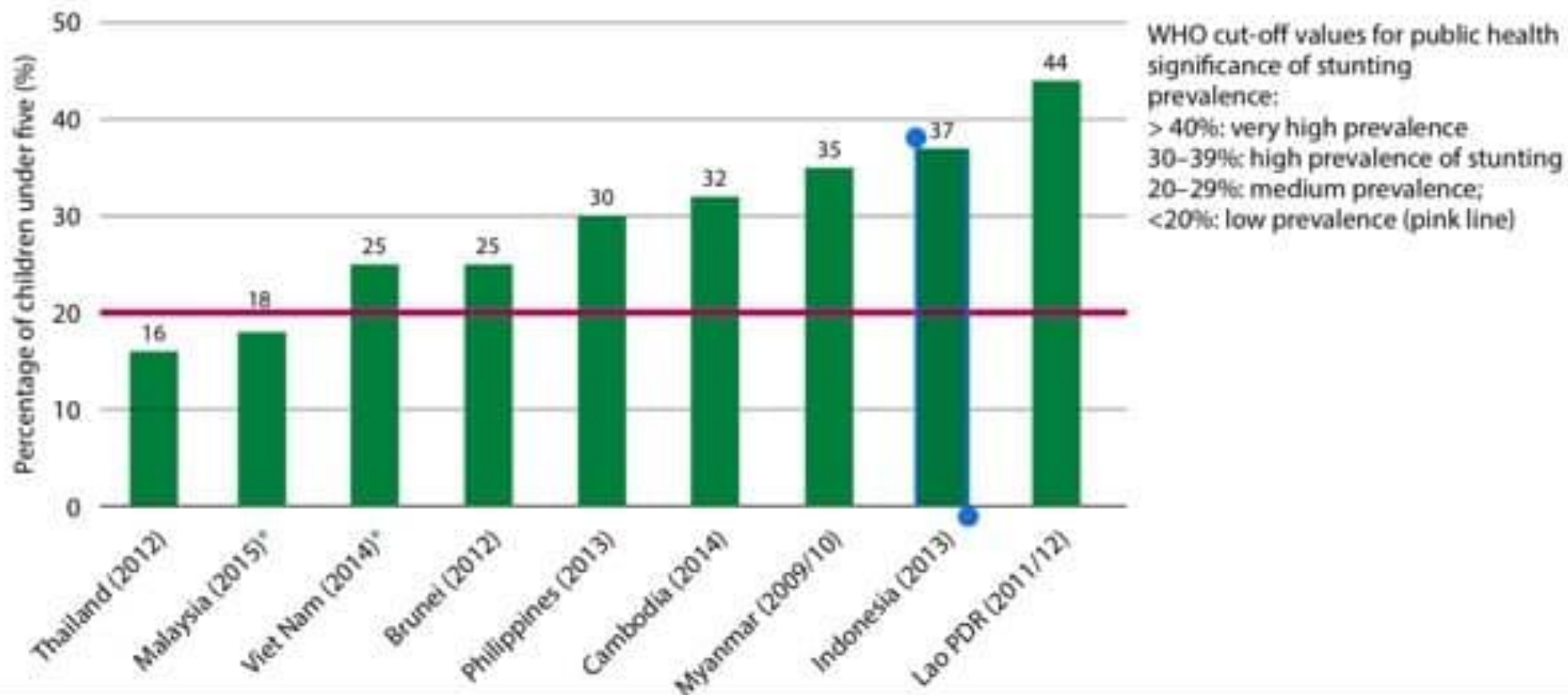


Figure 8: Prevalence of wasting in children under five in ASEAN Member States

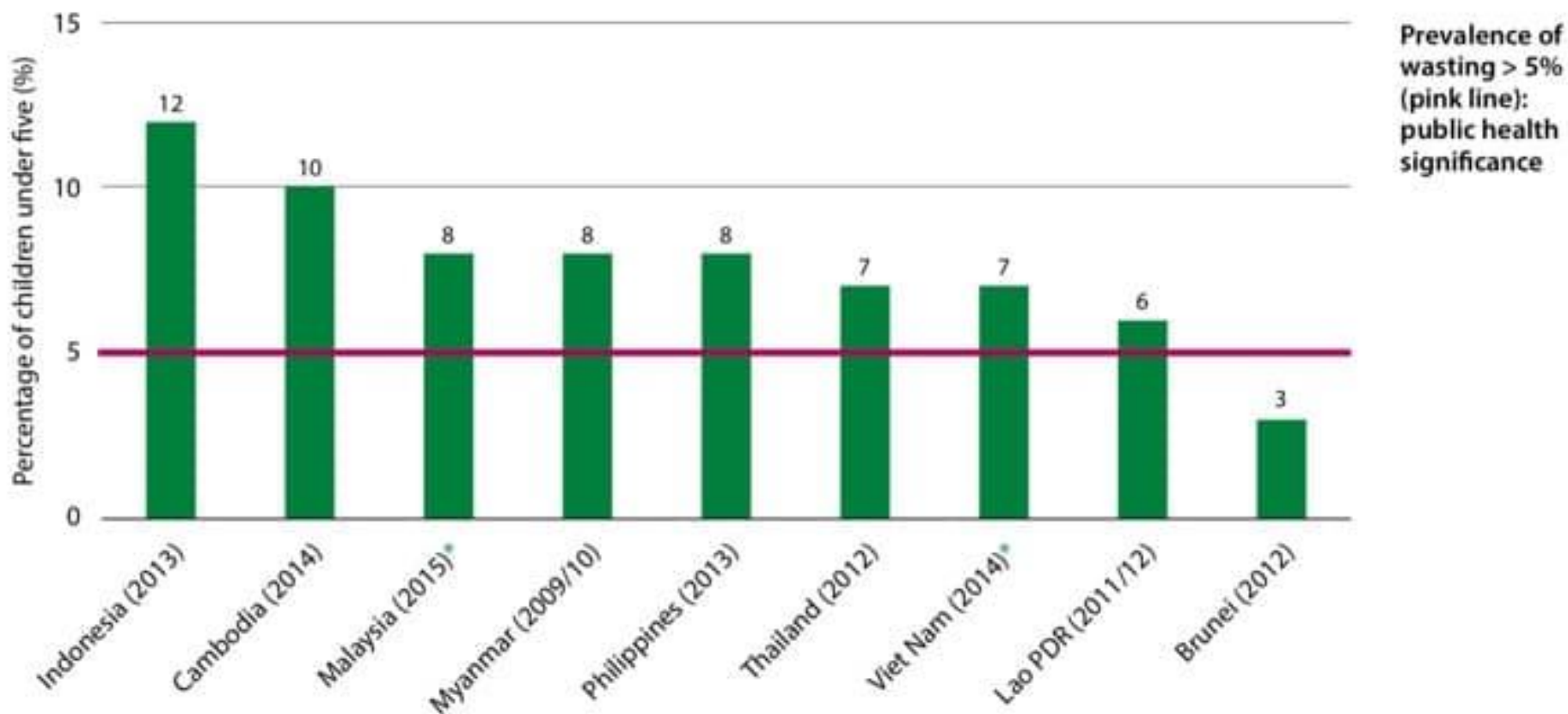


Figure 10: Prevalence of anaemia in children 6–59 months, women of reproductive age (15–49 years of age) and pregnant women in ASEAN Member States¹³

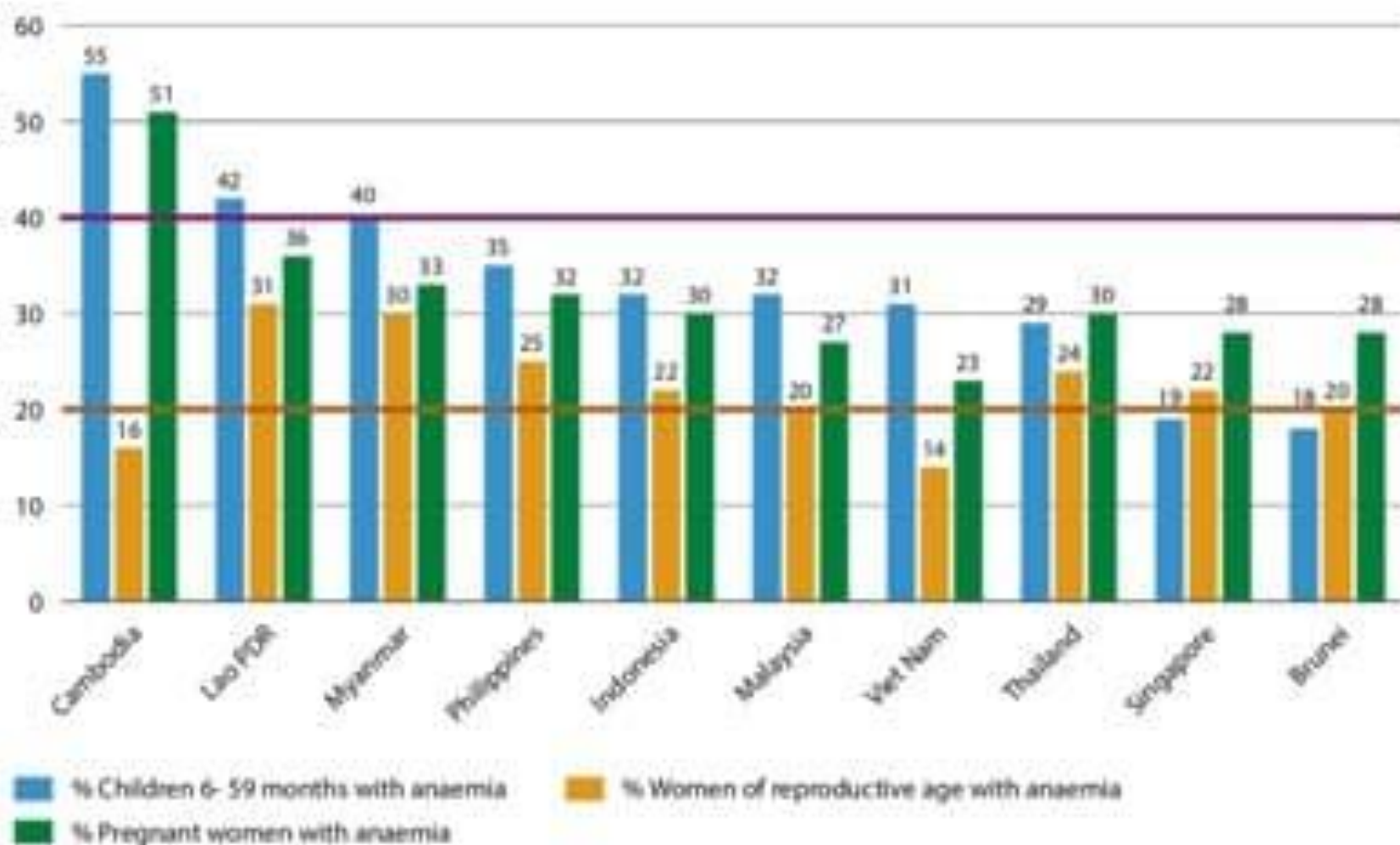


Figure 15: Vitamin A supplementation (VAS) in children 6–59 months and Vitamin A deficiency (VAD) in children 6-79 months in ASEAN Member States

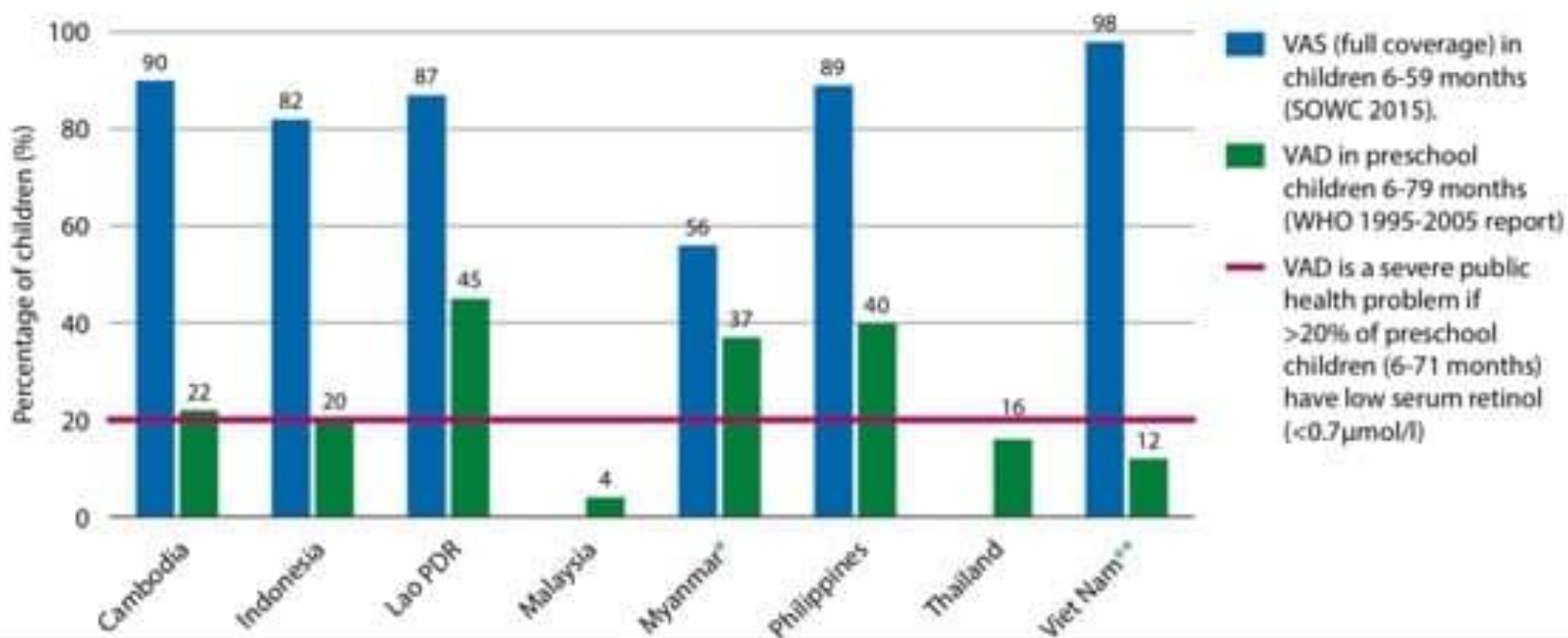


Figure 16: Iron and folic acid supplementation

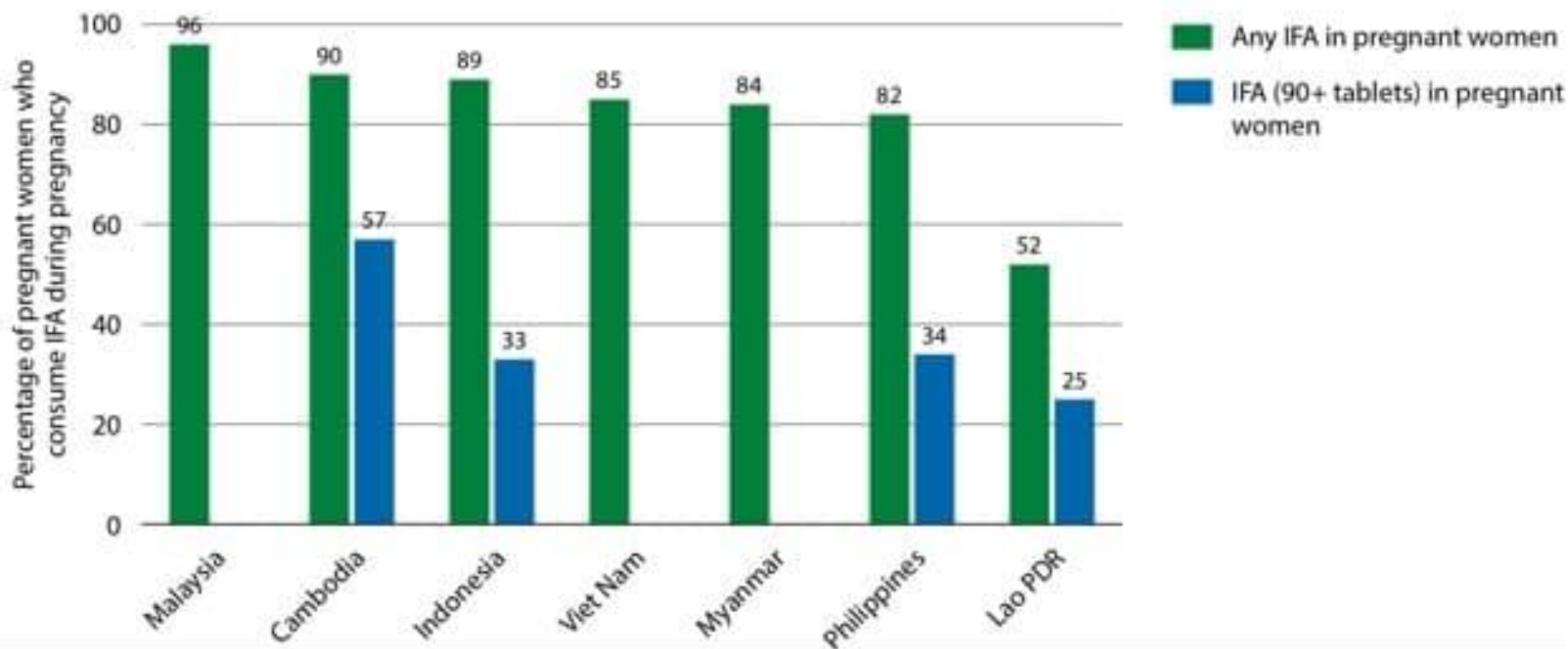


Figure 17: Coverage of iodized salt in ASEAN Member States

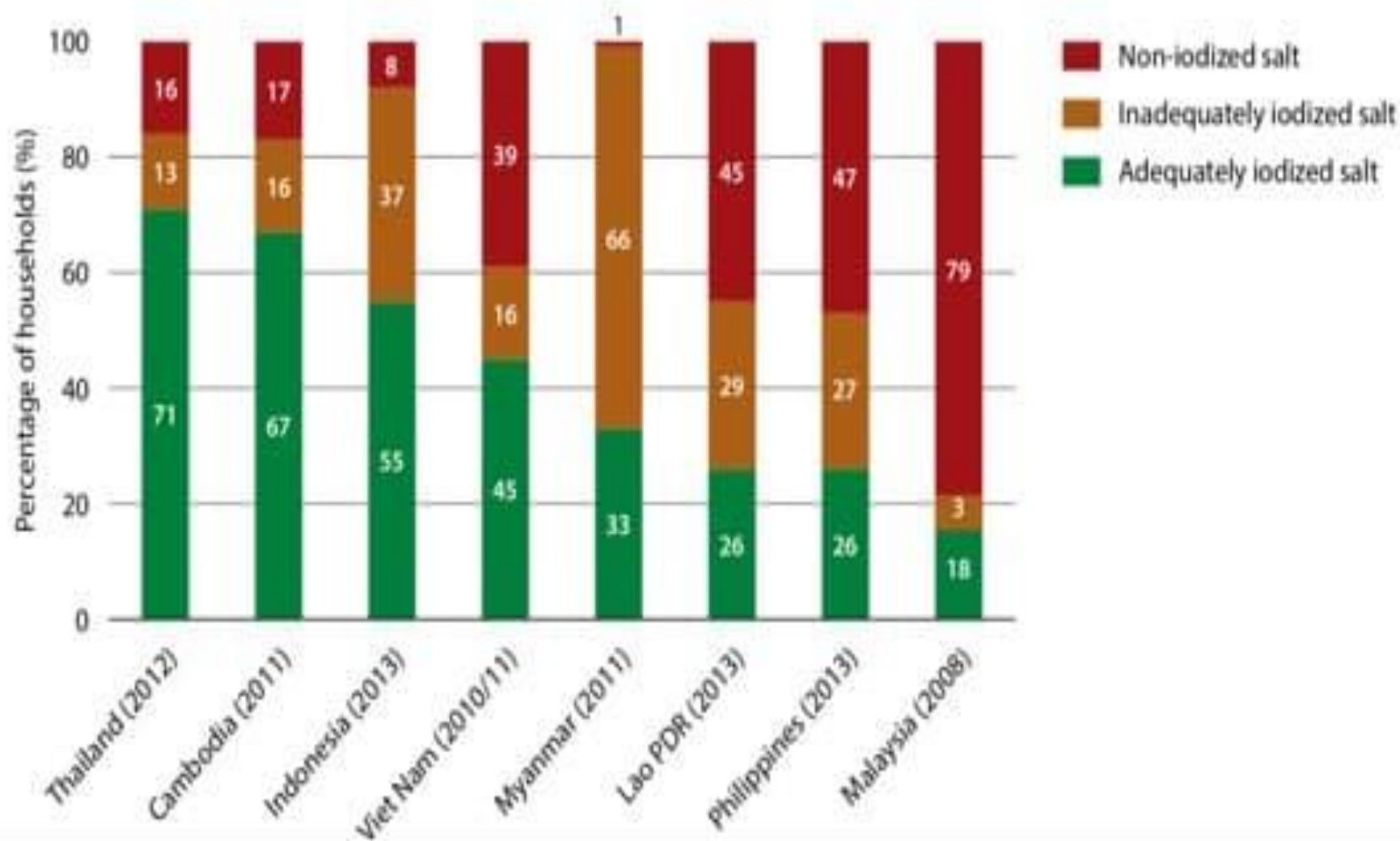


Figure 11: Prevalence of overweight in children under five in ASEAN Member States

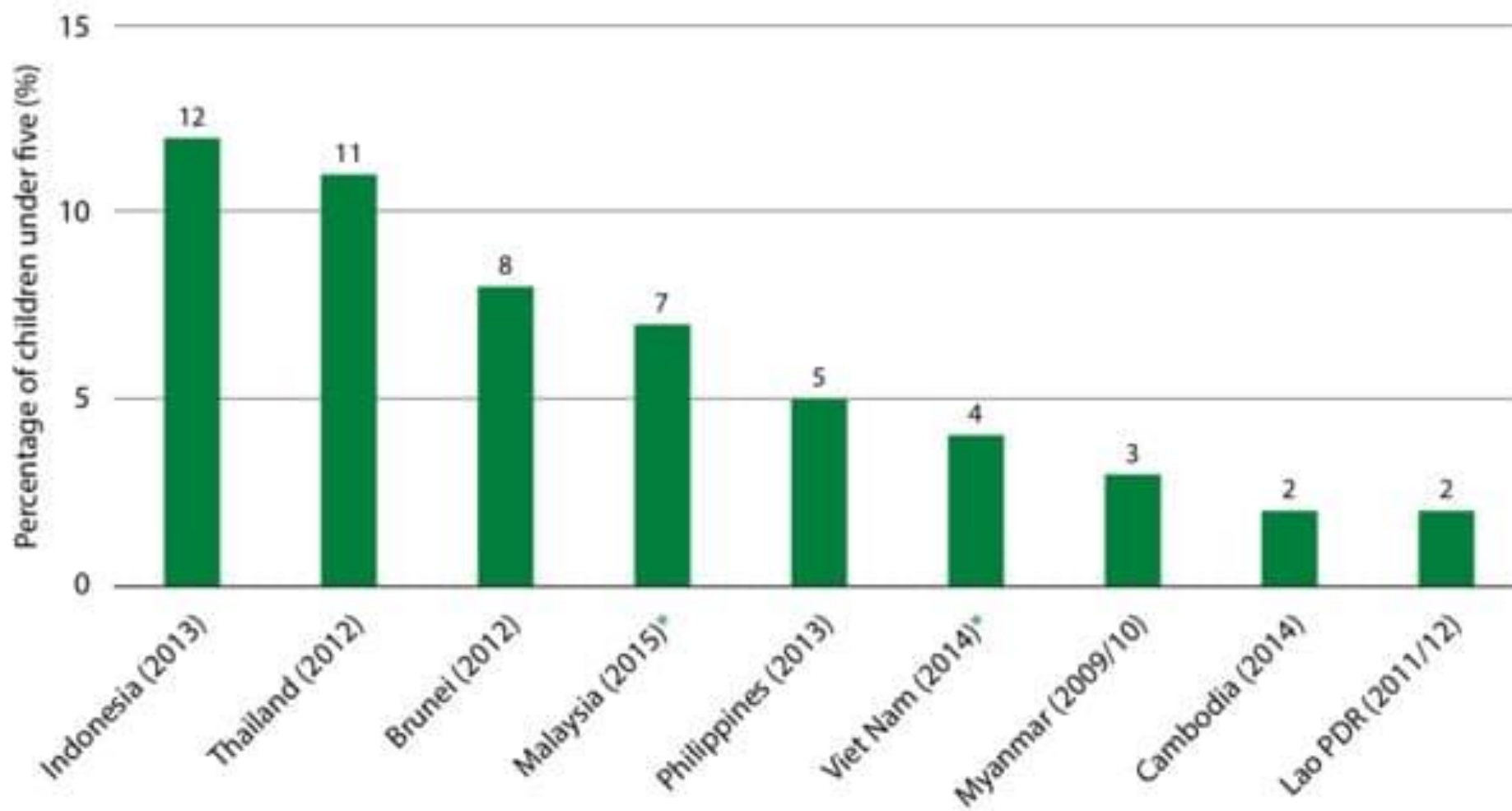


Figure 12: Sodium intake rates in ASEAN Member States⁷³

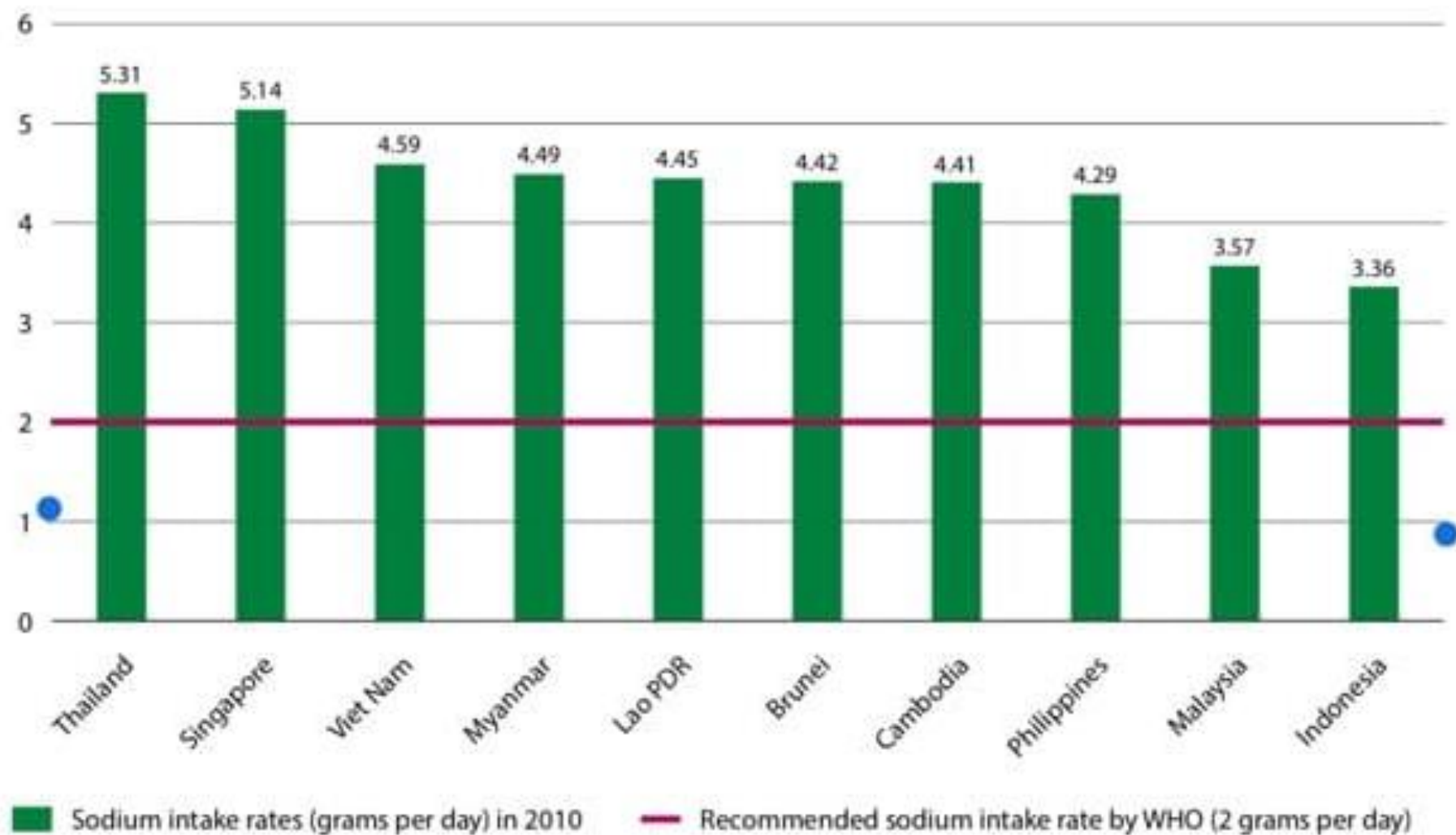
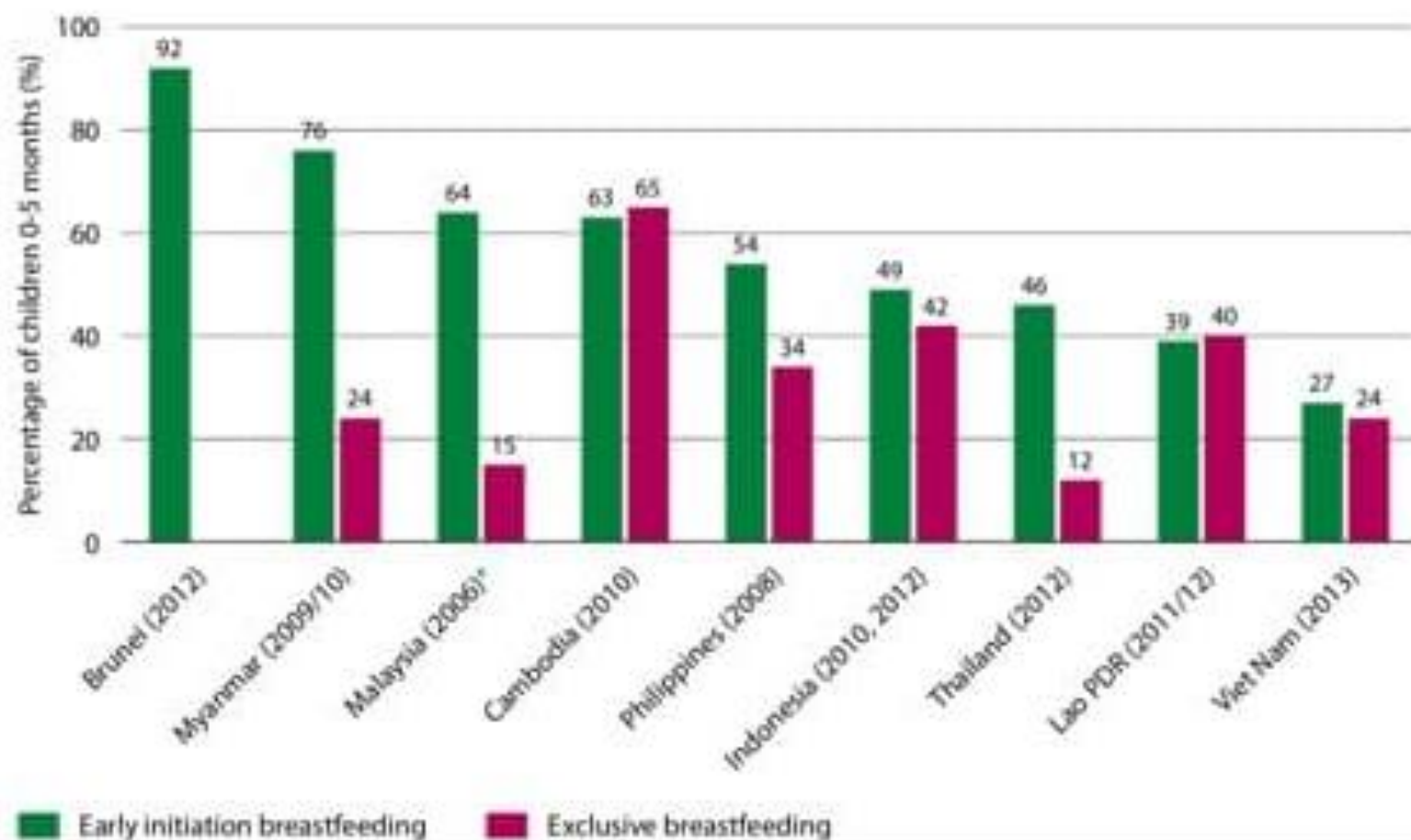


Figure 13: Early Initiation of breastfeeding and exclusive breastfeeding in ASEAN Member States



THAILAND MALNUTRITION REDUCTION : FACTORS FOR SUCCESS

- The prevalence of underweight among children under 5 was reduced from 25% in 1986 to 15% in 1995 a rate of 1.1% which double elsewhere due to general development.
 - Government commitment to a national nutrition program and multisectoral poverty alleviation strategies.
 - A national consensus that investing in nutrition was important to building the country's future.
 - Multisectoral holistic approach to addressing malnutrition.
 - Targeting the most vulnerable groups and provinces.

THAILAND MALNUTRITION REDUCTION : FACTORS FOR SUCCESS

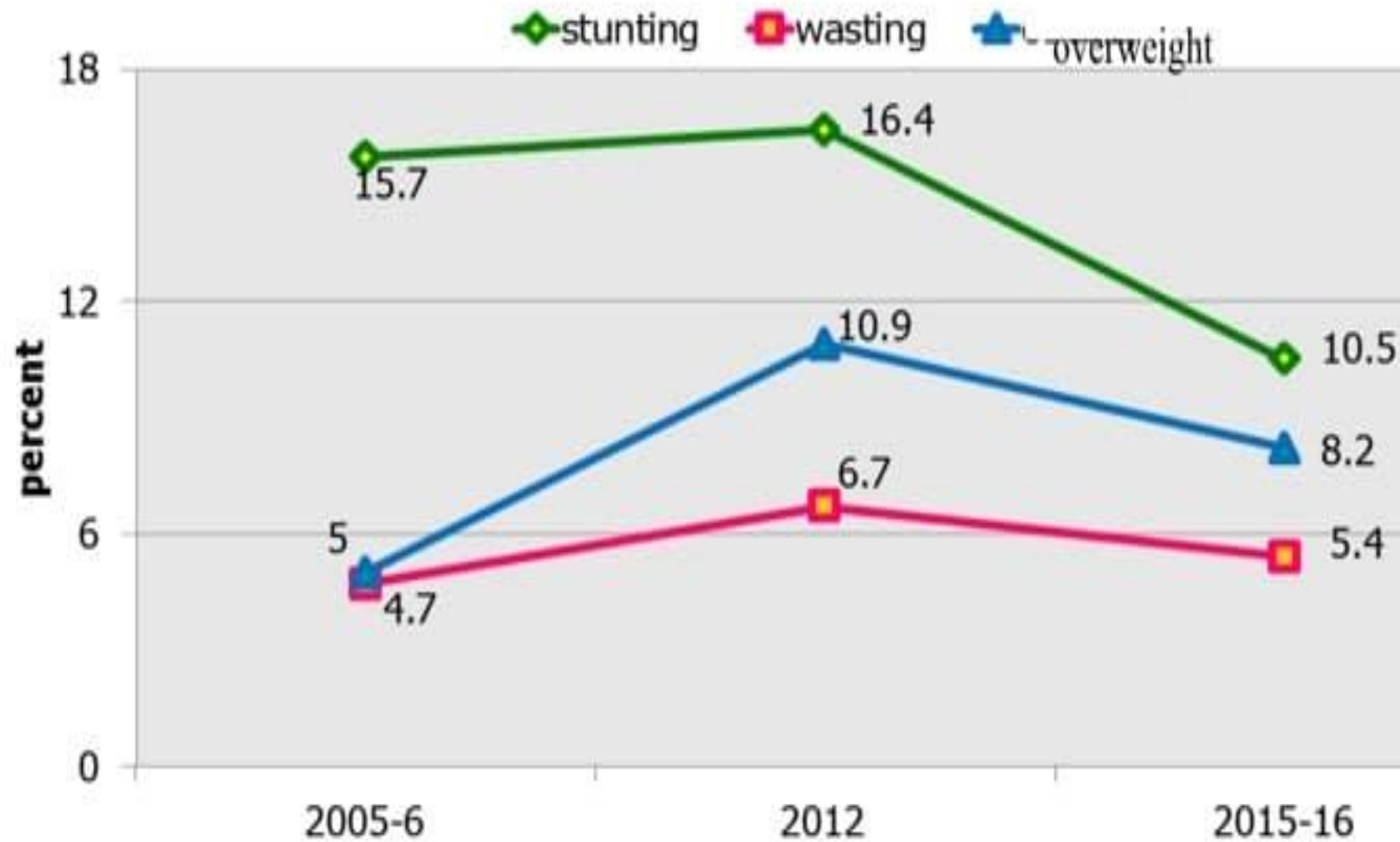
- Building community involvement that Nutrition was a family and community responsibility not just the government's through
 - The use of Village Health Volunteers.
 - Community program, planning and implementation.
 - An assessment and monitoring approach – “Basic Minimum Needs” by prioritizing nutrition that managed by community.
 - Management through multiple committees not one agency

Source : Heaver and kachondam 2002, Ruel 2008, Tontisirin and Bhattacharjce 2001.

Present Nutritional Status in Thailand

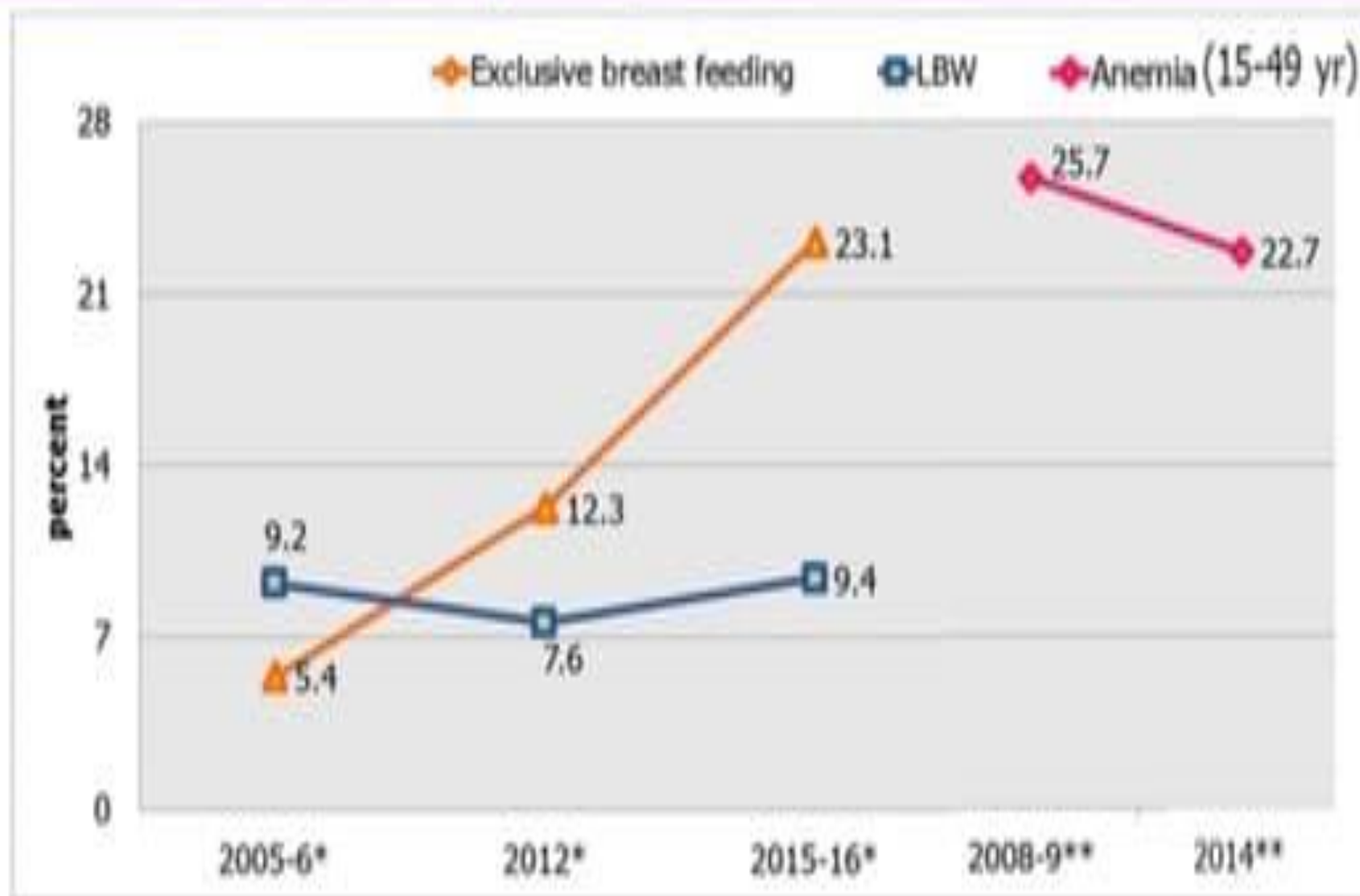
Anthropometry		
Underweight woman (BMI < 18.5 kg/m ²)	9.6 %	2004
Overweight adults (BMI >= 25 kg/m ²)	31.5 %	2003
Proportion of infants with low birth weight	9.4 %	2012

Malnutrition among 0-5 yrs.



ข้อมูล: Thailand Multiple Indicator Cluster Survey (MICS3-2005-6, MICS4-2012 และ MICS5-2015-16), สำนักงานสถิติแห่งชาติ

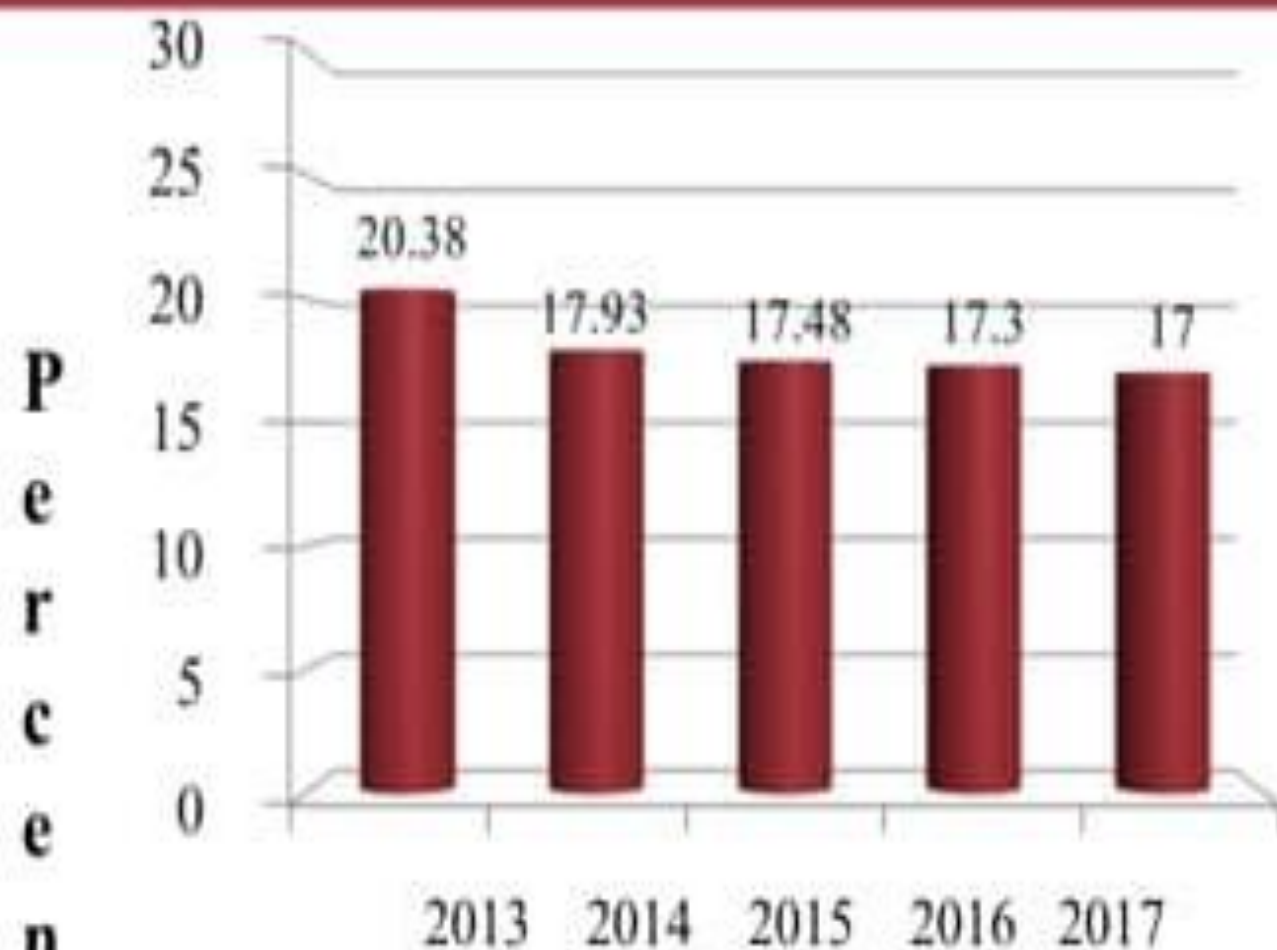
Exclusive breastfeeding 6 m., anemia in CBA women and LBW



Source : *Thailand Multiple Indicator Cluster Survey (MICS3-2006, MICS4-2012)

** National Health Exam Survey (NHES4-2008-9, NHES5-2014)

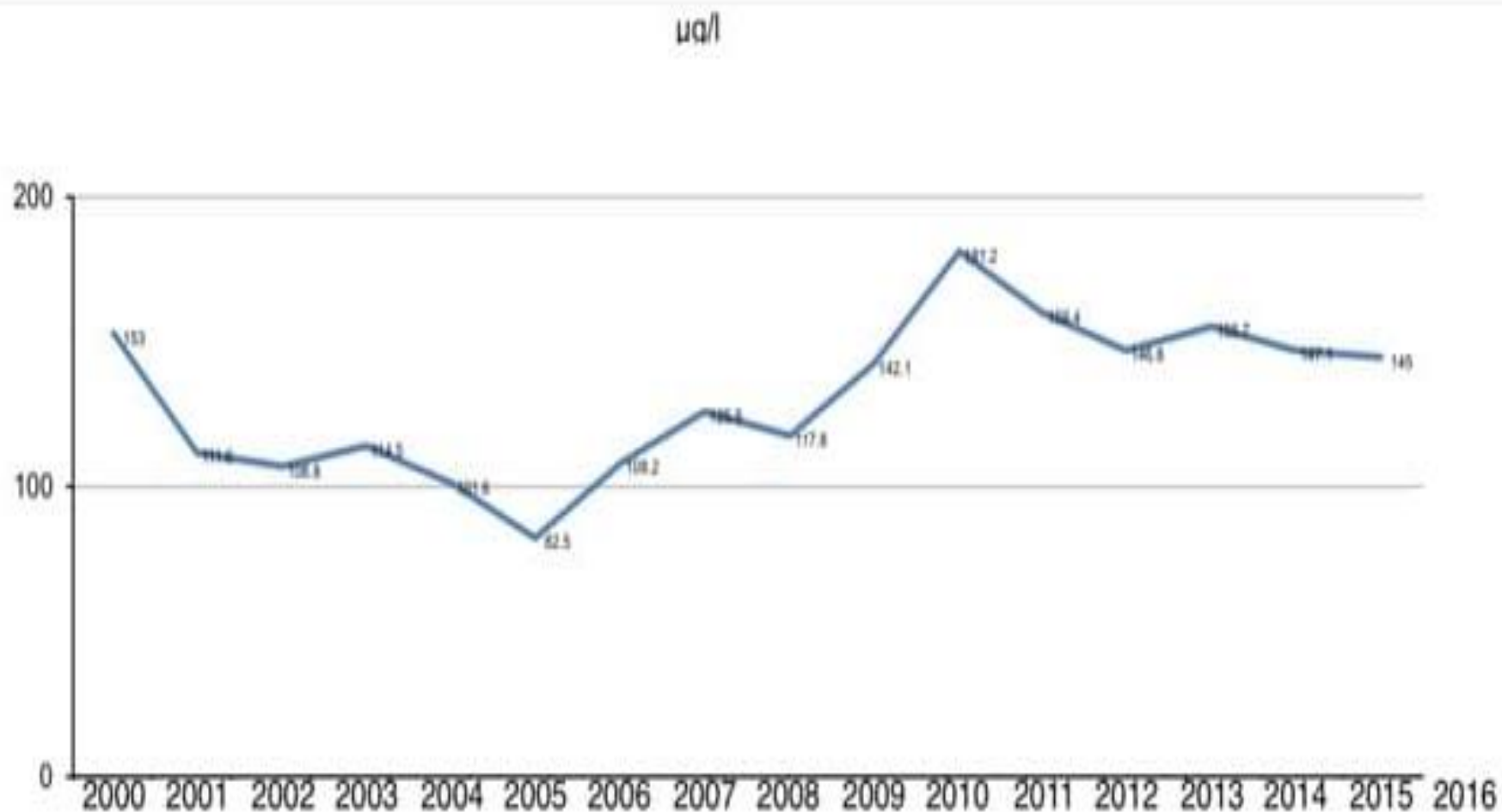
Prevalence of anemia during Pregnancy



Source : Health Data center (HDC), 6 Jun 2018 .

Strategy and Planning Division, Ministry of Public Health

Median Urine Iodine in Pregnant women 2011-2016



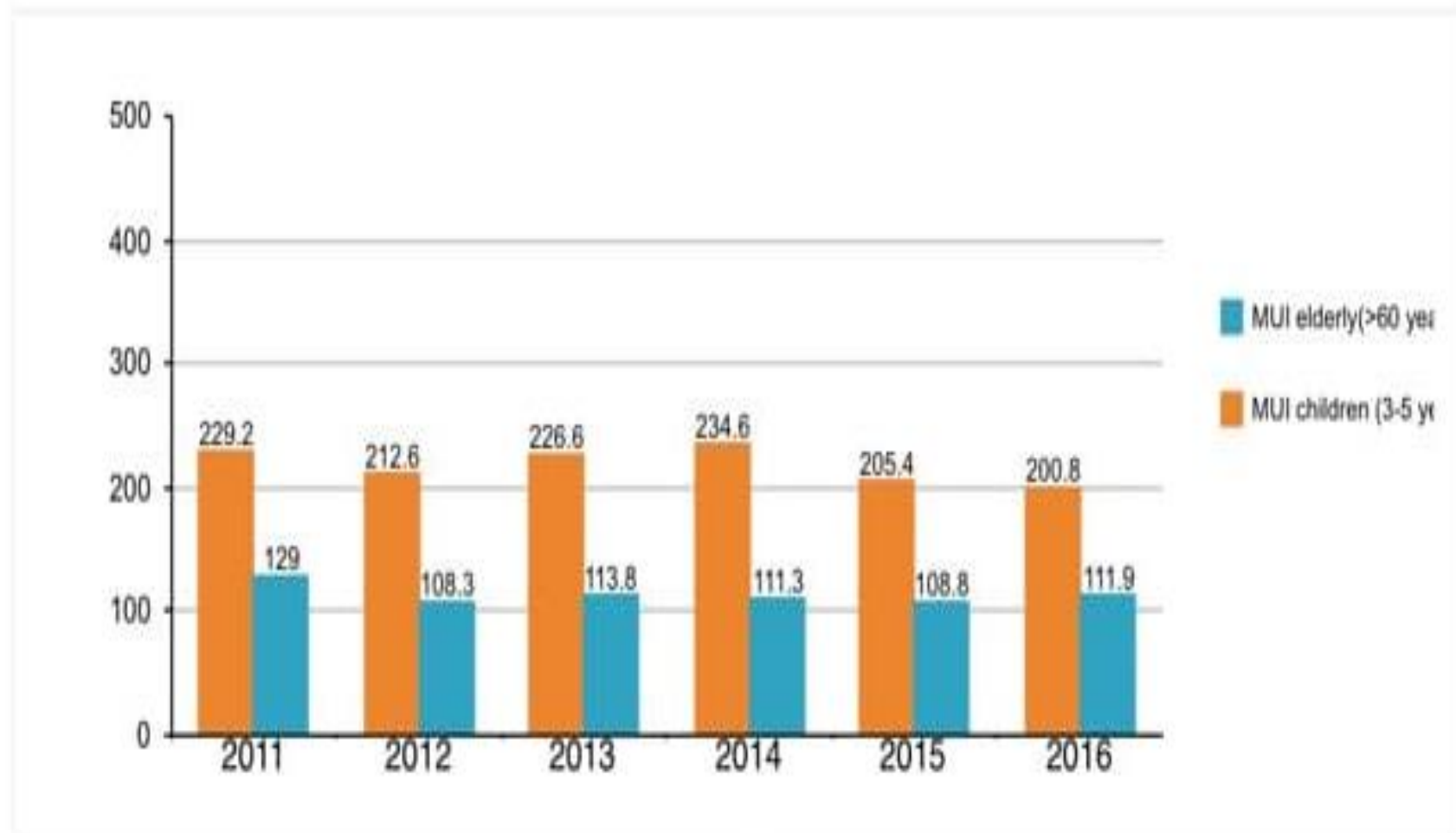
Adequate Intake, Before 2007 $\geq 100 \mu\text{g/l}$

After 2007 $\geq 150 \mu\text{g/l}$



Median UIC in 3-5 y children and elderly in 2011-2016

µg/l



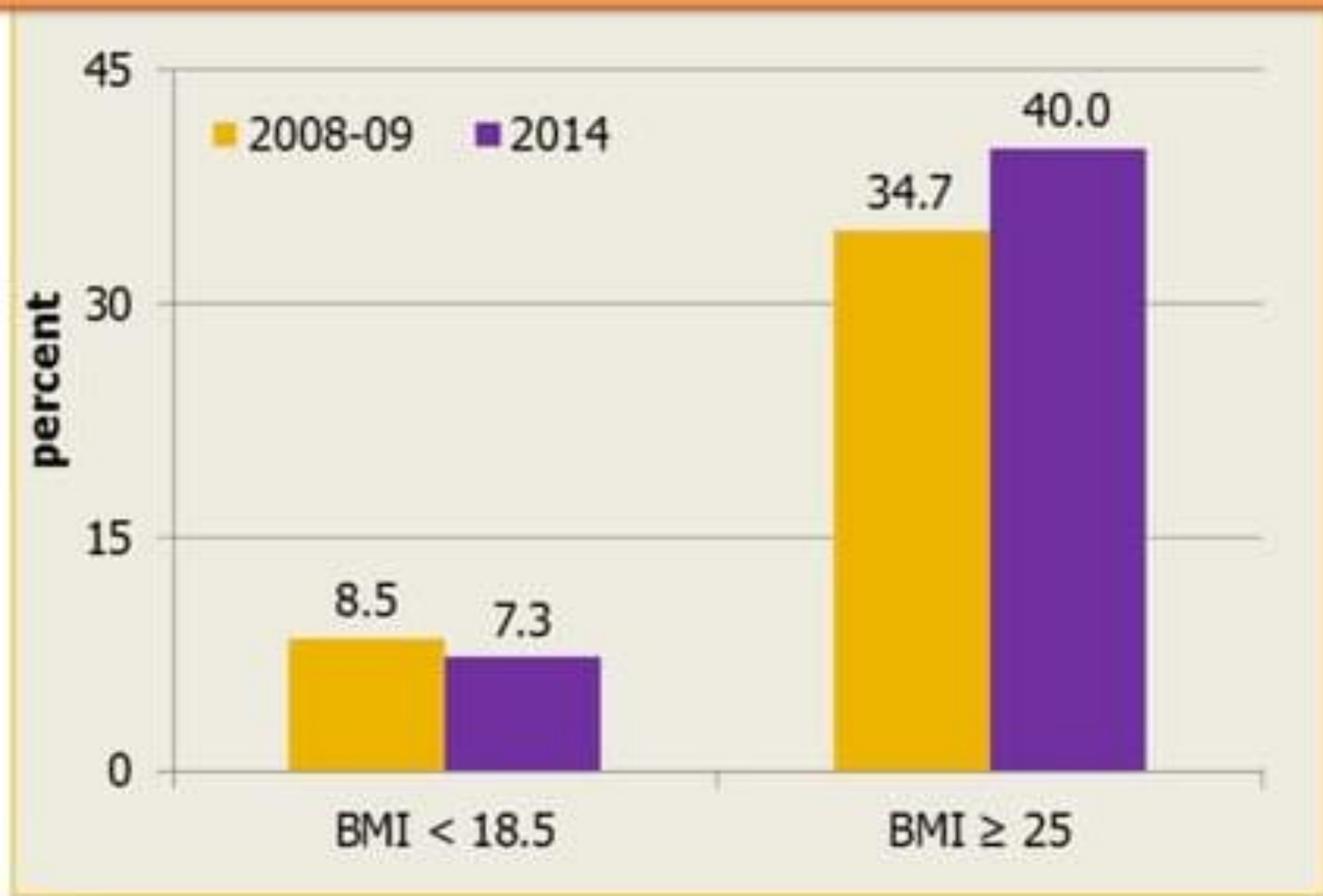
Source : Bureau of Nutrition

IDD Area (children and elderly)

MUIC < 100 µg/l



Situation of BMI among Thai people 15-59 yrs.



Source : National Health Exam Survey (NHES4-2008-9, NHES5-2014-15)

Good Nutrition Governance: What is Needed?

1. **The executive branch of government should be directly involved in malnutrition reduction policies at the presidential or prime ministerial level.** This helps to raise public awareness, coordinate efforts of different government sectors, and protect funding allocations.
2. **Establish effective bodies to coordinate nutrition actions across government ministries.** These bodies can facilitate effective funding allocations, monitor progress, and facilitate decision making among other stakeholders. Coordination bodies need to have strong political support and appropriate funding sources.
3. **Frame nutrition as an integral part of the national development agenda.** A high public profile for nutrition can create greater public awareness and concern and is most effective when nutrition is seen as part of a broader development agenda.

Future Challenge in 21th Century

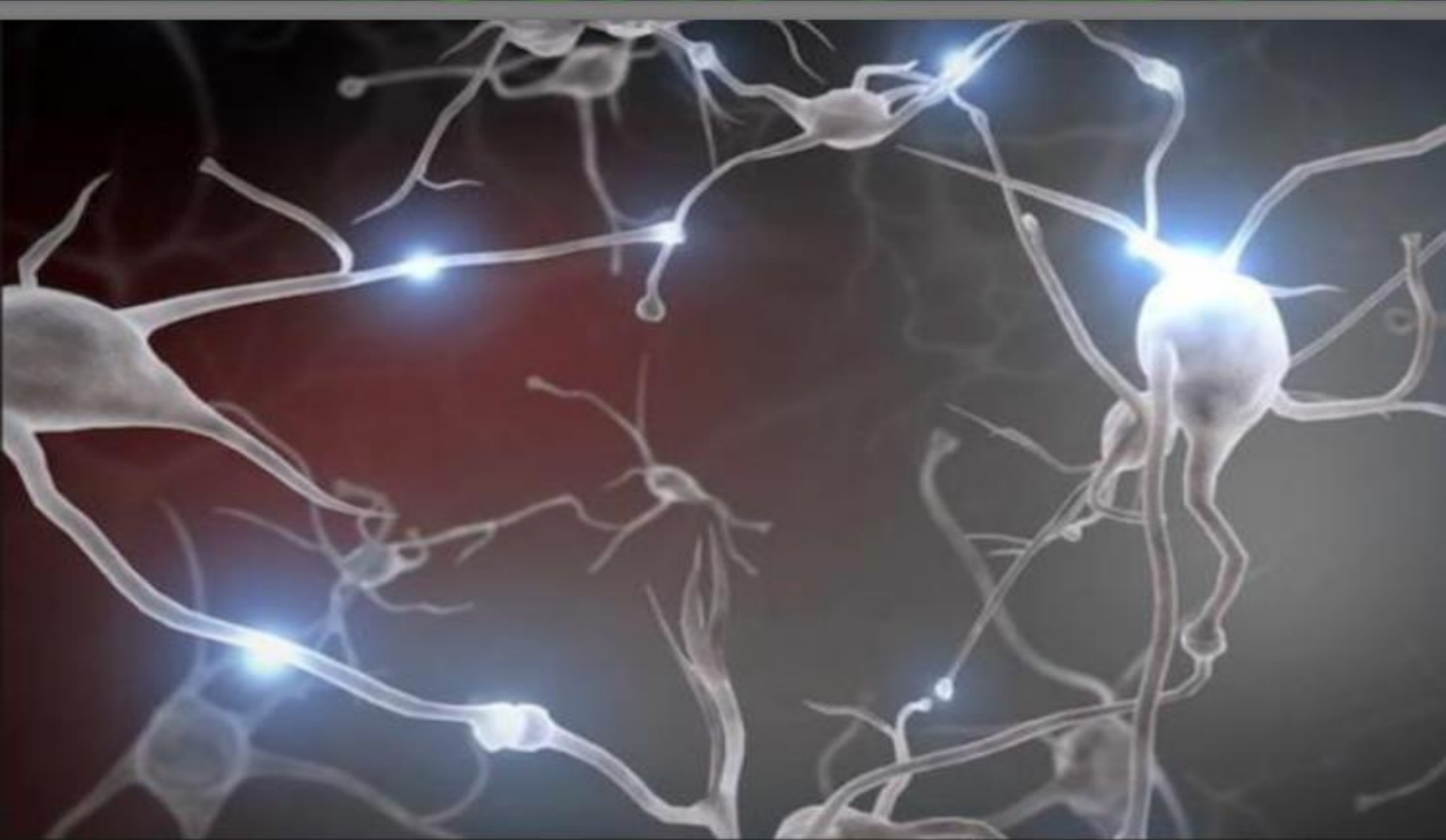
- DBMN is still exist Over > Under nutrition.
- Childhood Obesity $\frac{1}{3}$ Children is overweigh or obese
17% of kids aged 2-19 are obese.
- Childhood learning Disabilities
 $\frac{1}{6}$ kids has a learning disability
Cause – Premature birth with $\frac{1}{10}$ babies
born prematurely.

Decades of Science from Many Disciplines All Point to the Same Conclusion

The healthy development of children provides a strong foundation for healthy and competent adulthood, responsible citizenship, economic productivity, strong communities, and a sustainable society.



**TO BUILD BETTER FUTURES,
WE NEED TO BUILD
BETTER BRAINS.**



A baby forms 700 neural connections per second in the first years of life.

Credit Center on the Developing Child at Harvard University

Experience Shapes Brain Architecture by Over-Production Followed by Pruning

(700 synapses formed per second in the early years)

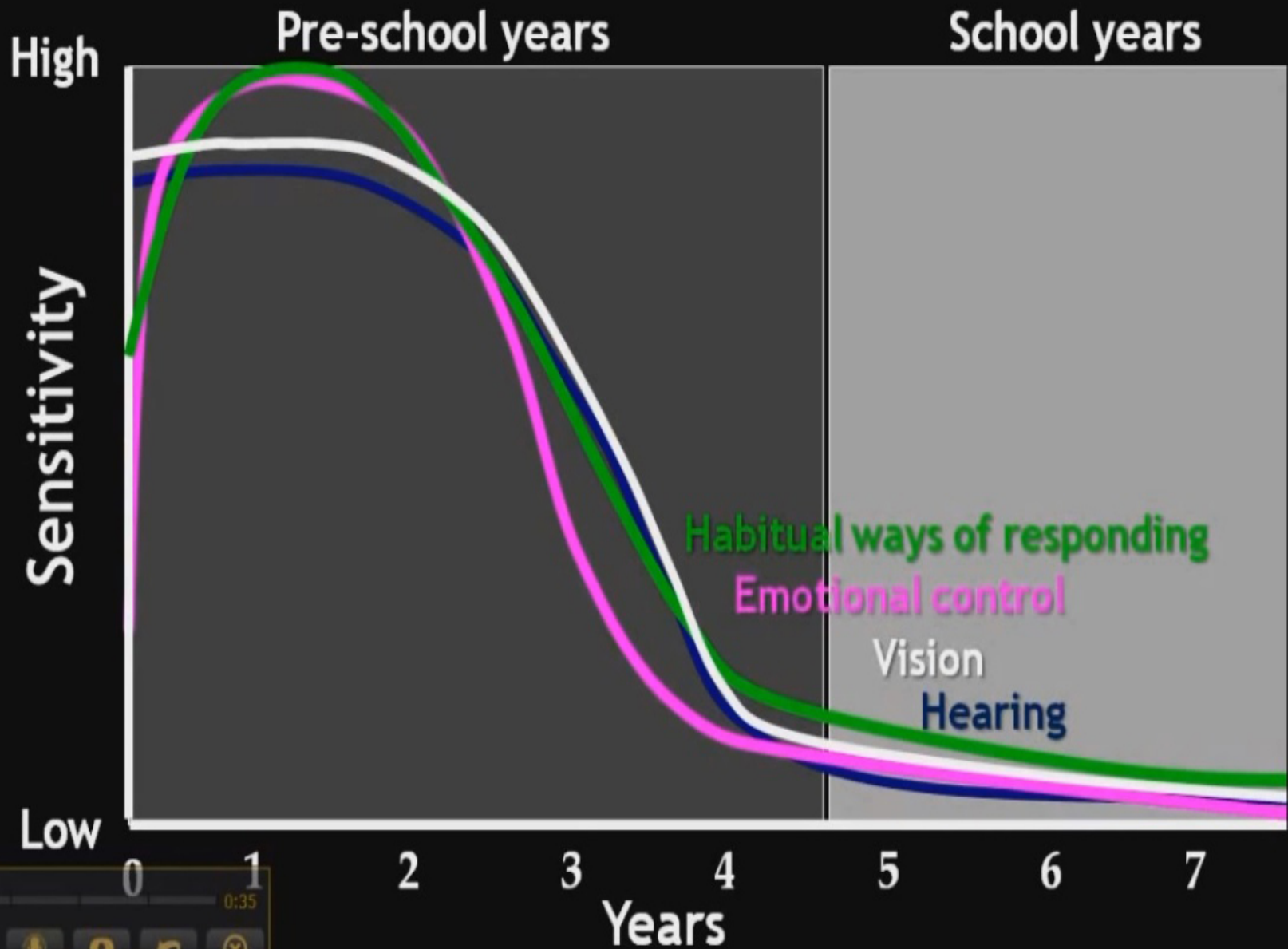


Birth

6 years

14 years

Sensitive Periods in Early Brain Development



Neural Circuits are Wired in a Bottom-Up Sequence

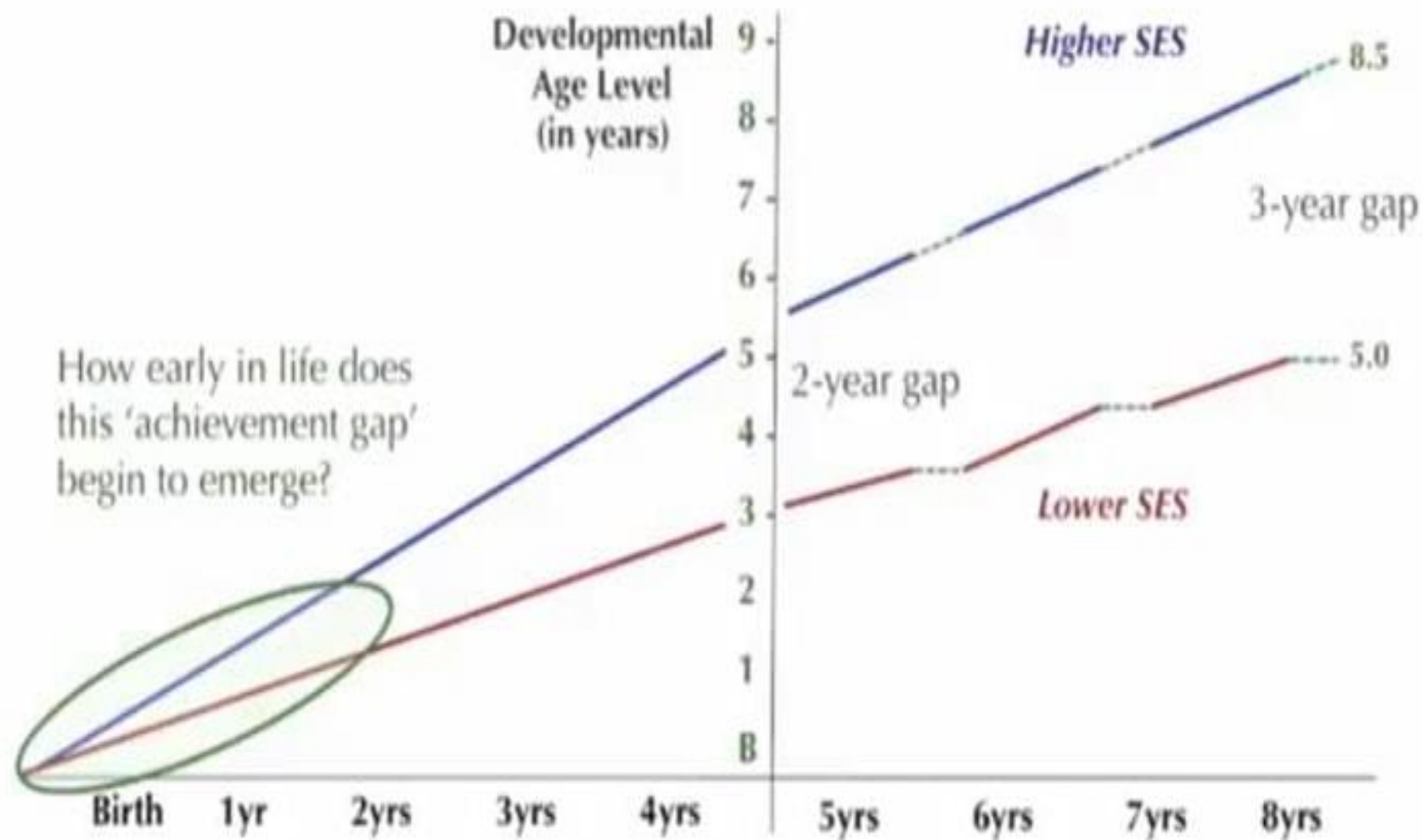


Proficiency in oral language provides children with a vital tool for thought.

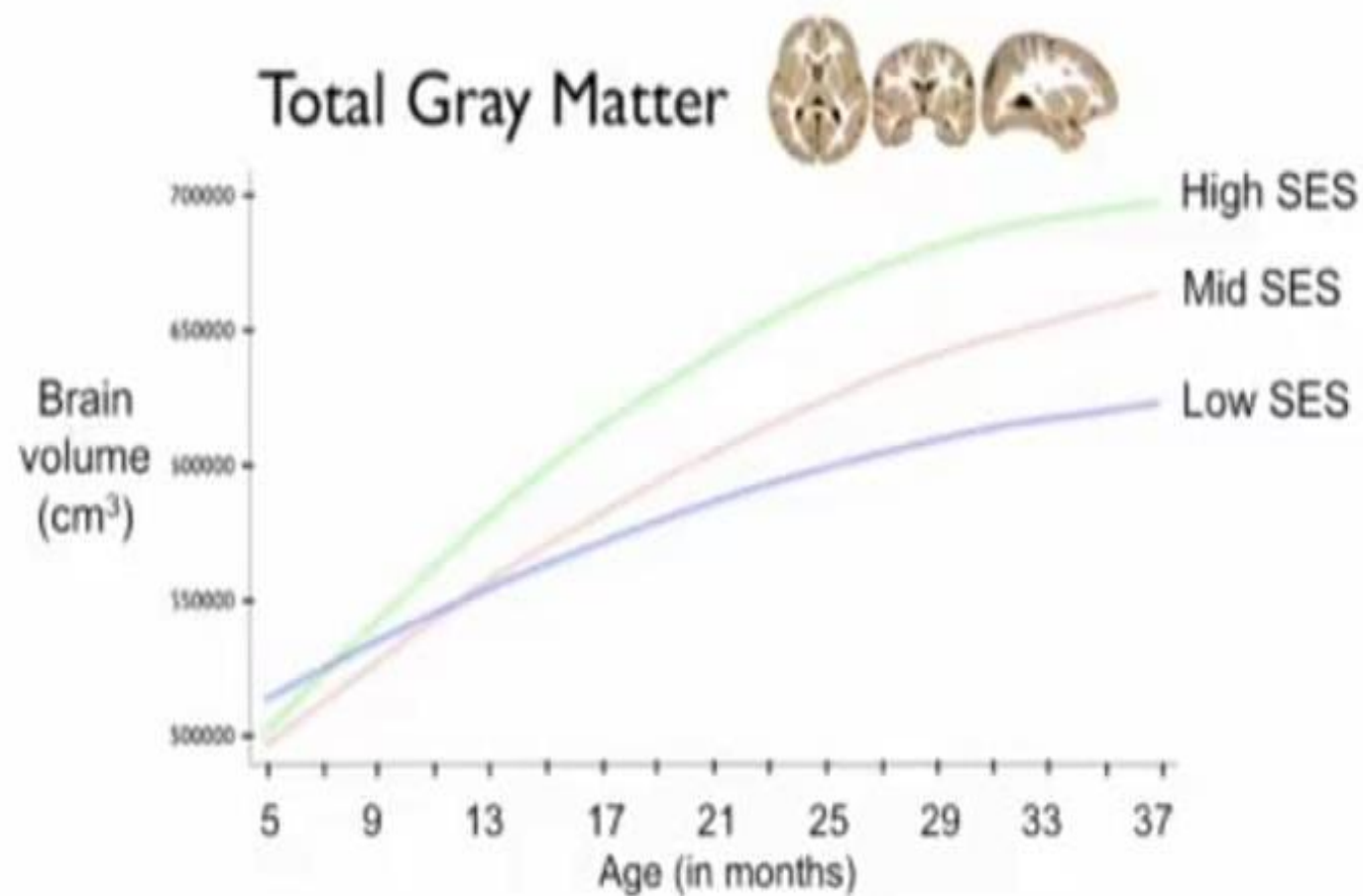
Without fluent and structured oral language, children will find it very difficult to think.

Jerome Bruner (1983)

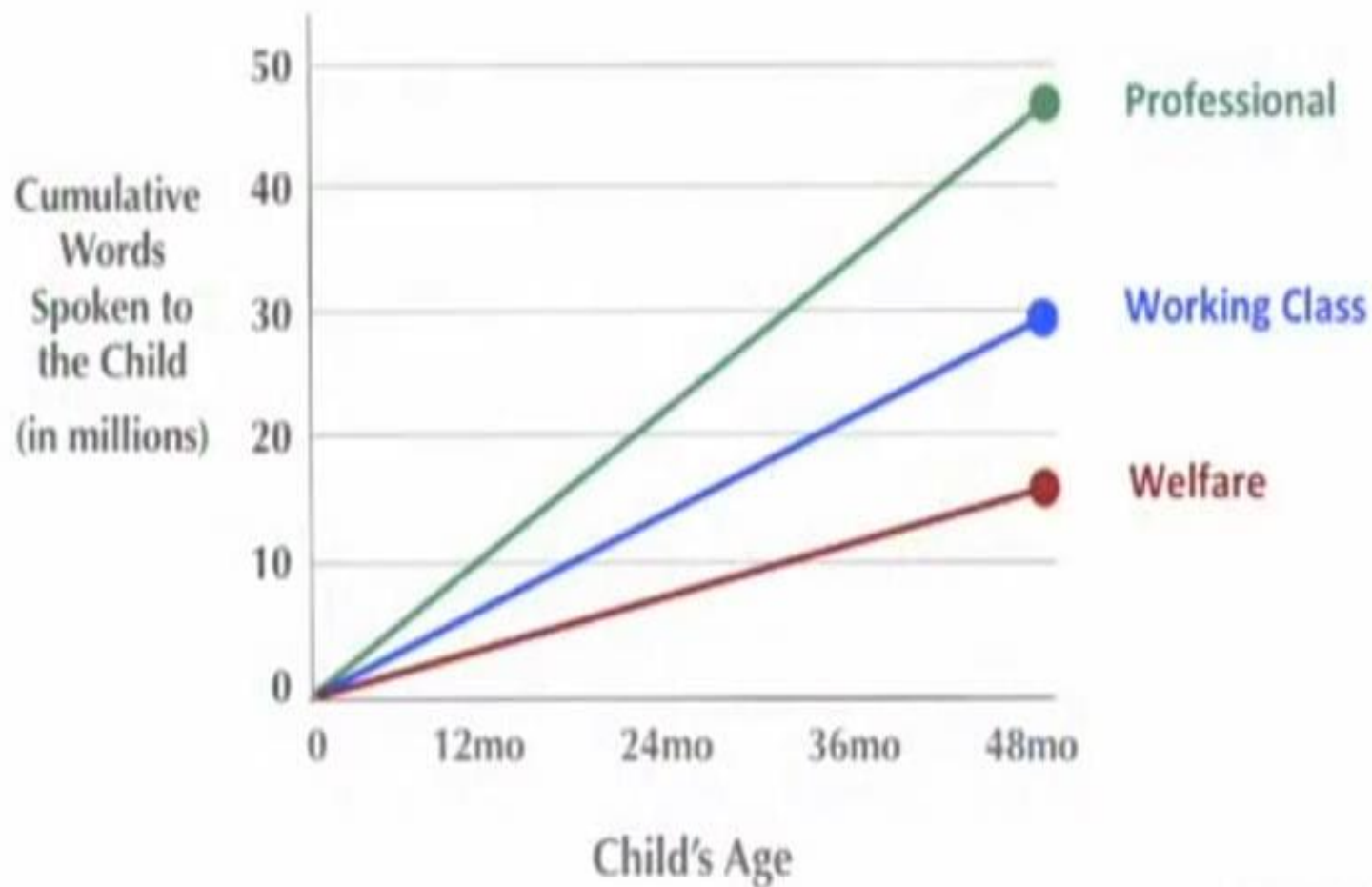
Children in poverty are already behind by the time they start school



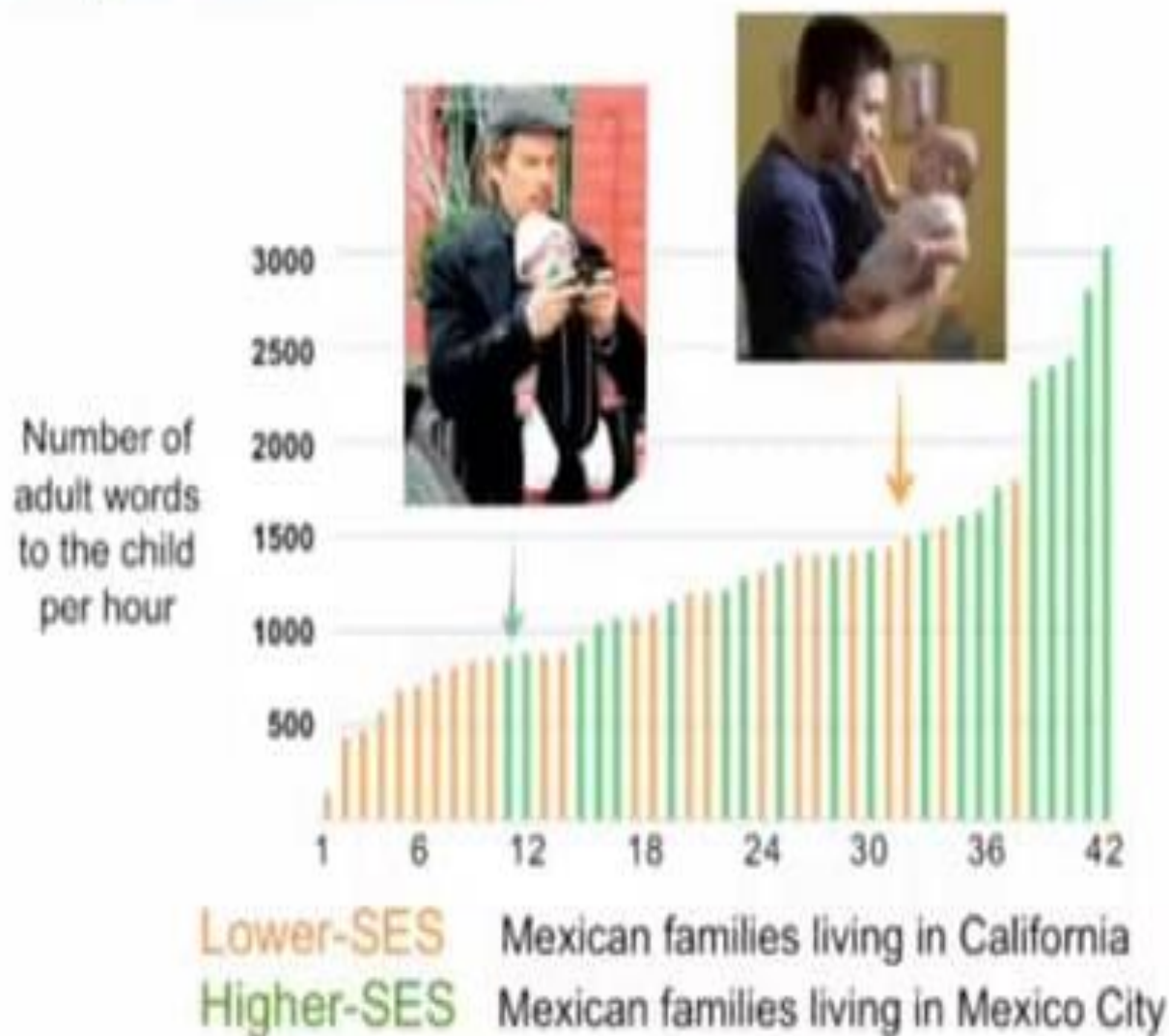
Family poverty affects the rate of brain growth in human infants



The 30 million word gap



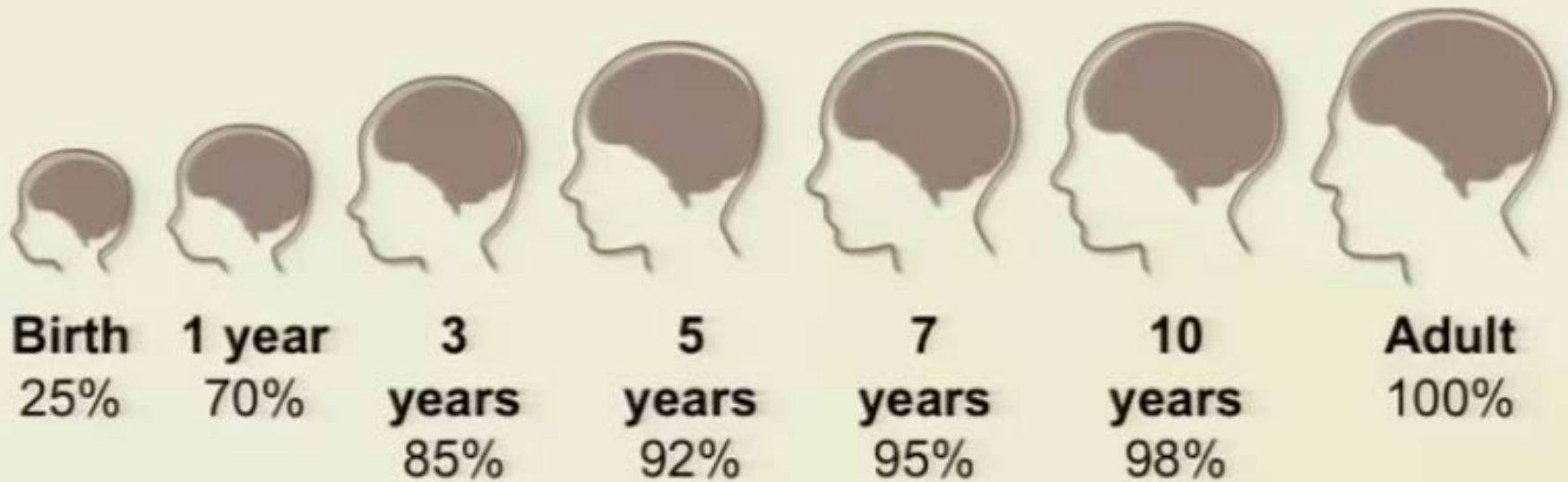
It's speech to the child that matters,
independent of SES.



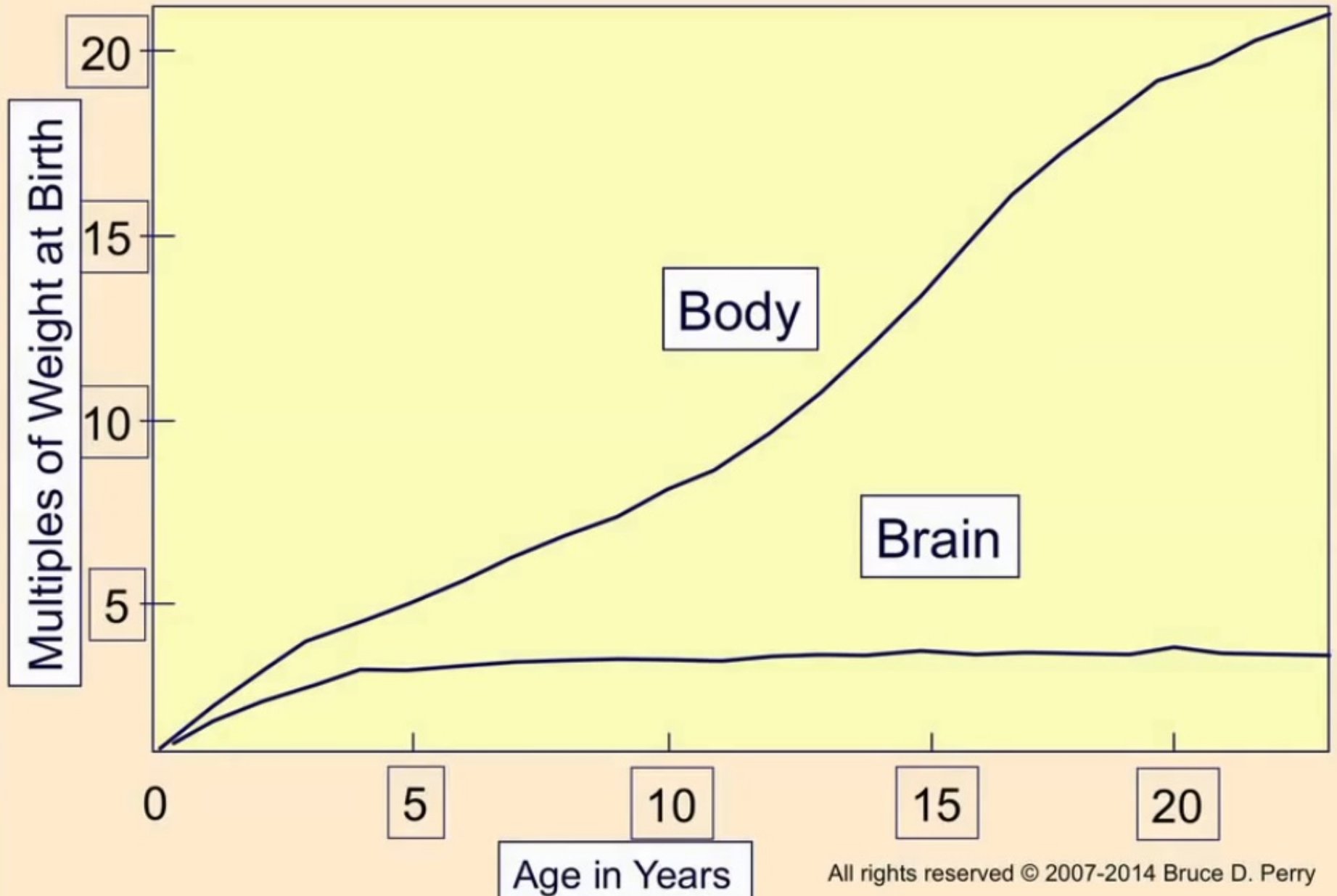
LANGUAGE NUTRITION



Brain Growth: Birth to Adulthood



Brain Growth vs. Body Growth



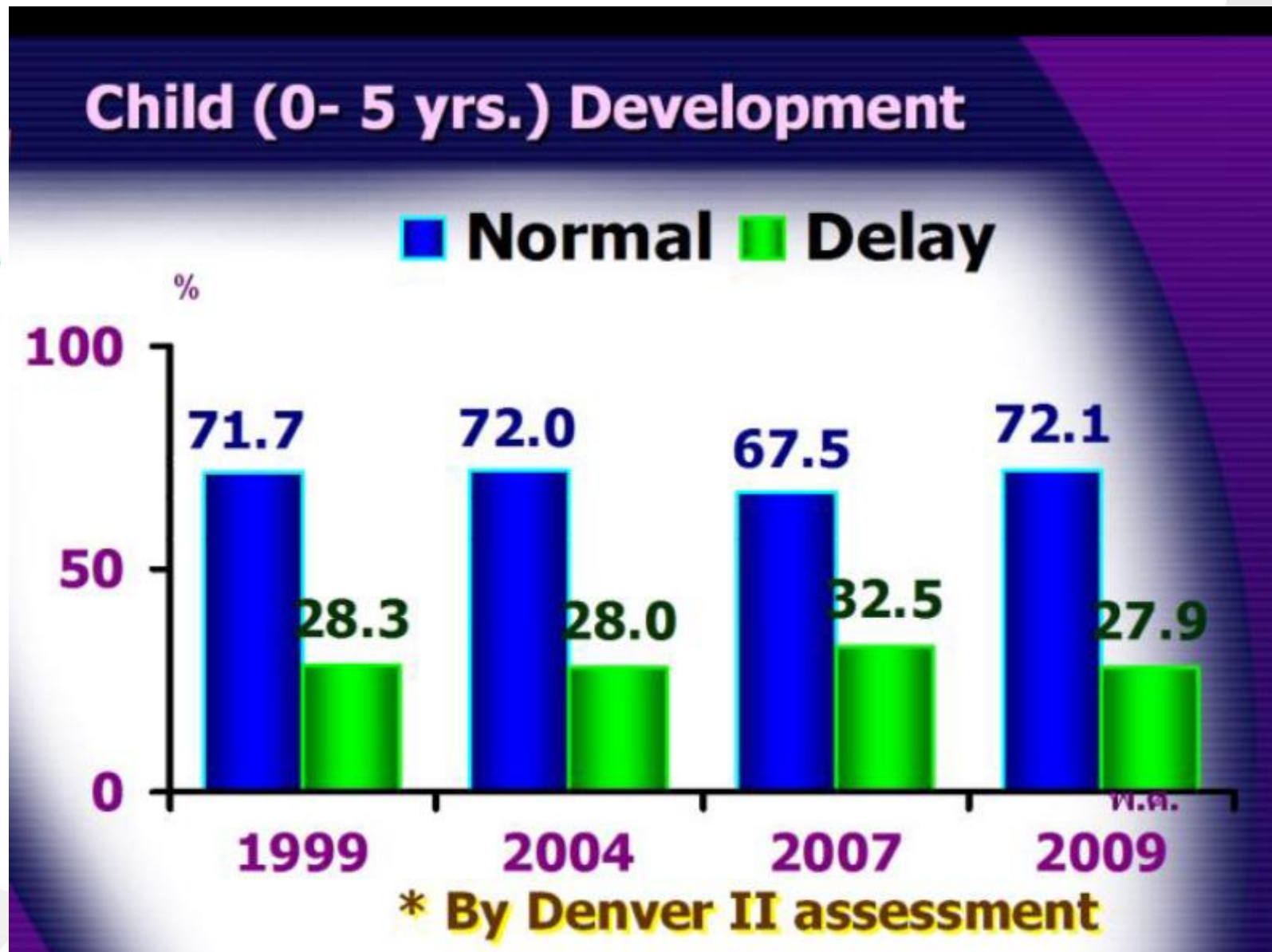
Creating a New Paradigm for Early Childhood Policy and Practice

Early experiences affect lifelong health *and* learning


Double Solution



ECD surveys in Thailand



Conditions and Substances that Affect the Developing Brain

Needed for Normal Brain Development	Detrimental of Toxic
Oxygen	Alcohol
Adequate protein and energy	Lead
Micronutrients, such as iron and zinc	Tobacco
Adequate gestation 	Prenatal infections
Iodine	Polychlorinated biphenyls (PCBs)
Thyroid hormone	Ionizing radiation
Folic acid	Cocaine
Essential fatty acids	Metabolic abnormalities (excess phenylalanine, ammonia)

Causes of Delay Development in Thai Children

1. Biological Risk

1.1 LBW – Nutrition/Prematurity

1.2 Birth Asphyxia

2. Social (Environmental) Risk

2.1 Grandparent Care

2.2 Single parent

2.3 TV parenting

Development Assessment For Intervention Manual (DAIM)



Development Surveillance and Promotion (DSPM)



Development Milestone



DSPM

Developmental Surveillance and Promotion Manual



DAIM

Developmental Assessment and Intervention Manual

COMMUNITY SURVEY — ECD STATUS IN LAMPANG, THAILAND

Living with	Number	Delay Development	Percentage
Parents	1,497	215	14.36
Grand parent	968	274	20.31
Single Mom	435	125	28.74
Relatives	58	20	34.48
Single Dad	41	20	48.78

Source – Thern Health District Office 2015

MECHANISM OF MONITORING AND EVALUATION OF THE INTEGRATED NUTRITION AND DEVELOPMENT PROGRAM

Provincial N&D Committee – Governor



Quality of life improvement District Committee – Sheriff



**Community Surveillance and Screening – report
by Health officials and Village Health Volunteers
supported by local authorities**

HOW TO MANAGE DBMN

Double Burden Malnutrition starts from Maternal Underweight and Low Birth Weight till 2 years of age. Causes of Malnutrition are many and interrelated. The approach has changed from empowerment of parents to caretakers etc. and the gov. official is a facilitator.

Cancer treatment presently has opened a new chapter by empowering the immune system of the patient to fight the disease so called immunotherapy. Can we boost the cognitive system of our children to fight malnutrition so called “Double Solution”

Double Solution (Nutrition and Development)

Nutrition  Body Growth

Malnutrition  Double Burden

Integrating Nutrition  DSPM

DSPM  Body and Brain Growth

Double Solution  Nutrition and Development

Are You
Talking
to Me?



Thank you so much.



Thank you so much.

CNN

