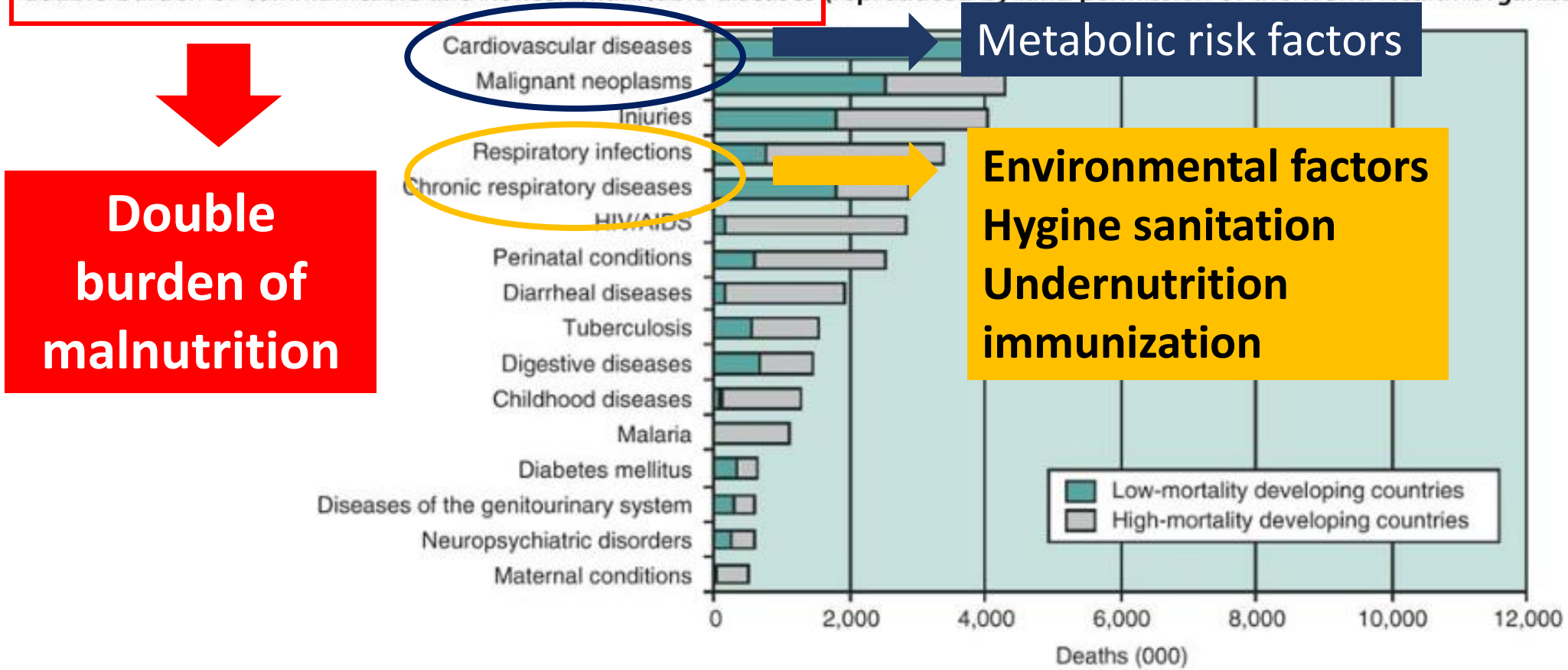


# **GIZI KELUARGA**

**TIRTA PRAWITA SARI**

■ Figure 32-1

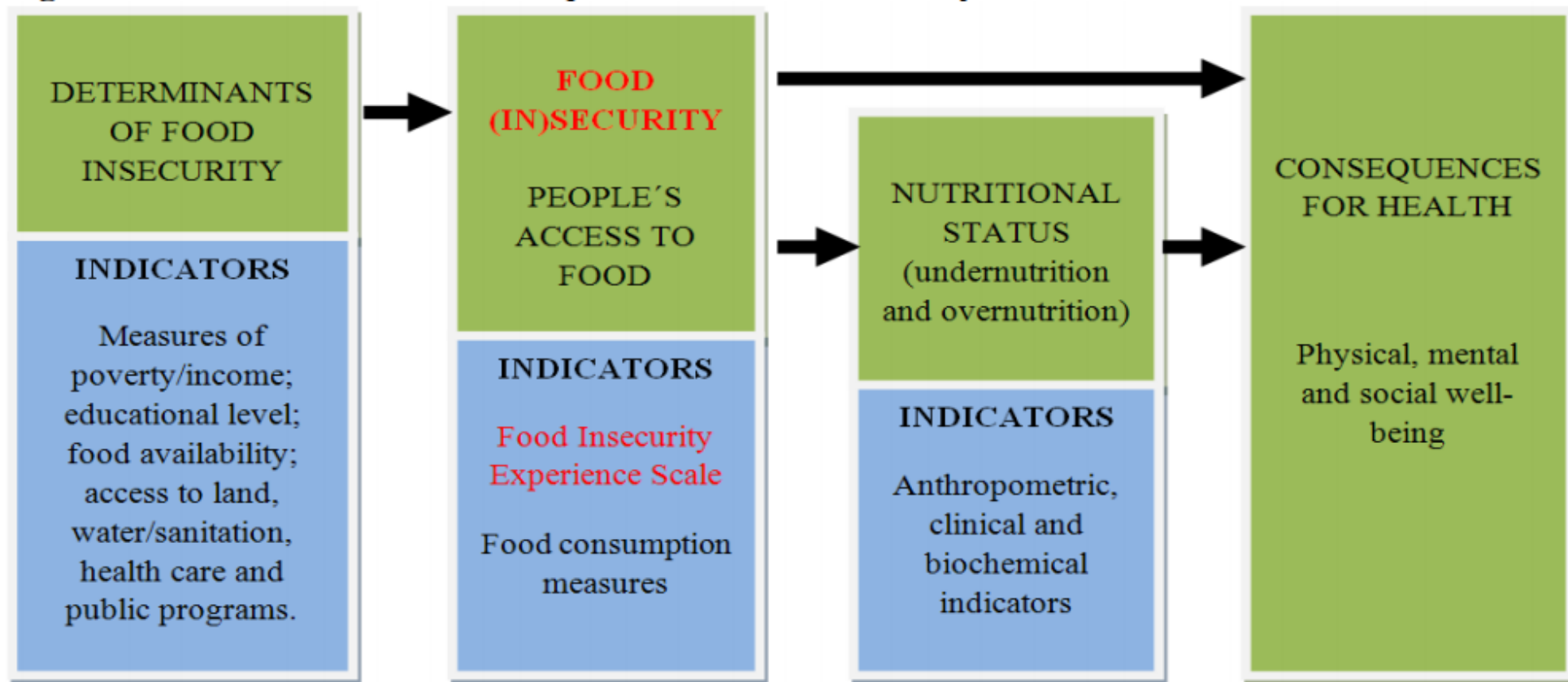
Deaths attributable to 16 leading causes in developing countries, 2002 (WHO, 2003b). This figure shows that developing countries are exposed to the double burden of communicable and noncommunicable diseases (reproduced by kind permission of the World Health Organisation)



# Food Security

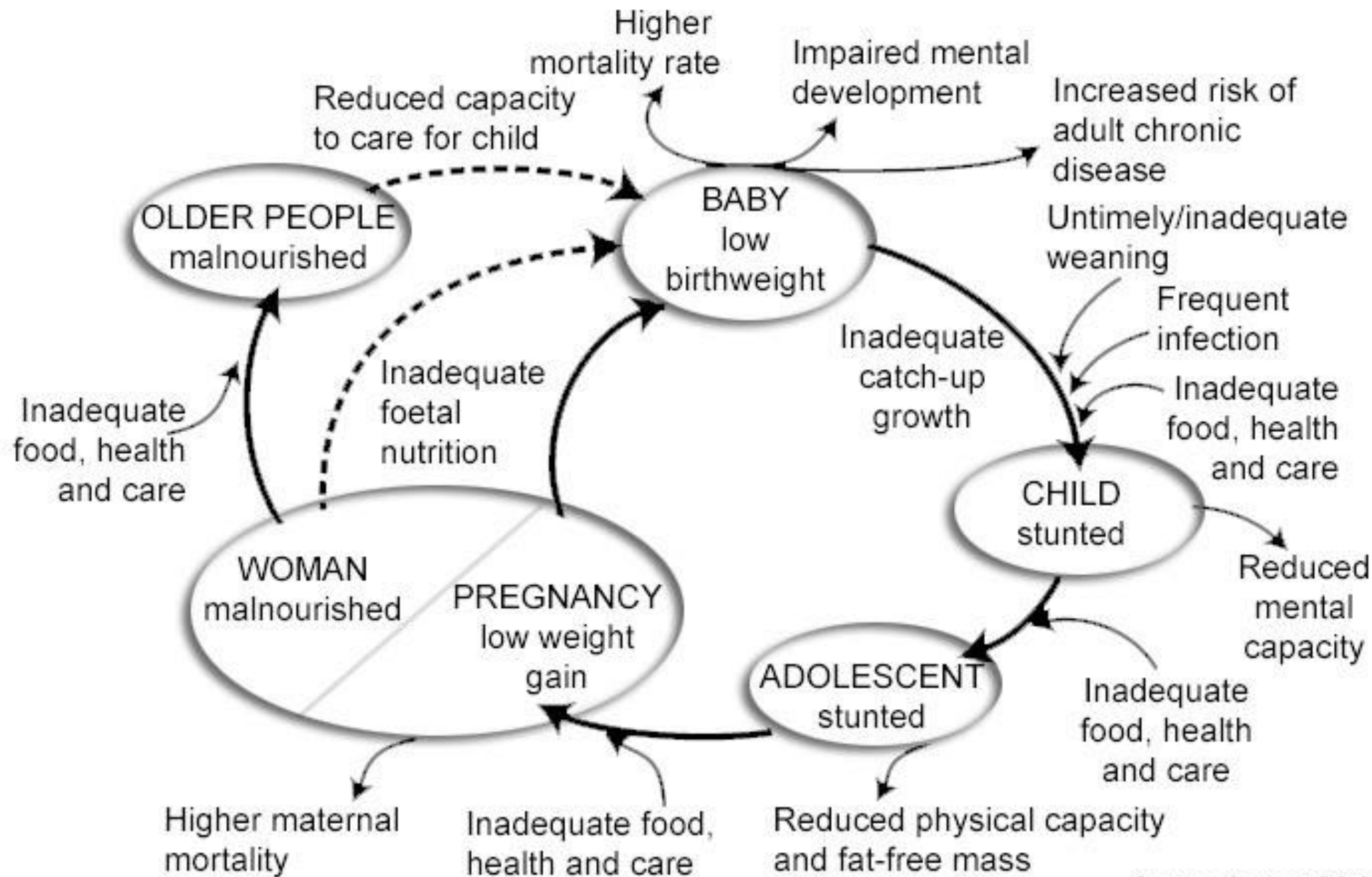
*when all people, at all times, have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.*

**Figure 2: Determinants and consequences of food insecurity at the individual level<sup>3</sup>**



<sup>3</sup> Adapted from Campbell (1990).

# Impact of hunger and malnutrition throughout the life cycle



# Food Security Dimension

- **Physical *availability* of food:** Food availability addresses the “supply side” of food security and is determined by the level of food production, stock levels and net trade.
- **Economic and physical *access* to food:** An adequate supply of food at the national or international level does not in itself guarantee household level food security. Concerns about insufficient food access have resulted in a greater policy focus on incomes, expenditure, markets and prices in achieving food security objectives.
- **Food *utilization*:** Utilization is commonly understood as the way the body makes the most of various nutrients in the food. Sufficient energy and nutrient intake by individuals are the result of good care and feeding practices, food preparation, diversity of the diet and intra-household distribution of food. Combined with good biological utilization of food consumed, this determines the nutritional status of individuals.
- ***Stability* of the other three dimensions over time:** Even if your food intake is adequate today, you are still considered to be food insecure if you have inadequate access to food on a periodic basis, risking a deterioration of your nutritional status. Adverse weather conditions, political instability, or economic factors (unemployment, rising food prices) may have an impact on your food security status.

**Mild food insecurity**

**Severe food insecurity**

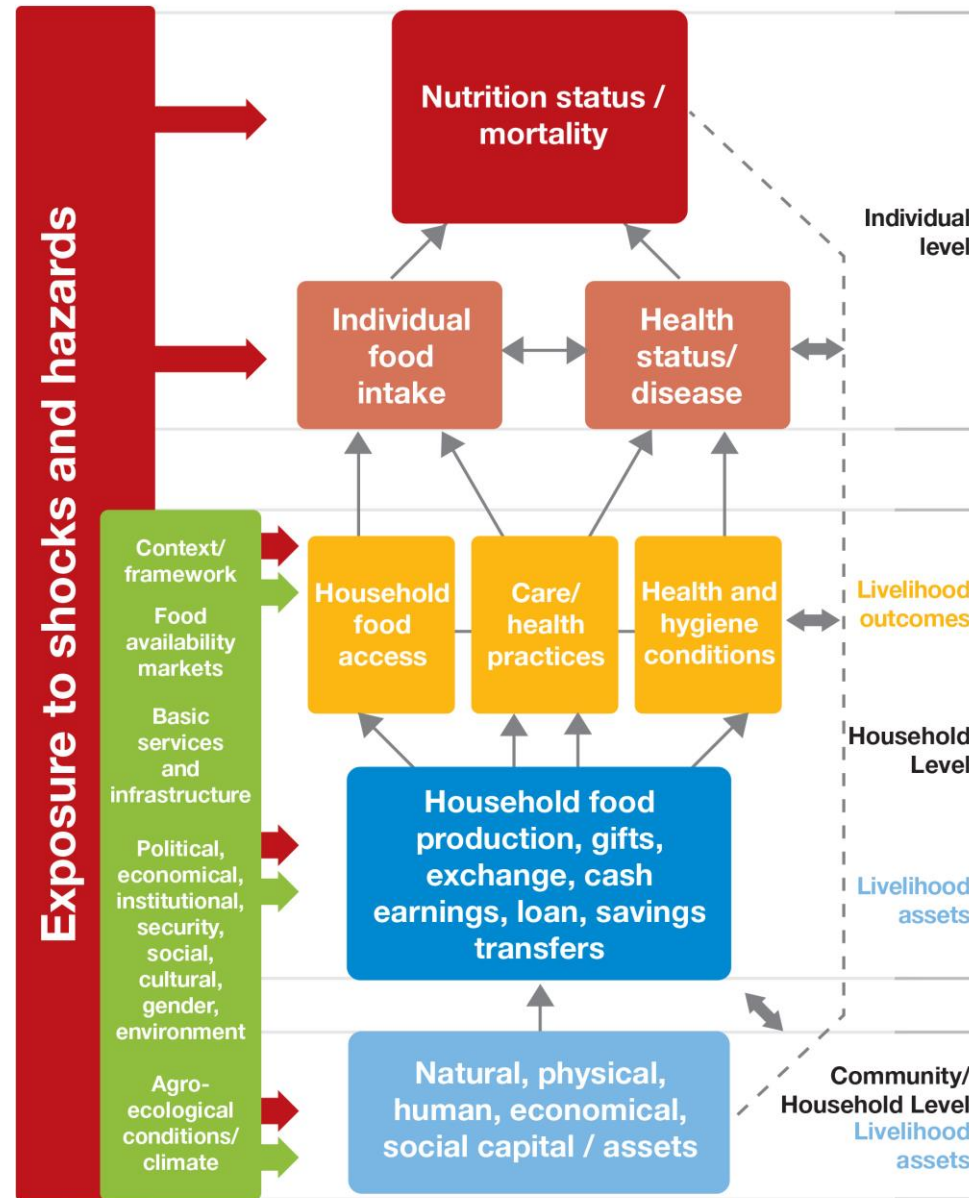
Worrying about how  
to procure food

Compromising on quality  
and variety

Reducing quantities,  
skipping meals

Experiencing  
hunger

# Linkages between food and nutrition security

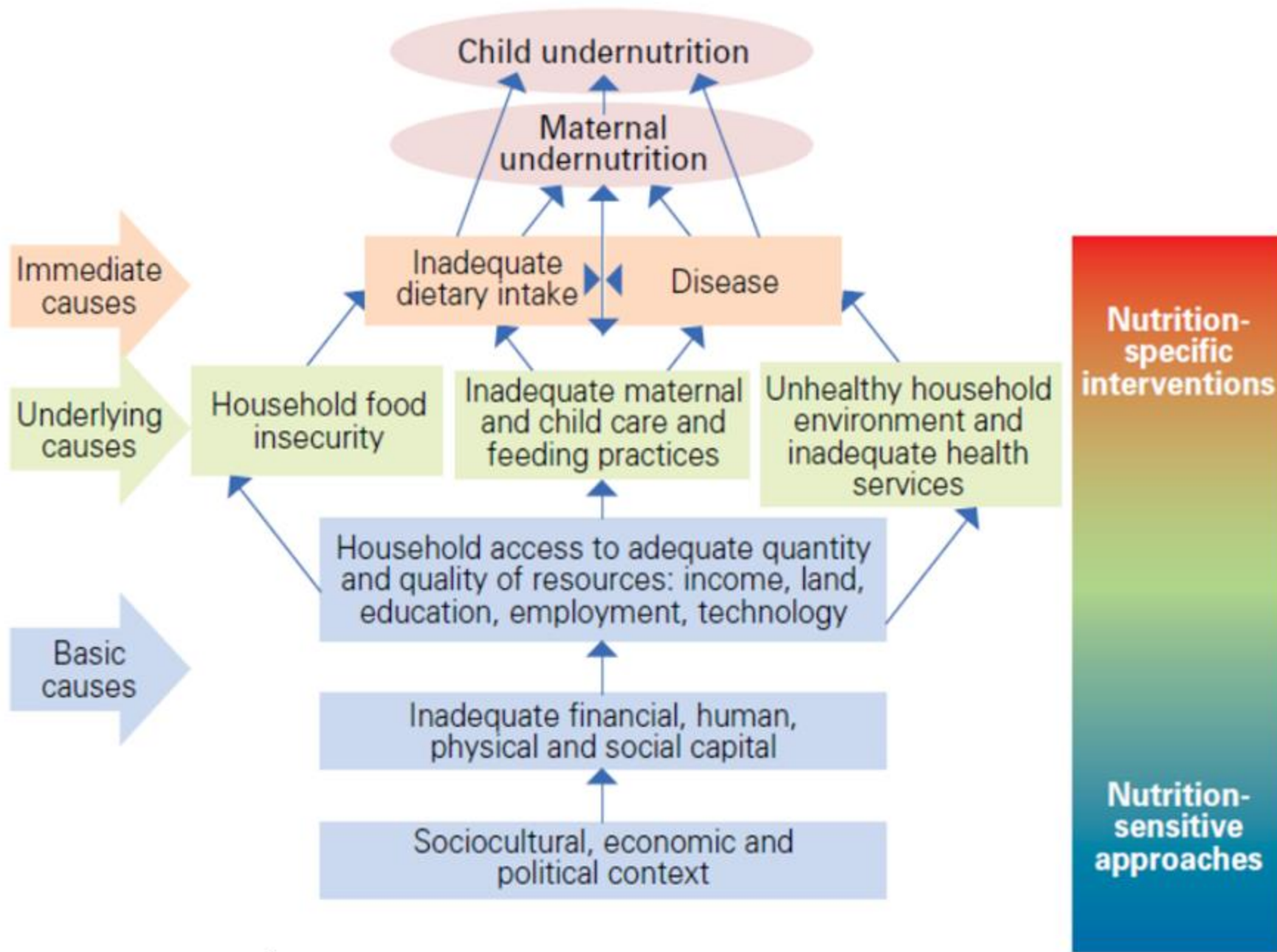


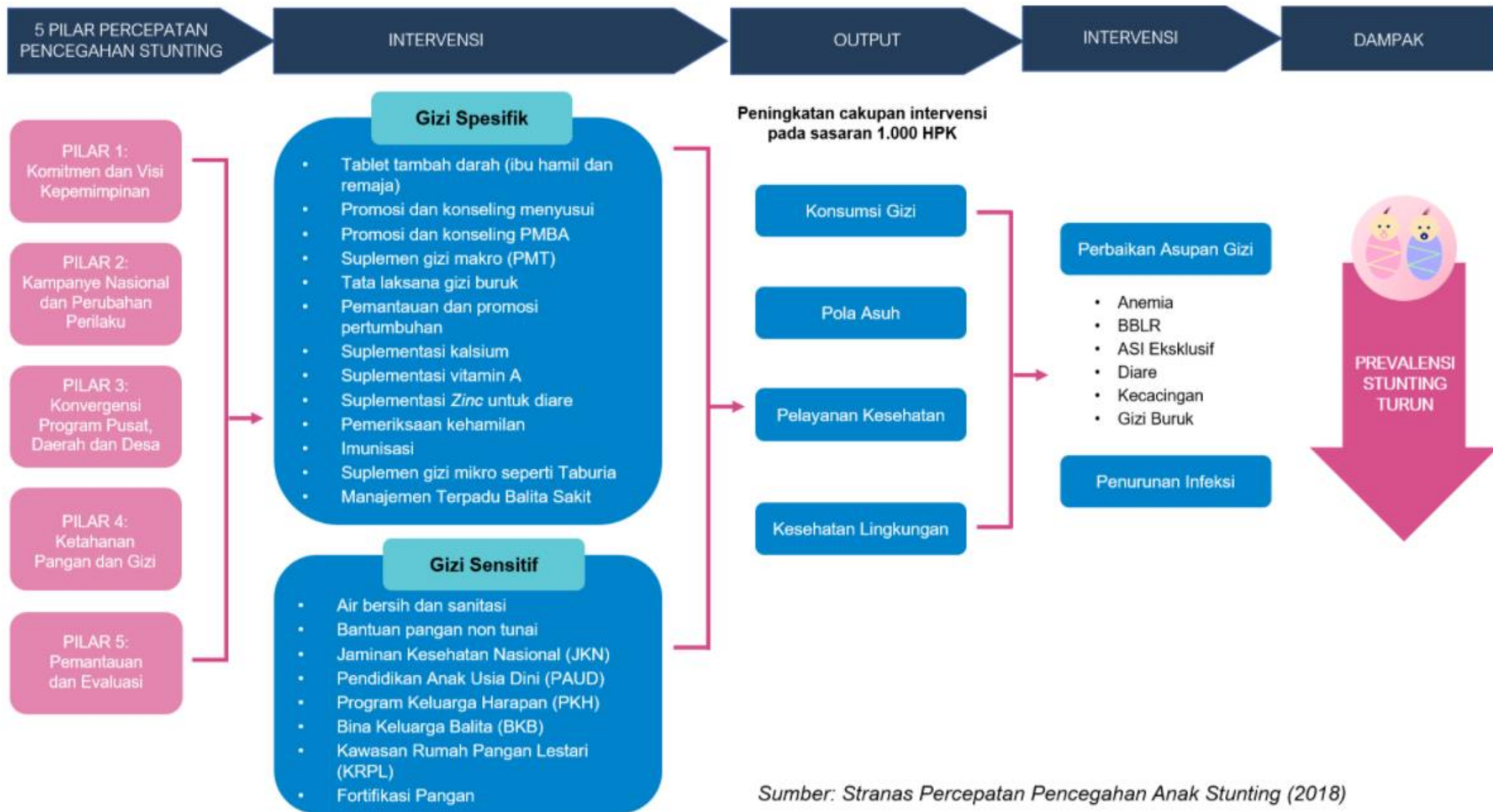
WFP Food and Nutrition Security Conceptual Framework (based on UNICEF conceptual framework for causes of malnutrition and DfID sustainable livelihoods framework).

Reprinted with permission from WFP (2009) Comprehensive Food and Security

Vulnerability Analysis Guidelines, Rome, Italy: WFP Available from [www.wfp.org](http://www.wfp.org)

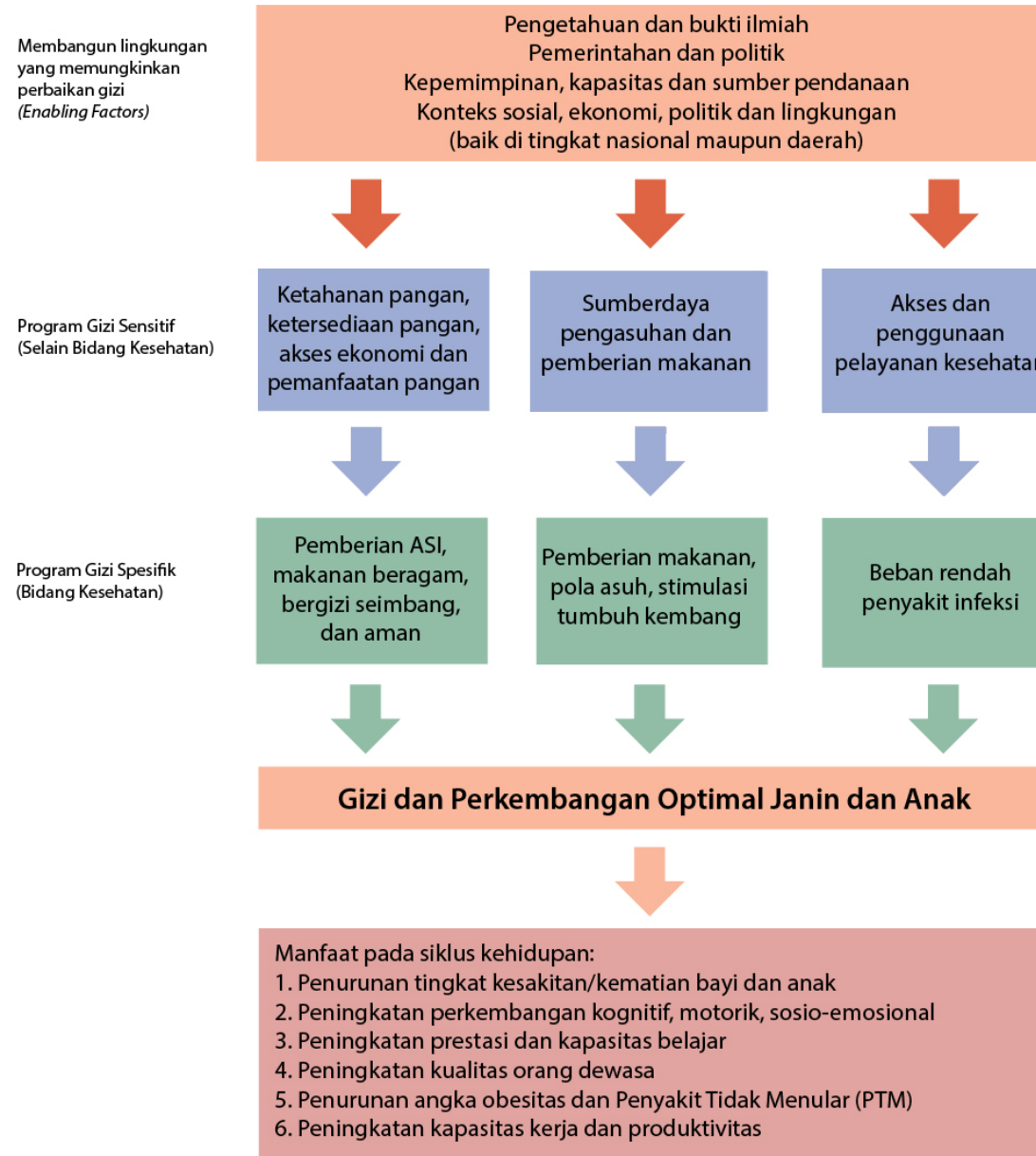




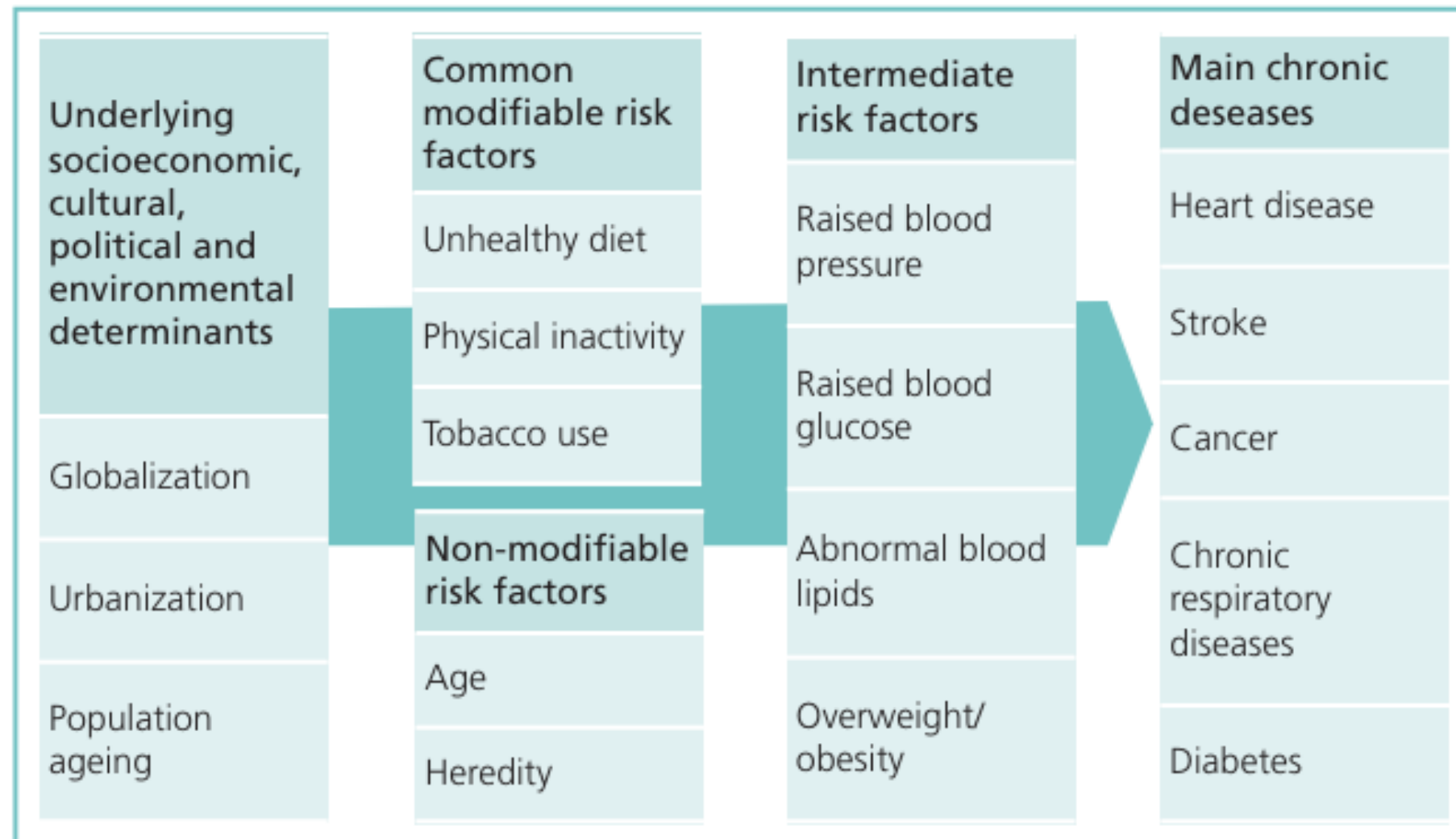


Sumber: Stranas Percepatan Pencegahan Anak Stunting (2018)

## Pendekatan Multi-Sektor dalam Perbaikan Gizi



**Fig. 1. Top causes of chronic disease according to WHO**



Source: *Preventing chronic disease: a vital investment. WHO global report (1).*

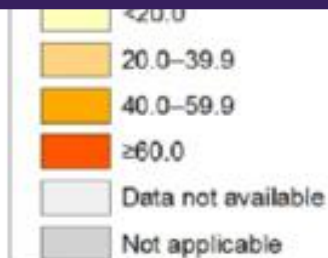
Prevalence of overweight\*, ages 18+, 2016 (age standardized estimate)  
Male

39% penduduk dunia menderita overweight; 13% menderita obesitas (WHO, 2016)

Riskesmas 2018:  
obesitas 10,5% → 21,8% ; Obesitas sentral: 18.8% → 31%

Perubahan gaya hidup terutama pola konsumsi:  
Hanya 4,5% penduduk Indonesia usia > 18 tahun mampu mengkonsumsi sayur dan buah sesuai anjuran

Lingkungan obesogenik



Note: For mapping purposes, the map shows identical values for Sudan and South Sudan. These values concern the former Sudan as it existed prior to July 2011.

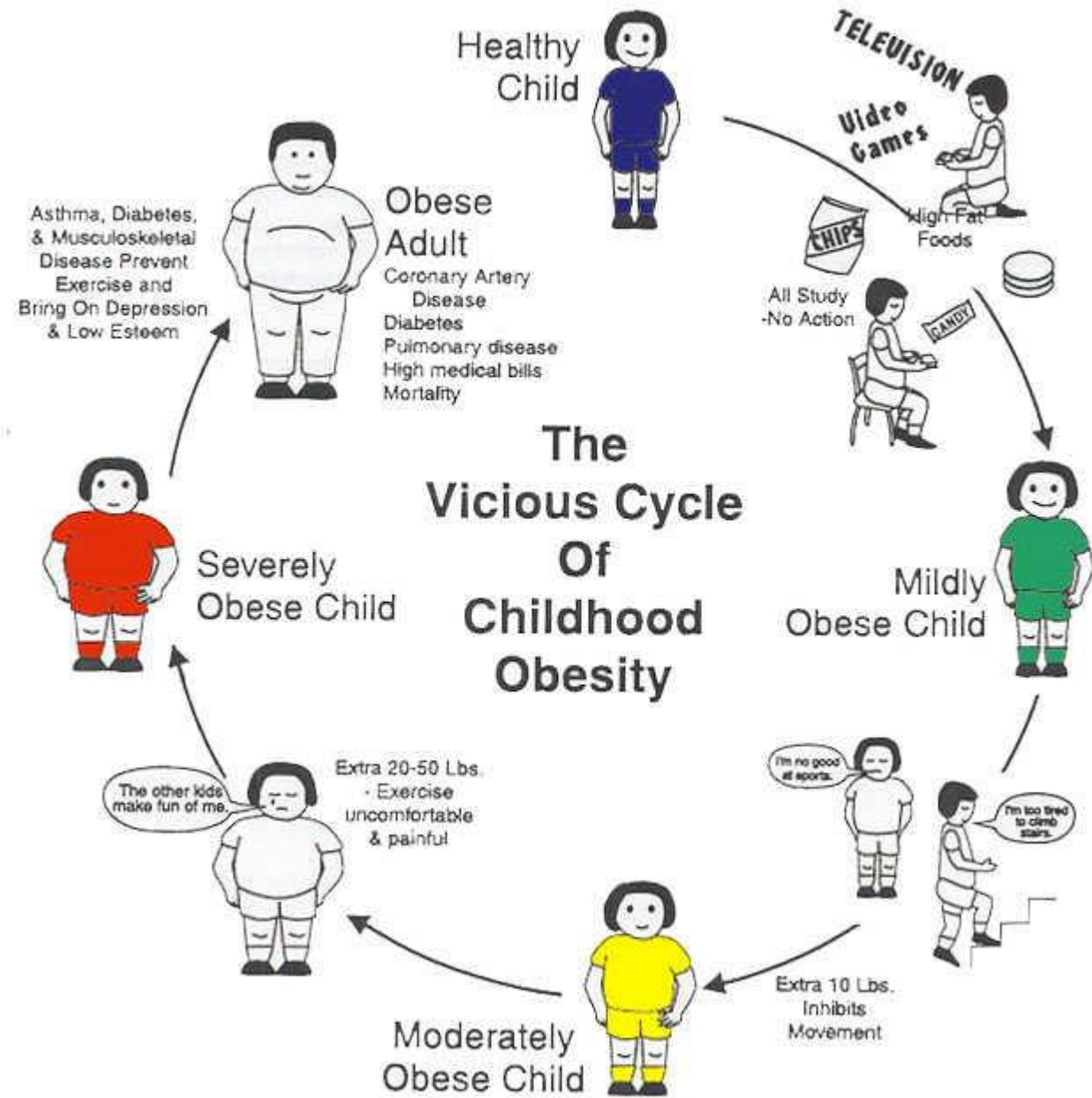
\* Body Mass Index  $\geq 25$  kg/m<sup>2</sup>

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Health Organization  
Map Production: Information Evidence and Research (IER)  
World Health Organization



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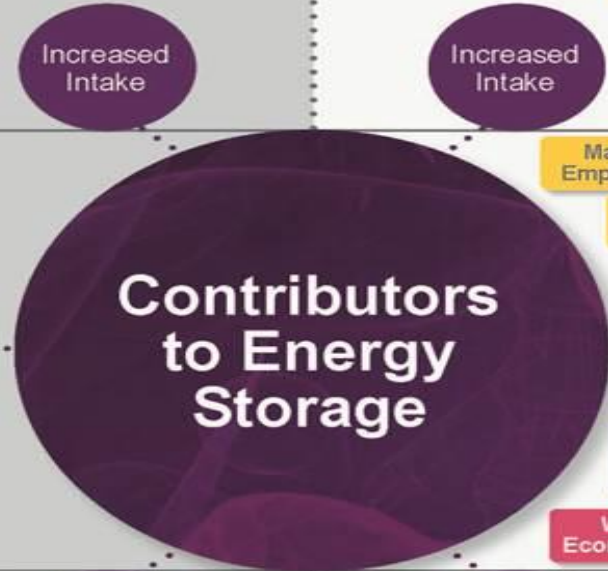


# POTENTIAL CONTRIBUTORS TO OBESITY

2015

## Inside the Person

## Outside the Person



- Disordered Eating (night eating syndrome, binge eating, "food addiction")
- Emotional Coping
- Hyper-reactivity to Environmental Food Cues
- Heightened Hunger Response
- Delayed Satiety

- Environmental/Chemical Toxins
- Increased Availability of Energy Dense, Nutrient Poor Foods & Beverages
- Larger Portion Sizes
- Eating as Recreation, Snacking, Special Occasions
- Lack of Nutritional Education
- Skipping Meals
- Food Insecurity
- Diet Patterns
- Eating Away From Home
- Lack of Family Meals
- Market Economy
- Food Surplus
- Pervasive Food Advertising

- Age Related Changes (i.e. menopause, mobility decline, hormones)
- Chronic Inflammation (i.e. altered insulin signaling and glucose homeostasis)
- Pathological Sources of Endocrine Dysregulation (i.e. thyroid dysfunction, PCOS, Cushing's Syndrome)
- Genetic & Epigenetic Factors
- Central & Peripheral Regulators of Appetite & Adipose Tissue
- Gestational Diabetes
- Self-regulatory & Coping Deficits
- Mood Disturbance (i.e. depression, anxiety, bipolar etc.)
- Trauma History
- Mental Disabilities

- Maternal Employment
- Breast Feeding and/or Related Factors
- Maternal Stress
- Maternal Smoking
- Maternal Obesity
- Delayed Prenatal Care
- Birth Order (first-born in family)
- Having Children (for women)
- Non-parental Childcare
- Maternal Over-nutrition During Pregnancy
- Birth by C-section
- Infection (i.e. human adenovirus 36)
- Weight Gain Inducing Drugs
- Smoking Cessation
- Sleep Deficits
- Family Conflict
- Weight Bias & Stigma (i.e. avoidance of medical care, self esteem, teasing history)
- Social Networks
- Entering Into a Romantic Relationship
- Lack of Employer Preparedness to Assist with Obesity
- Lack of Health Care Provider Support/Knowledge & Inadequate Access to Care
- Stress
- Child Maltreatment
- Weight Cycling (yo-yo dieting)
- Westernization & Economic Development
- Low SES & Nutrition Support
- Living in Crime-prone Areas

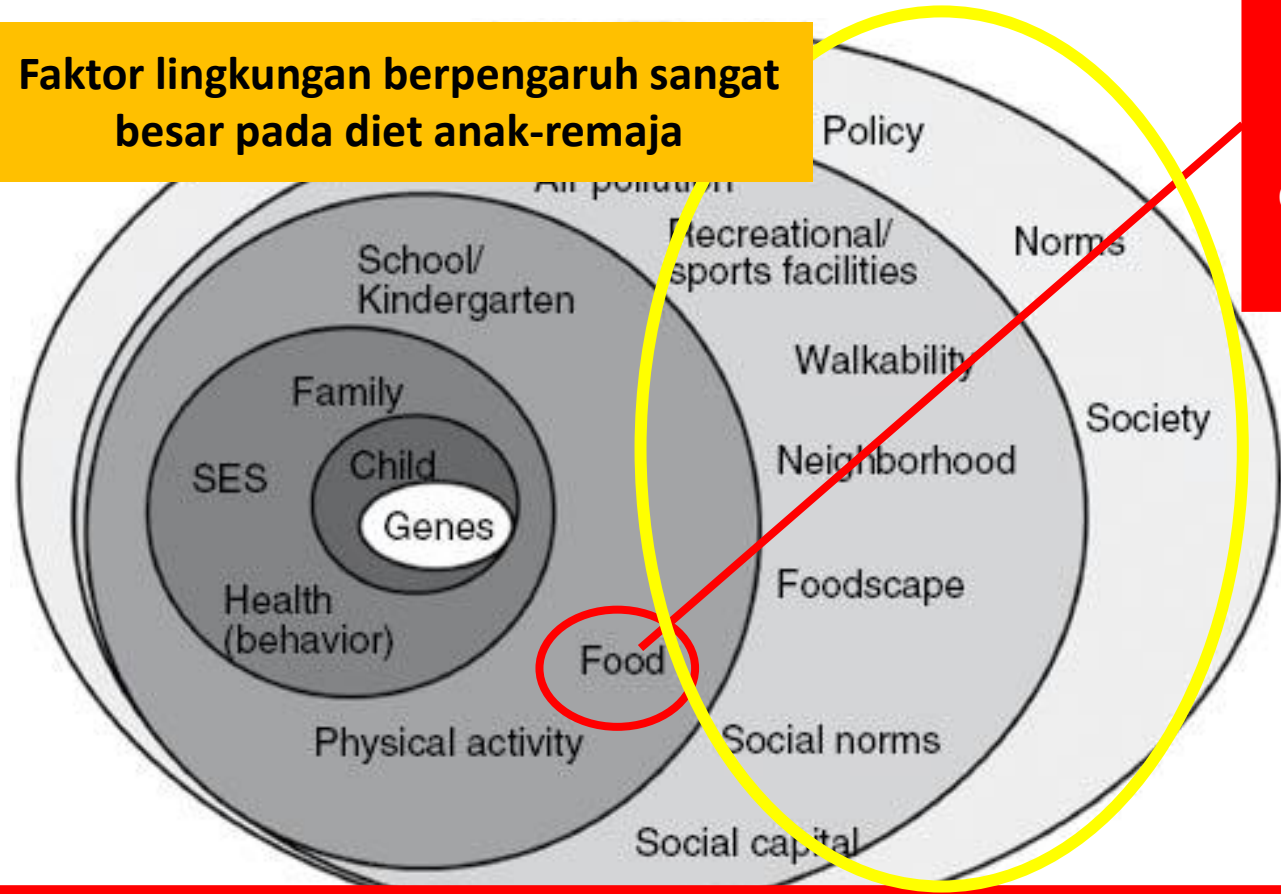
- Thermogenesis
- Gut Microbiota
- Pain Sensitivity
- Physical Disabilities (i.e. functional impairments and regulatory dysfunction)
- Social Anxiety (i.e. exercise avoidance)

- Consistent Temperature (i.e. air conditioning/heating, thermoregulation)
- Increased Sedentary Time (i.e. inactive leisure "screen" time, inactive job requirements)
- Built Environment (i.e. stairwell design/access, building design, absence of or poor sidewalks)
- Decreased Opportunity for Non-exercised Based Physical Activity (i.e. driving vs. walking to work and school, sedentary jobs)
- Labor Saving Devices
- Pre-natal Air Pollution

\* Potential contributors indicate anything that has been put forth in the research literature as a question of investigation and is not intended to be a verification of whether or not, or the extent to which, each may or may not contribute.

Lingkungan obesogenic merupakan penyebab terjadinya obesitas, upaya pencegahan seharusnya menargetkan pendekatan pada keseluruhan determinan ini

Faktor lingkungan berpengaruh sangat besar pada diet anak-remaja



Kualitas diet jauh lebih penting dalam pengendalian obesitas daripada "hanya" sekedar energi

Prinsip diet sebaiknya memperhatikan komposisi zat gizi dan jumlah kebutuhan, ketimbang hanya melakukan restriksi energi serta kombinasi dengan aktifitas fisik



**Box I.1 Voluntary global targets for prevention and control of noncommunicable diseases to be attained by 2025**



(1) A 25% relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases



(2) At least 10% relative reduction in the harmful use of alcohol, as appropriate, within the national context



(3) A 10% relative reduction in prevalence of insufficient physical activity



(4) A 30% relative reduction in mean population intake of salt/sodium



(5) A 30% relative reduction in prevalence of current tobacco use



(6) A 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances



(7) Halt the rise in diabetes and obesity



(8) At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes



(9) An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major noncommunicable diseases in both public and private facilities

# 2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease

A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines

## WRITING COMMITTEE MEMBERS

Donna K. Arnett, PhD, MSPH, FAHA, Co-Chair

Robert S. Blumenthal, MD, FACC, FAHA, Co-Chair

Endorsed by the American Association of Cardiovascular and Pulmonary Physicians

**JENIS DIET YANG DIANJURKAN MENGEDEPANKAN PENGURANGAN KONSUMSI GULA, LEMAK TRANS, JUMLAH KALORI YANG SESUAI SERTA MENURUNKAN KONSUMSI SODIUM DAN MENINGKATKAN ASUPAN SERAT → DASH DIET, MEDITERANEAN DIET, PLANT BASED DIET**

Kim A. Williams Sr, MD, MACC, FAHA\*

Joseph Yeboah, MD, MS, FACC, FAHA\*

Boback Ziaeeian, MD, PhD, FACC, FAHA§

cardiovascular ■ cardiovascular disease ■ cholesterol ■ chronic kidney disease ■ coronary artery calcium score ■ coronary disease ■ coronary heart disease ■ diet ■ diet patterns ■ diet

**Box 1.1 WHO “best buys” – (very cost-effective interventions that are also high-impact and feasible for implementation even in resource-constrained settings) (14–16)**

**Tobacco**

- Reduce affordability of tobacco products by increasing tobacco excise taxes
- Create by law completely smoke-free environments in all indoor workplaces, public places and public transport
- Warn people of the dangers of tobacco and tobacco smoke through effective health warnings and mass media campaigns
- Ban all forms of tobacco advertising, promotion and sponsorship

**Harmful use of alcohol**

- Regulate commercial and public availability of alcohol
- Restrict or ban alcohol advertising and promotions
- Use pricing policies such as excise tax increases on alcoholic beverages

**Diet and physical activity**

- Reduce salt intake
- Replace trans fats with unsaturated fats
- Implement public awareness programmes on diet and physical activity
- Promote and protect breastfeeding

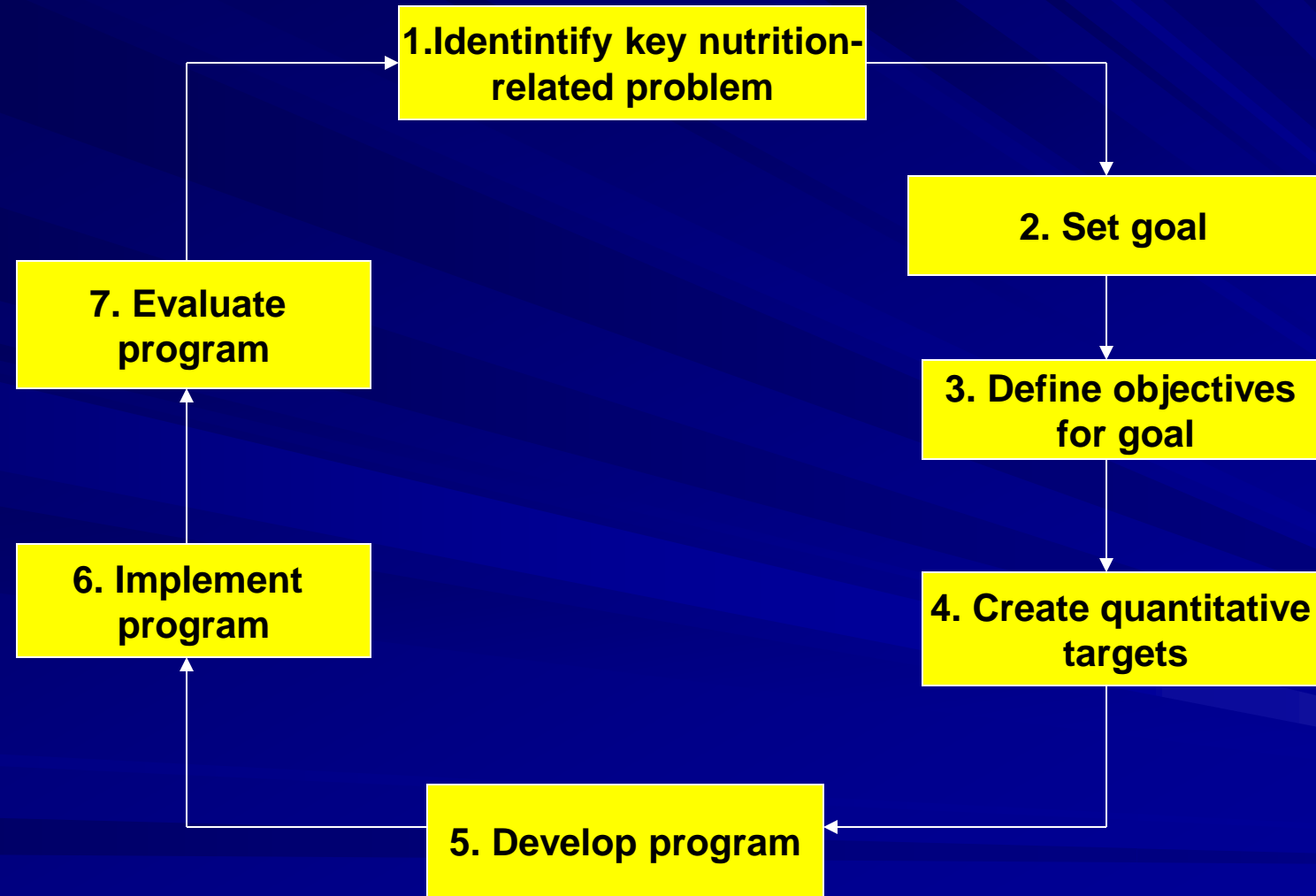
**Cardiovascular disease and diabetes**

- Drug therapy (including glycaemic control for diabetes mellitus and control of hypertension using a total risk approach) and counselling to individuals who have had a heart attack or stroke and to persons with high risk ( $\geq 30\%$ ) of a fatal and nonfatal cardiovascular event in the next 10 years
- Acetylsalicylic acid (aspirin) for acute myocardial infarction

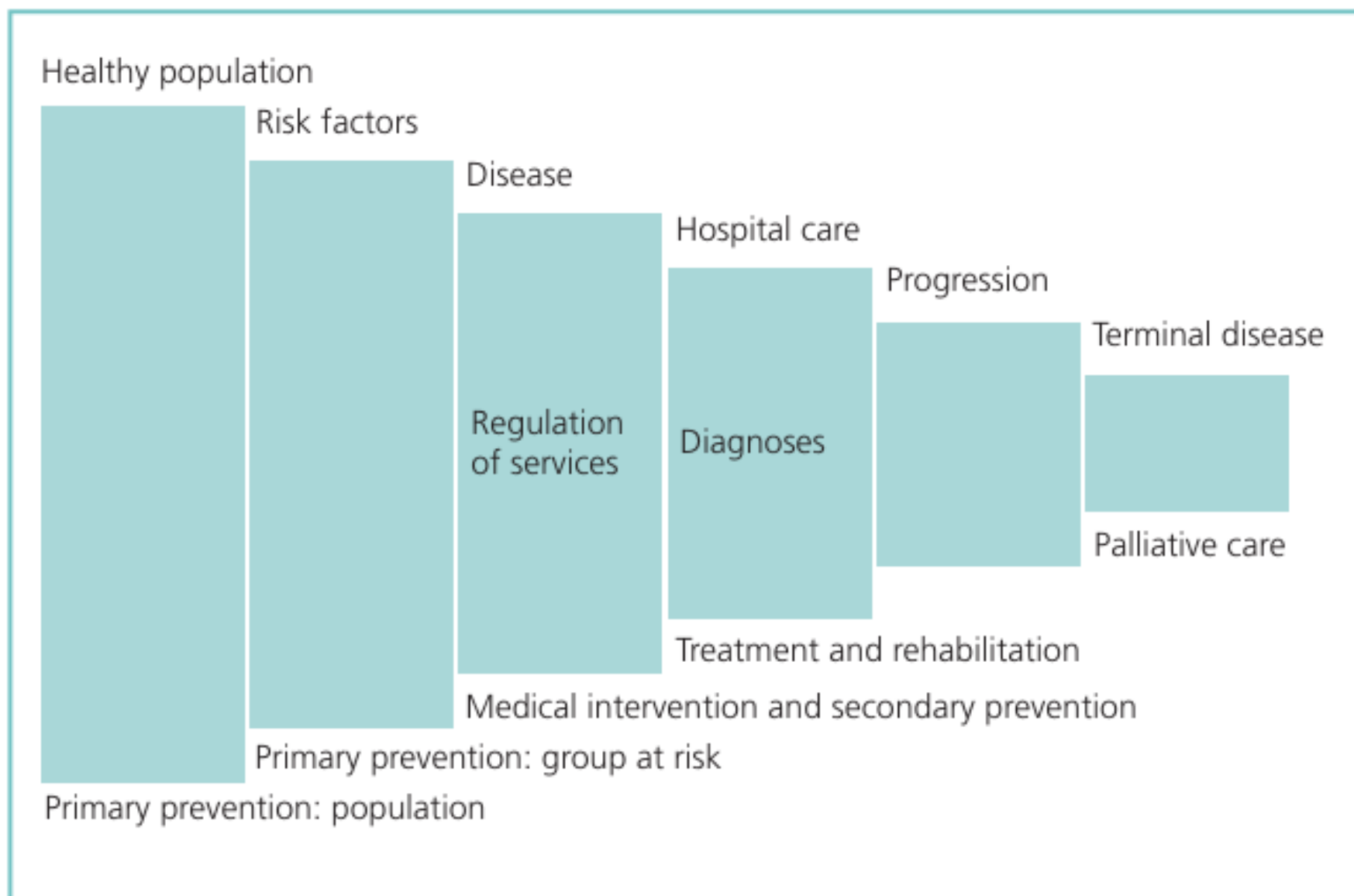
**Cancer**

- Prevention of liver cancer through hepatitis B immunization
- Prevention of cervical cancer through screening (visual inspection with acetic acid [VIA] linked with timely treatment of pre-cancerous lesions)

# The public health nutrition cycle

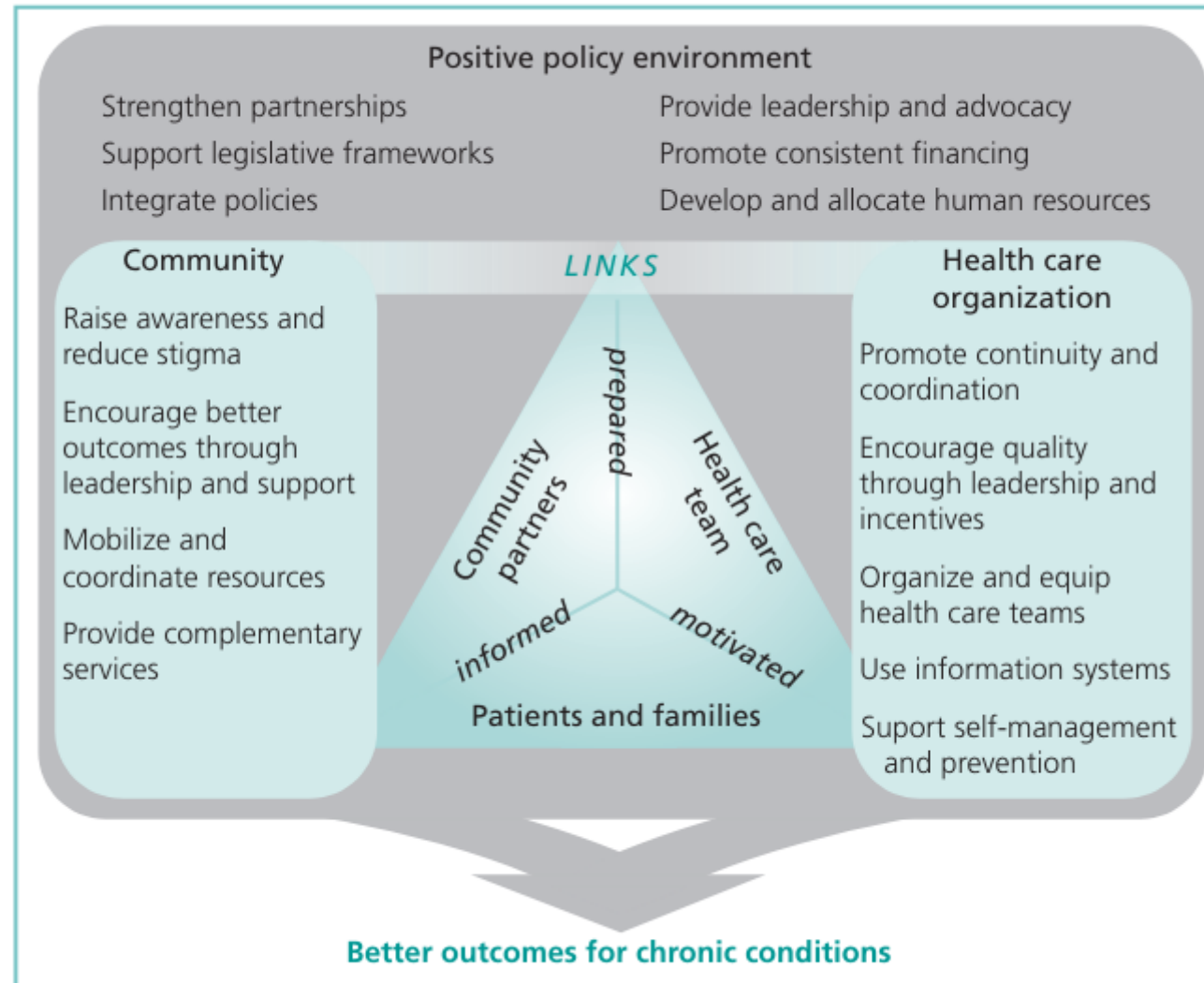


**Fig. 2. The life-course approach**



Source: adapted from Suñol et al. (16).

**Fig. 4. The Innovative Care for Chronic Conditions Framework**



Source: *Innovative care for chronic conditions: building blocks for action* (45).

# 5 A's Behavior Change Model

## Adapted for Self-Management Support Improvement

Self-Management Model with 5 A's (Glasgow, et al, 2002; Whitworth et al, 2002)

