

# Human Capital: Health Introduction

Lecture 4.2/1

EE461 – 2/2017

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# Health and Education

- Health and education are also important components of growth and development
  - Education: absorb modern technology
  - Health: prerequisite for increase in productivity
- Education and Health as Joint Investments for Development
- Greater education capital may improve the returns to investments in health
  - Public health programs need knowledge learned in school
  - Basic hygiene and sanitation may be taught in school
  - Education needed in training of health personnel

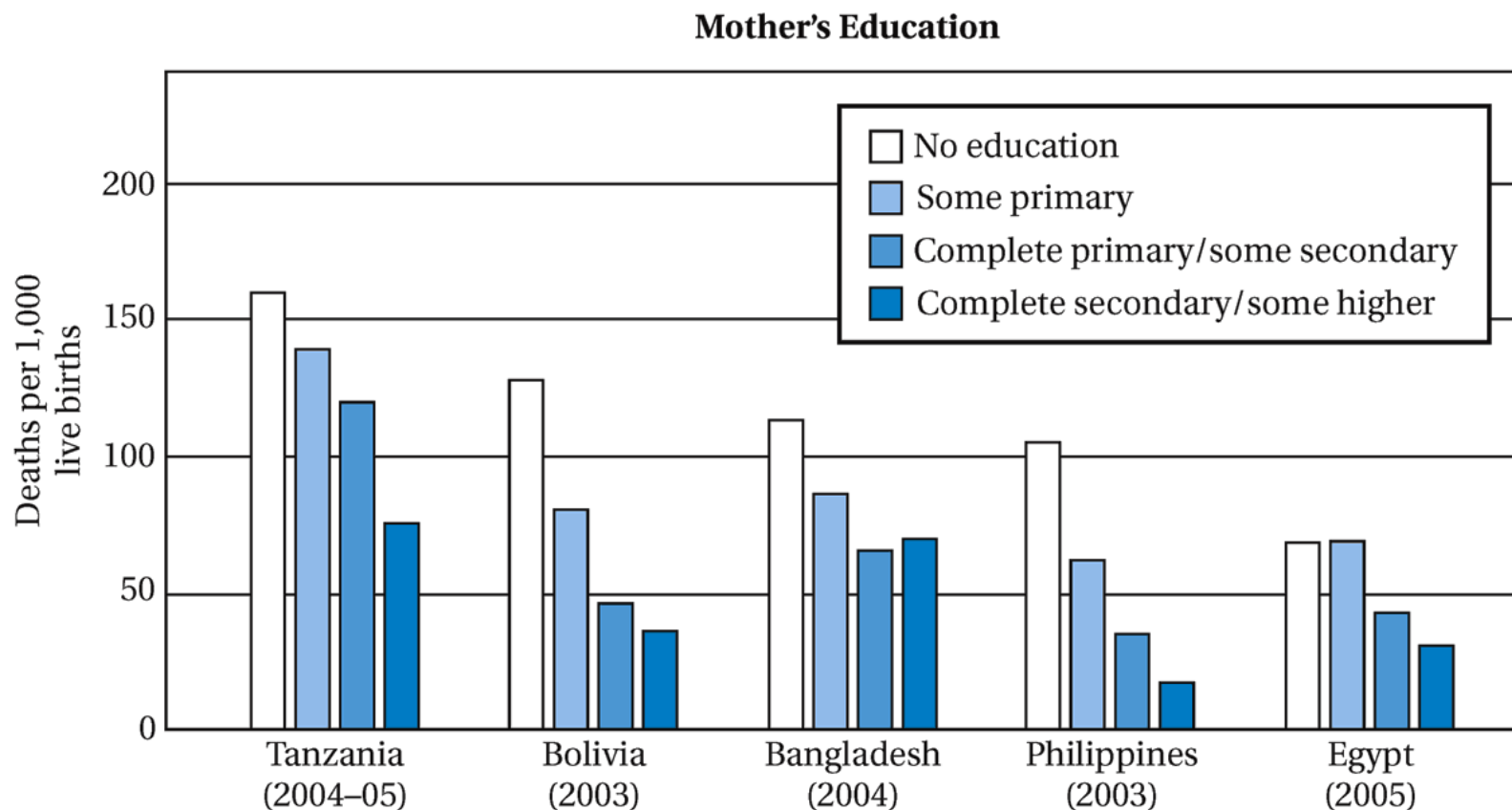
# Health and Education

- Education and Health as Joint Investments for Development
- Greater health capital may improve the returns to investments in education
  - Health is a factor in school attendance
  - Healthier students learn more effectively
  - A longer life raises the rate of return to education
  - Healthier people are more able to productively use education

# Improving Health and Education: Why increasing incomes is not sufficient

- Increases in income often do not lead to substantial increases in investment in children's education and health
- But better educated mothers tend to have healthier children at any income level
- Significant market failures in education and health require policy action
  - Low investment in education and health in some countries although the returns to investment are high.
  - Example of a policy: conditional cash transfer program

# Correlation between Under-5 Mortality and Mother's Education

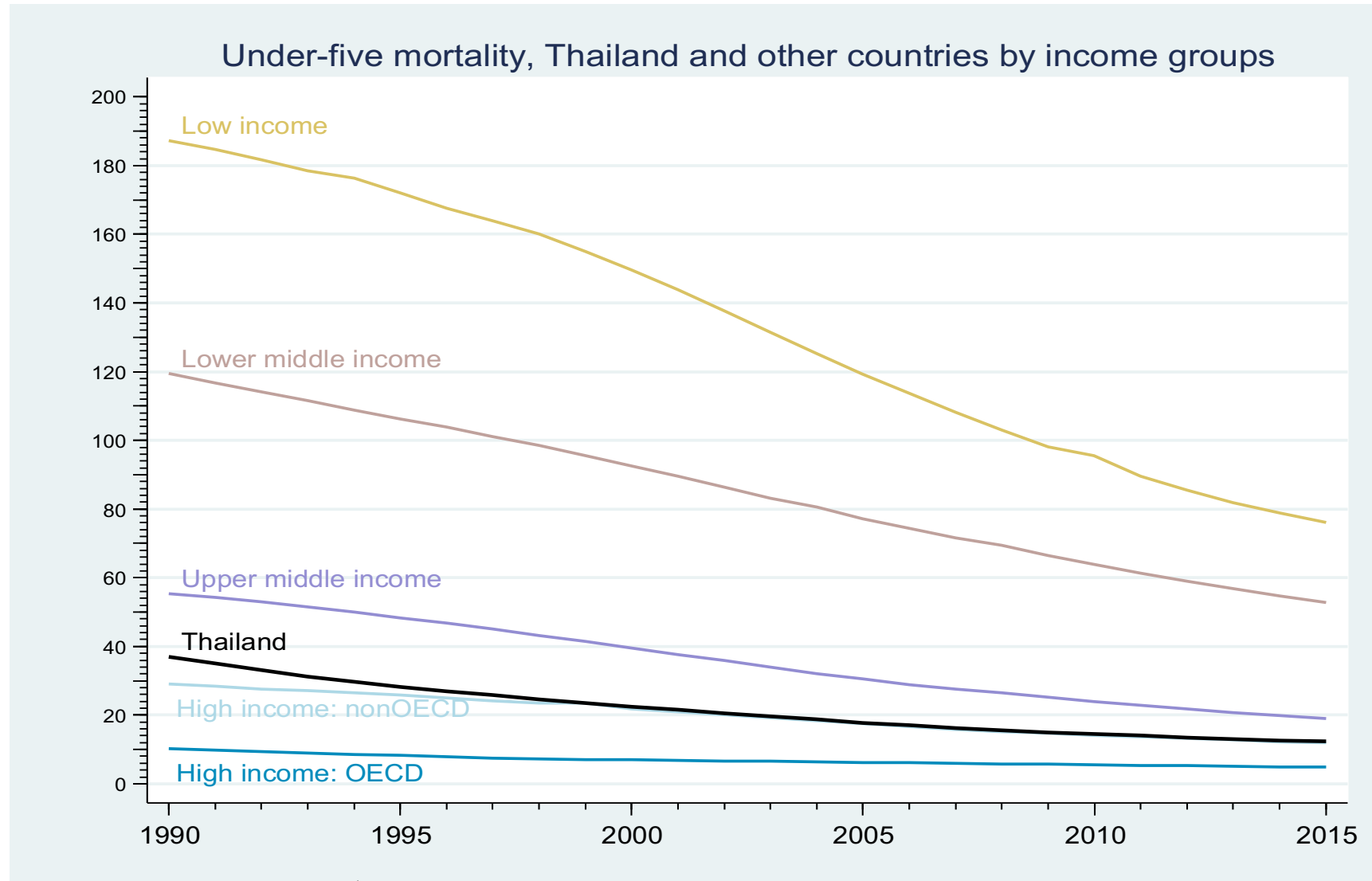


Source: World Bank, *World Development Indicators, 2007* (Washington, D.C.: World Bank, 2007), p. 119. Used by permission.

# Health Measurement and Distribution

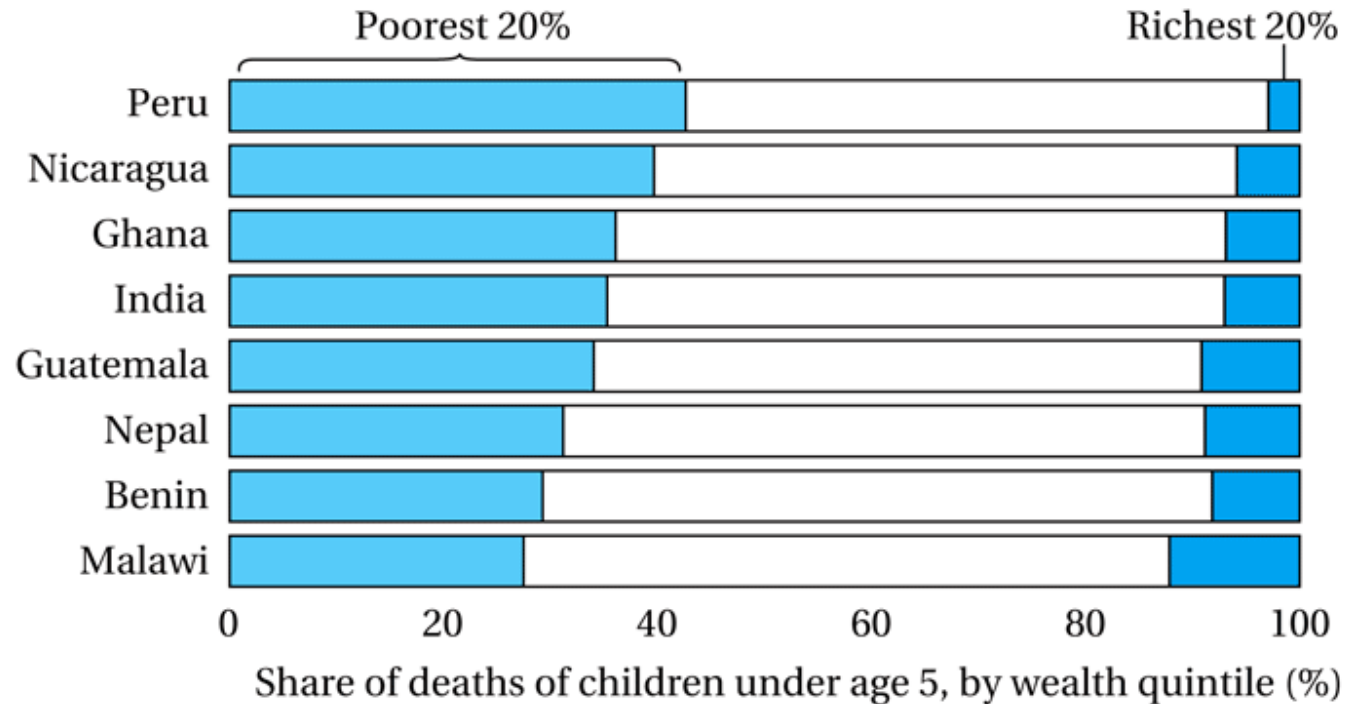
- Health measurements
  - Under-5 mortality rate
  - Life expectancy
  - Underweight
  - [http://www.who.int/healthinfo/indicators/2015/100CoreHealthIndicators\\_2015\\_infographic.pdf](http://www.who.int/healthinfo/indicators/2015/100CoreHealthIndicators_2015_infographic.pdf)
  - Health expenditure: private vs. public

# Under-5 mortality rate



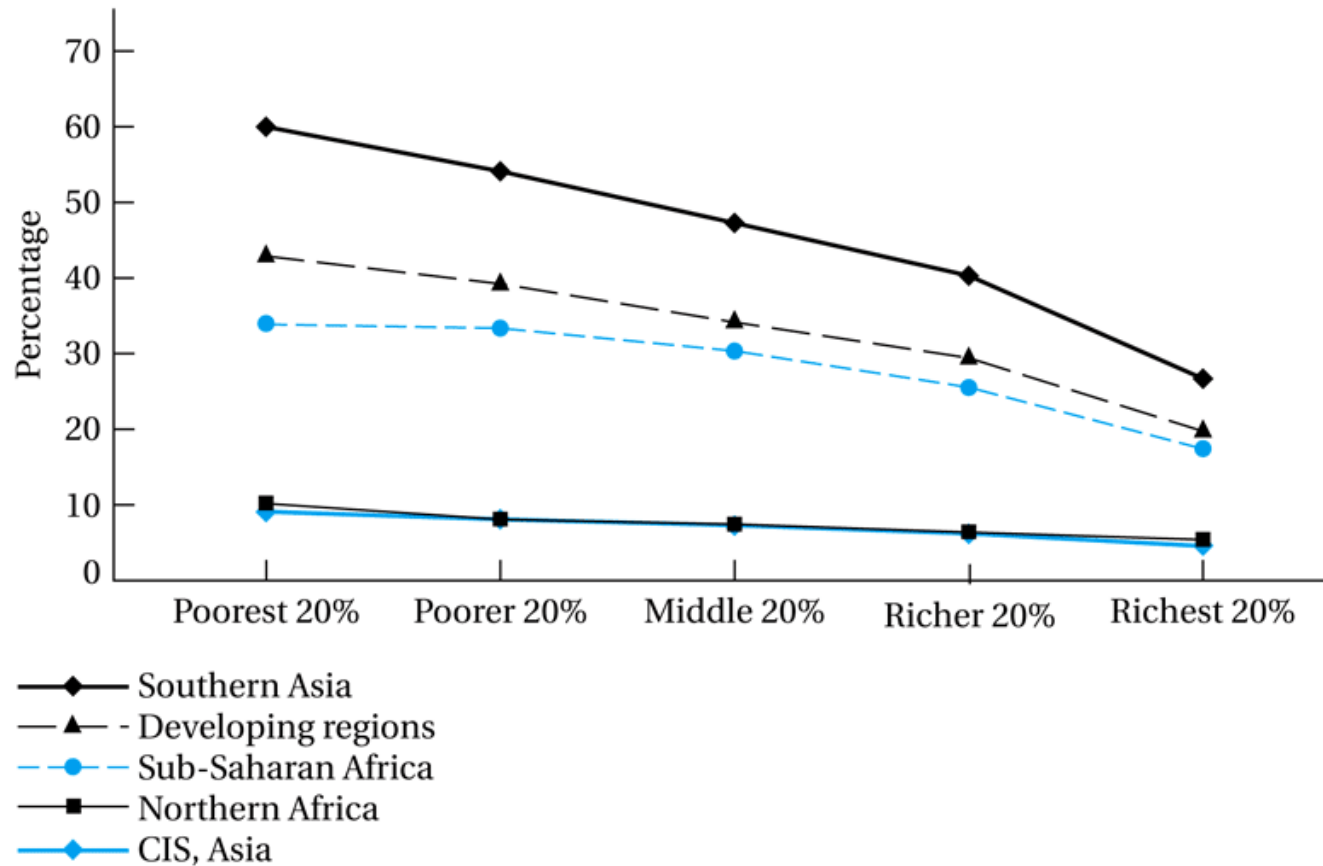
Source: ดร.สุพล ลิ้มวัฒนานนท์ Data: World Bank - World Development Indicators (updated Oct 2015)

# Children's Likelihood to Die in Selected Countries



Source: *Human Development Report, 2005*, fig. 2.4. Reprinted with permission from the United Nations Development Programme.

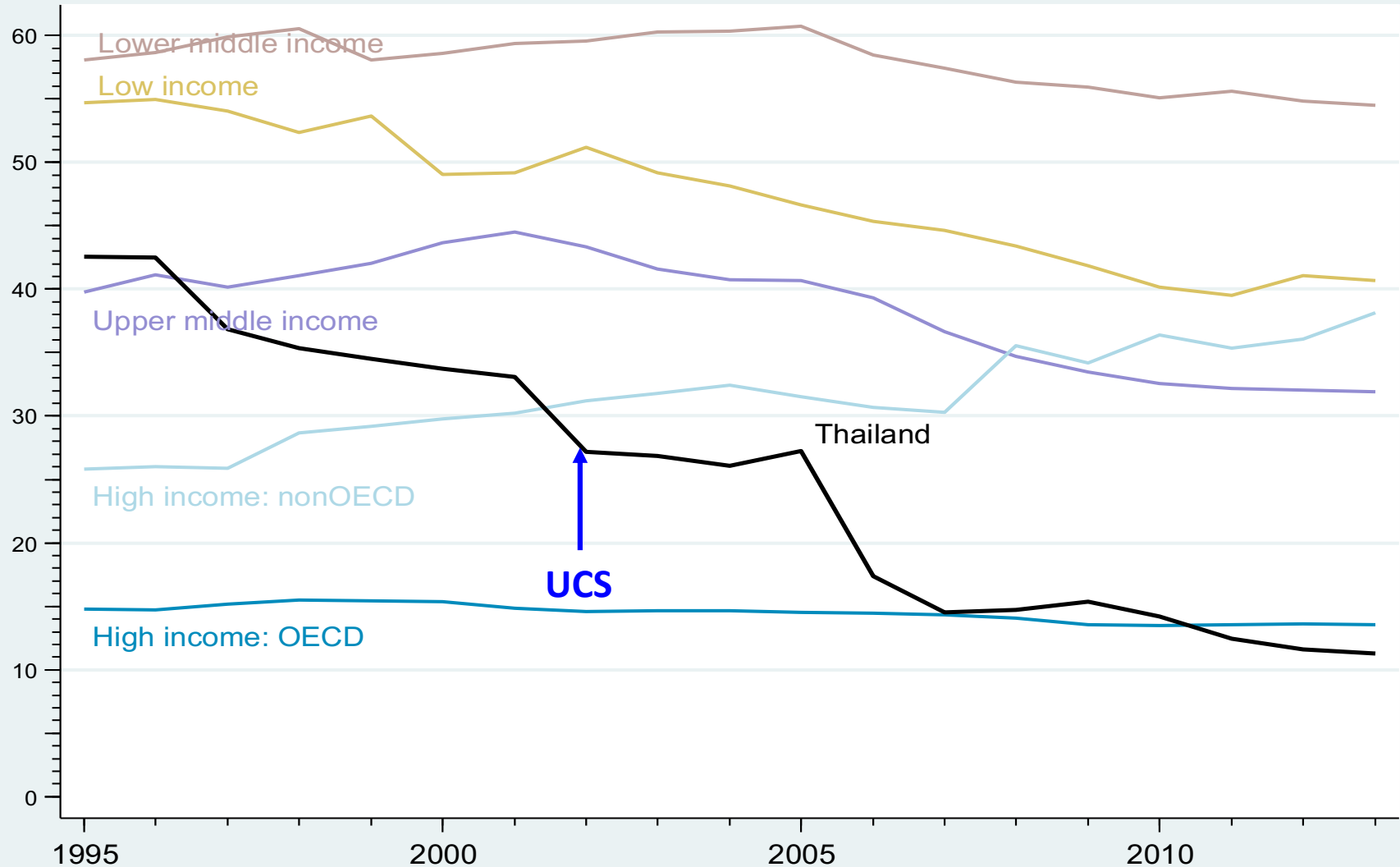
# Proportion of Under-Five Children Who Are Underweight, by Household Wealth, in 2008



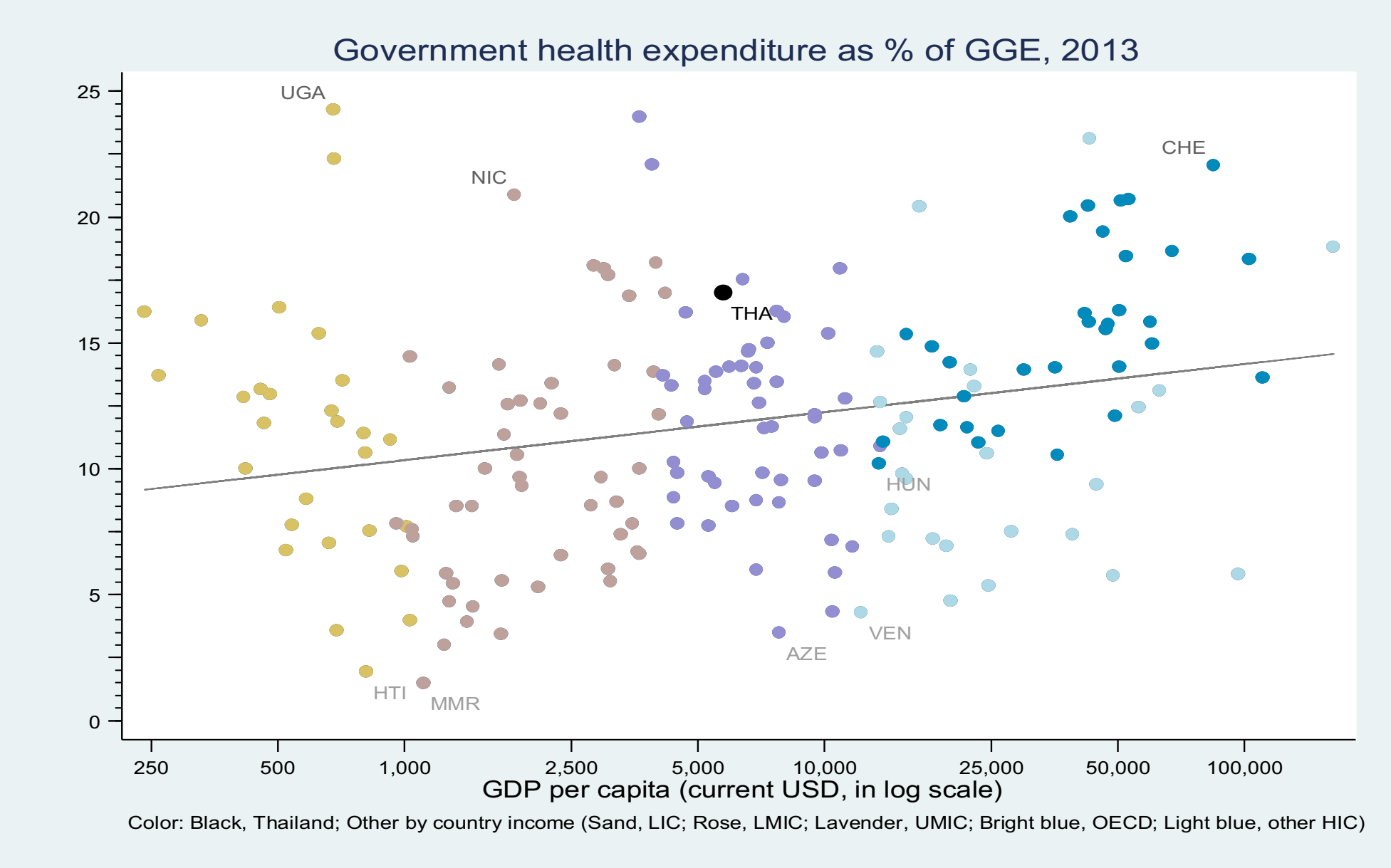
Source: From *Millennium Development Goals Report, 2010*, p. 14. Reprinted with permission from the United Nations.

# Household health expenditure

Out-of-pocket health expenditure, Thailand and other countries by income groups



# Public health expenditure as % gov't expenditure



# Disease Burden

- HIV/AIDS
- Malaria
- Parasitic Worms and Other “Neglected Tropical Diseases

Region	Adults and Children Living with HIV	Adults and Children Newly Infected with HIV	Adult and Child Deaths Due to AIDS
Sub-Saharan Africa	22.4 million	1.9 million	1.4 million
Middle East and North Africa	310,000	35,000	20,000
South and Southeast Asia	3.8 million	280,000	270,000
East Asia	850,000	75,000	50,000
Oceania	59,000	3,900	2,000
Latin America	2 million	170,000	77,000
Caribbean	240,000	20,000	12,000
Eastern Europe and Central Asia	1.5 million	110,000	87,000
Western and Central Europe	850,000	30,000	13,000
North America	1.4 million	55,000	25,000
Total	33.4 million	2.7 million	2 million

Source: Adapted from 2009 AIDS Epidemic Update, p. 11. © 2009 Joint United Nations Programme on HIV/AIDS (UNAIDS) and World Health Organization (WHO).

# The Major Neglected Tropical Diseases, Ranked by Prevalence

Disease	Global Prevalence (millions)	Population at Risk	Regions of Highest Prevalence
Ascariasis	807	4.2 billion	East Asia and Pacific Islands, sub-Saharan Africa, India, South Asia, China, Latin America and Caribbean
Trichuriasis	604	3.2 billion	Sub-Saharan Africa, East Asia and Pacific Islands, Latin America and Caribbean, India, South Asia
Hookworm infection	576	3.2 billion	Sub-Saharan Africa, East Asia and Pacific Islands, India, South Asia, Latin America and Caribbean
Schistosomiasis	207	779 million	Sub-Saharan Africa, Latin America and Caribbean
Lymphatic filariasis	120	1.3 billion	India, South Asia, East Asia and Pacific Islands, sub-Saharan Africa
Trachoma	84	590 million	Sub-Saharan Africa, Middle East and North Africa
Onchocerciasis	37	90 million	Sub-Saharan Africa, Latin America and Caribbean
Leishmaniasis	12	350 million	India, South Asia, sub-Saharan Africa, Latin America and Caribbean
Chagas' disease	8–9	25 million	Latin America and Caribbean
Leprosy	0.4	N.D.	India, sub-Saharan Africa, Latin America and Caribbean
Human African trypanosomiasis	0.3	60 million	Sub-Saharan Africa
Dracunculiasis	0.01	N.D.	Sub-Saharan Africa
Buruli ulcer	N.D.	N.D.	Sub-Saharan Africa

Source: "Control of neglected tropical diseases," by Peter Hotez et al., *New England Journal of Medicine*, 357: 1018–1027 (September 6, 2007). Copyright © 2007 Massachusetts Medical Society. All rights reserved.

Note: N.D. = not determined.