

Protecting the Filipino Children: EPI and Beyond

Major Milestones of the EPI in the Philippines



EPI Prevents...



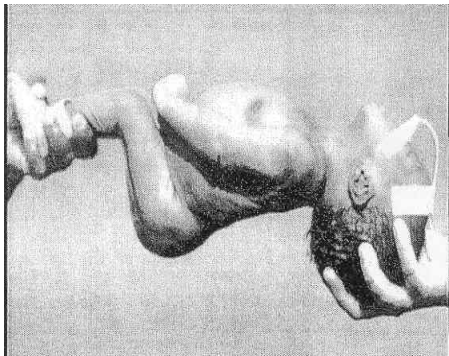
Polio



Diphtheria



Measles



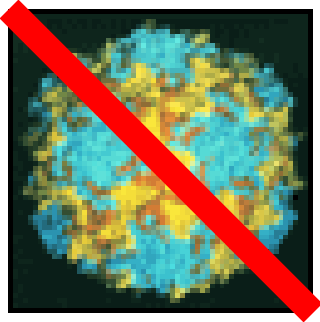
Newborn Tetanus



Pertussis



Hepatitis B



Global Polio Eradication Initiative

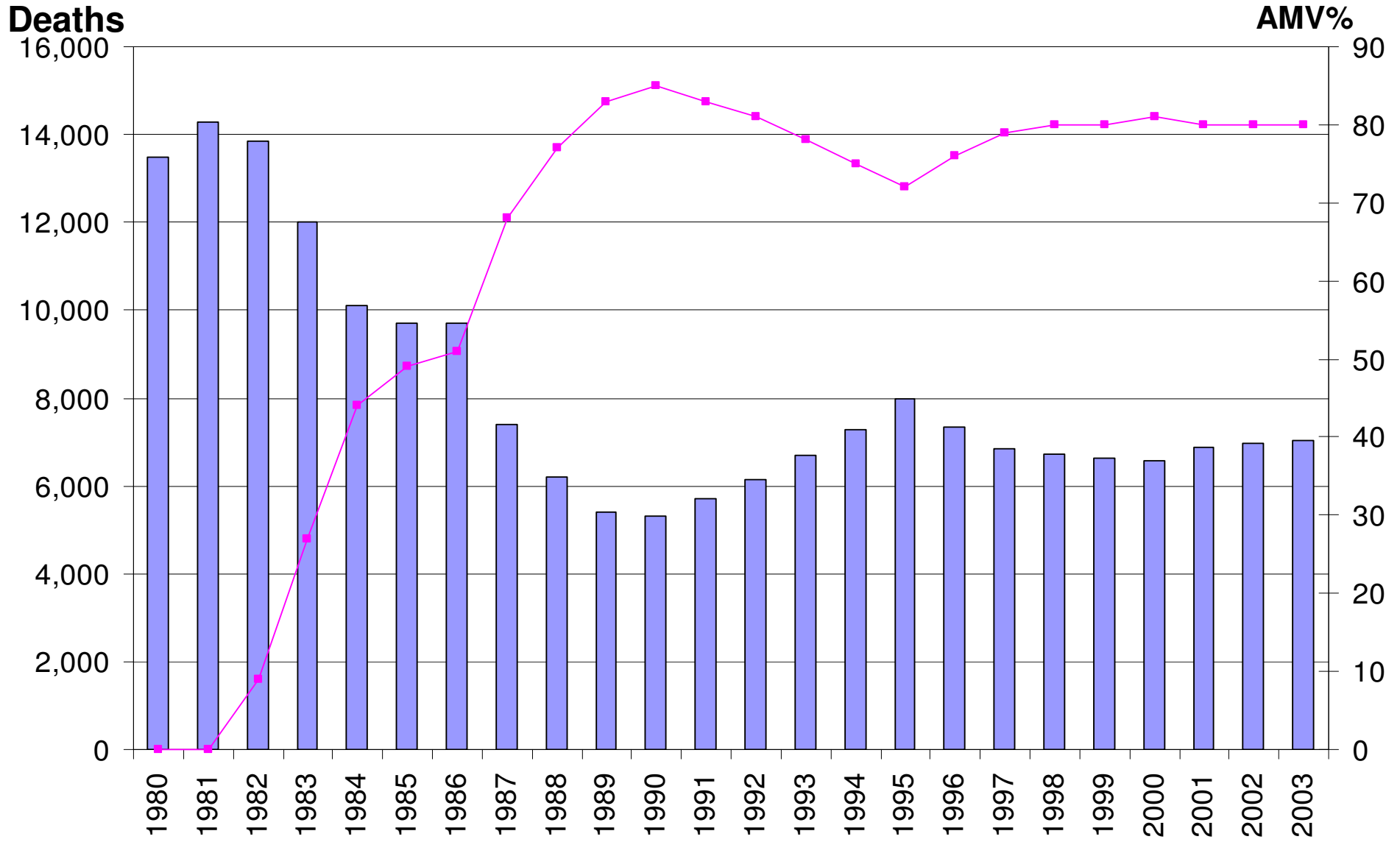
The Philippines was certified Polio-free since October 2000!

This was made possible by achieving:

- High OPV3 Immunization Coverage
- Good Surveillance for Polio



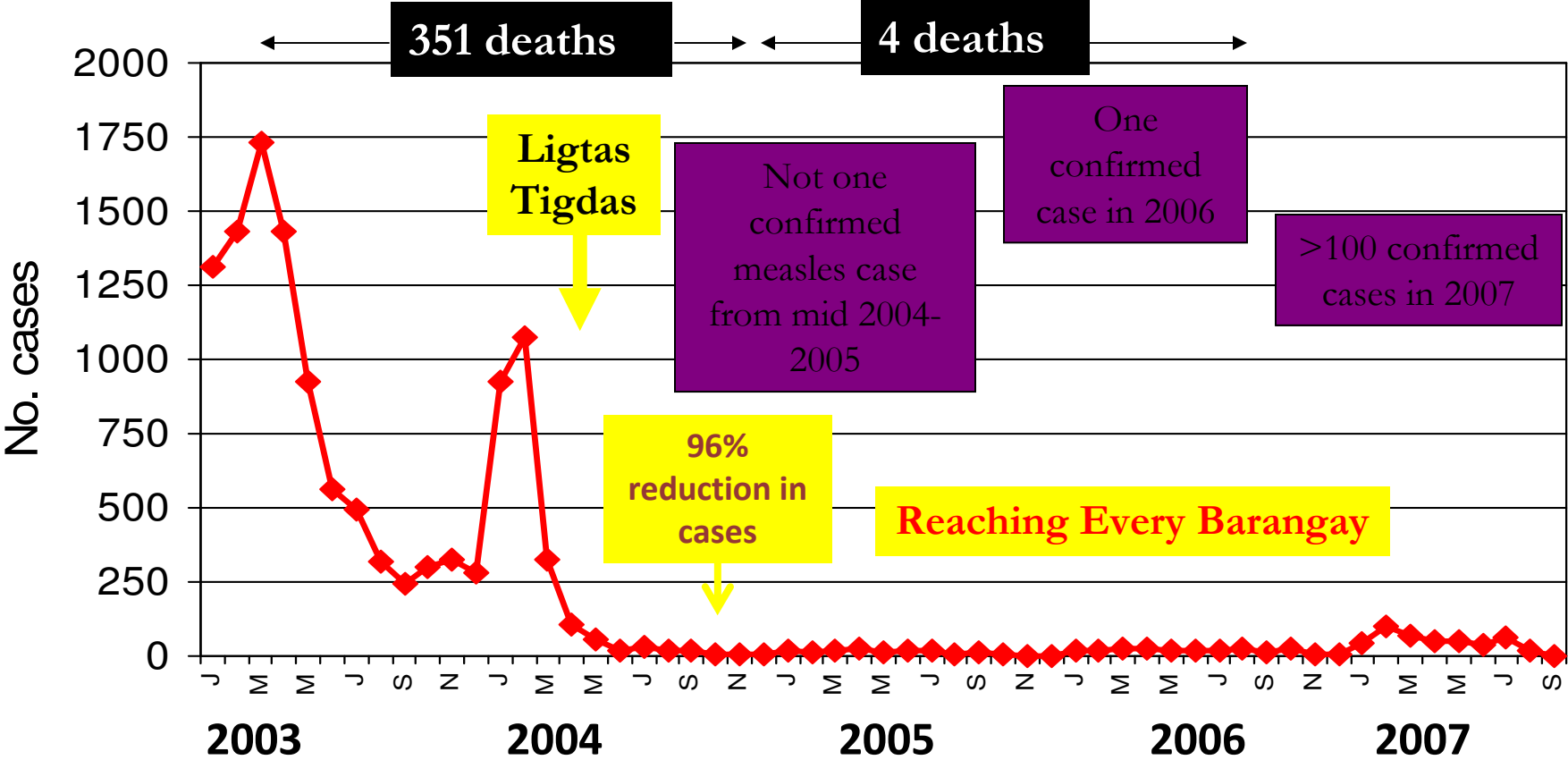
Measles is Deadly: Prior to vaccination, 14,000 Filipinos died every year



Office of the WHO Representative in the

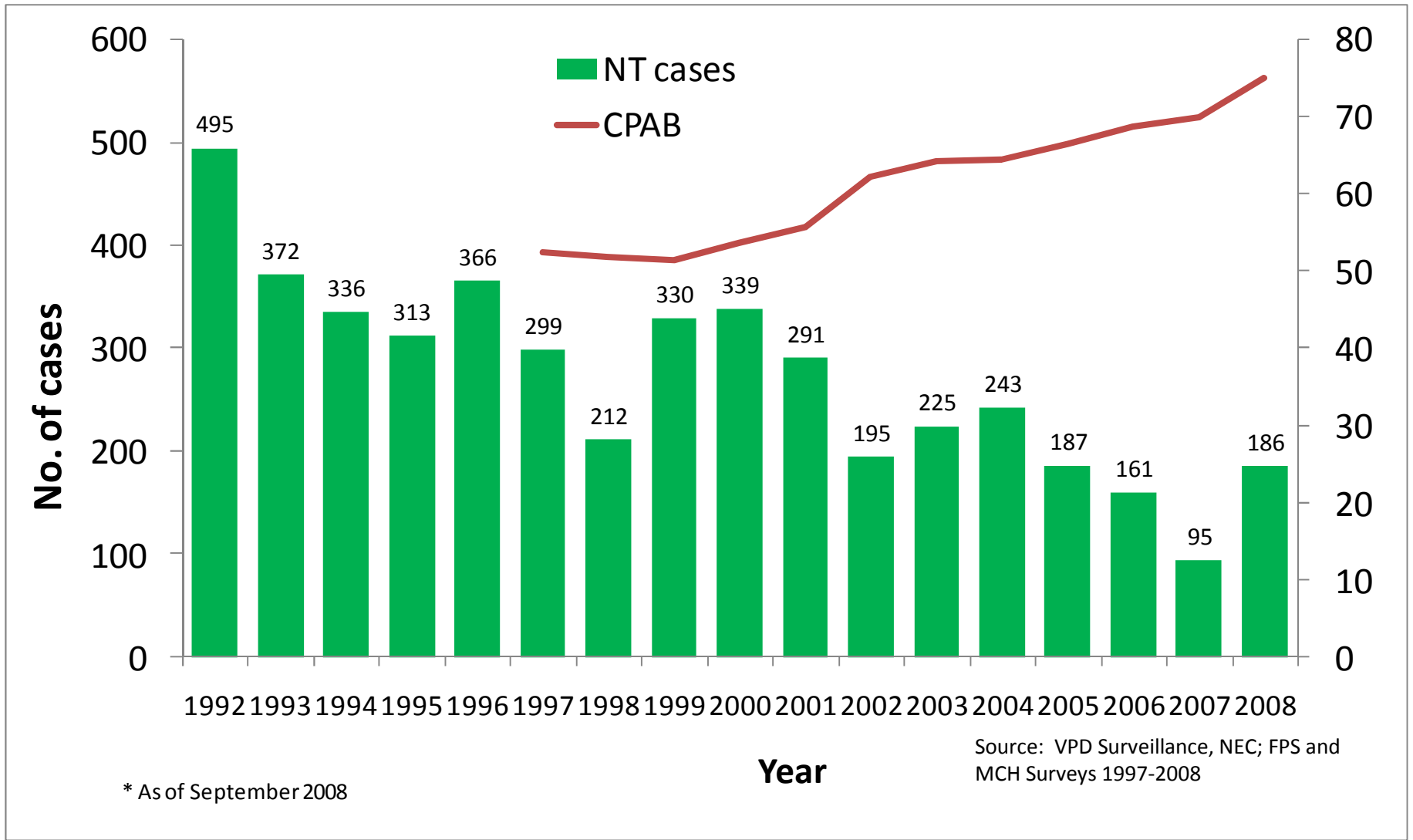
Philippines: Mortality Estimates based on Stein, et al. JID 2003:187

Unprecedented decline of measles cases in sentinel sites, 2003-2007



NEC, 2007

In the past 15 years, more children are protected against tetanus, and cases have declined



However, babies born in 9 provinces/cities remain at high risk of dying from newborn tetanus

9 Highest Risk Areas:

- Basilan
- Sulu
- Lanao del Sur
- Maguindanao
- Abra
- Cotabato City
- Lanao del Norte
- Benguet
- Isabela City, Basilan

- These are the target of a mass immunization effort to eliminate Maternal and Newborn Tetanus

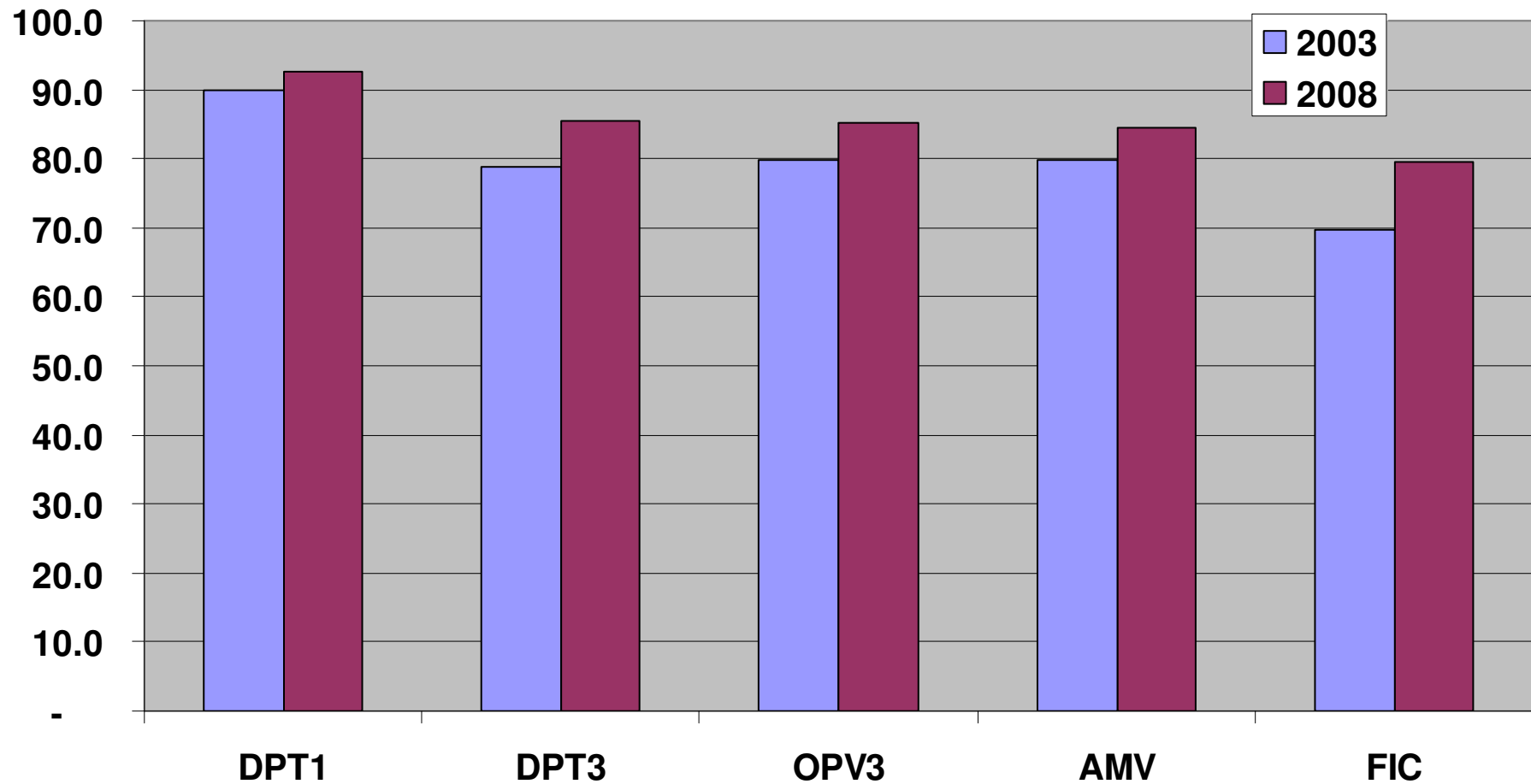
Hepatitis B Birth Dose

- 300,000 Filipinos chronically infected with hepatitis B
- >9000 deaths a year
- 40% were infected at birth;
 - 30% more in first year of life
- A dose of HBV given within 24 hours of birth, followed by two more doses in first year of life will prevent up to 90% of infections
- Goal is 2012 Elimination of hepatitis B infection, requires:
 - 80% birth dose coverage (<24 hours)
 - 80% HBV 3 coverage

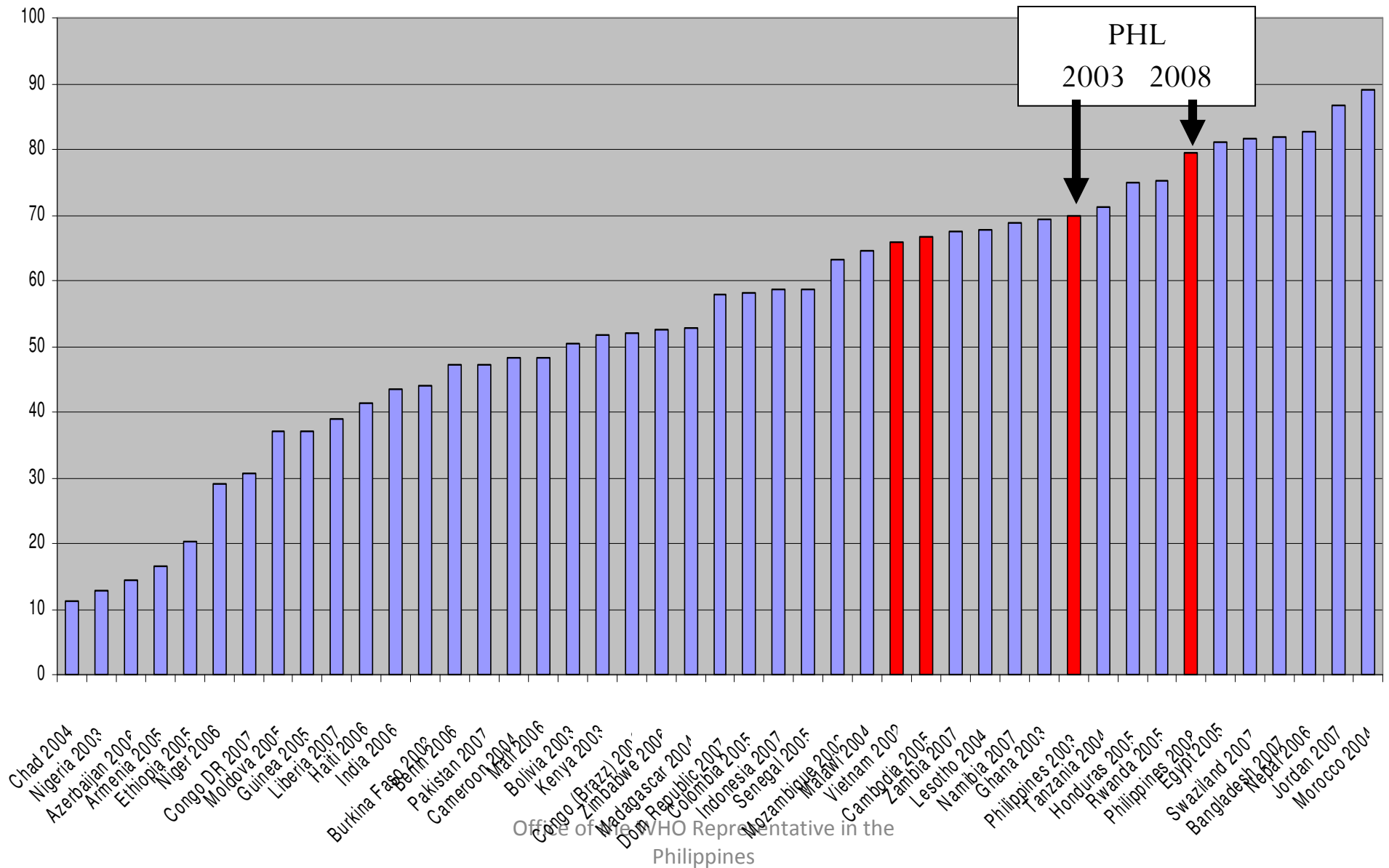
Hepatitis B Birth Dose

- Hepatitis B Vaccination Administered among Hospital Births increased from
 - 0% in January 2007
 - 71% in January 2009
- On the other hand,
 - Only 20% of Home Births receive a dose within 24 hours
- 80% have received 3 doses of HBV

Comparison of EPI Indicators NDHS (Note the Fully Immunized Child), 2003 and 2008



FIC Demographic and Health Survey Coverage by Country, 2002 - 2008



**Vaccines have saved tens of
thousands of lives every year in the
Philippines**



How Safe Are Vaccines?

Vaccines used in the Public Sector:

- Are bought through **UNICEF procurement system** from **pre-qualified manufacturers**
 - Good Manufacturing Practices, Clinical data, Consistency of Final Product, relies on functional National Regulatory Authority
 - Meets all critical indicators required for pre-qualification purposes following a WHO independent assessment / reassessment
- **Functional National Regulatory Authority** (in vaccine producing countries)
 - Is independent of manufacturers
 - Is assessed / reassessed by WHO
 - Monitors and tests vaccines for safety and efficacy
 - Licensing, regulatory inspections, etc.
 - Post-Marketing and Adverse Events Following Immunization Surveillance

Upgraded Cold Storage Facilities

- National
- 17 Regions
- 82 Provinces

At RITM and Regions...



Walk-in Cooler



Walk-in Freezer



Iced-line Freezers

At the Province and City Health Vaccine Room

Transport Boxes



Ice-Lined Refrigerator(ILR) 300 ltr



Deep Freezer (DF) 300 ltr

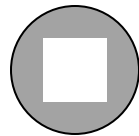


Vaccine Carriers

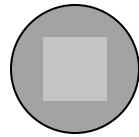
The correct storage temperatures

	State/ Regional	District	Primary Health Centre	Sub-centre
	6 months	3 months	1 month	Immunization Day
OPV	-15°C to -25°C		+2°C to +8°C	
Measles				
BCG				
Hep B				
DPT				
DT				
TT				
Diluent				

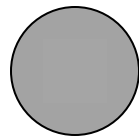
How to read a vaccine vial monitor (VVM)



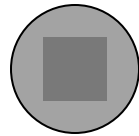
Inner square lighter than the outer circle
If the expiry date has not been passed
USE the vaccine



At a later time, inner square still lighter than the outer circle
If the expiry date has not been passed
USE the vaccine



Discard point:
Inner square matches colour of the outer circle
DO NOT use the vaccine
Inform your supervisor



Beyond Discard point:
Inner square darker than outer circle
DO NOT use the vaccine
Inform your supervisor



Monitoring of Adverse Events Following Immunization

AEFI Surveillance

WHAT IS AN ADVERSE EVENT FOLLOWING IMMUNIZATION (AEFI)?

A medical incident that takes place after an immunization, causes concern, and is believed that it could be caused by immunization

AEFI cases are reported and investigated through the AEFI Surveillance system.

A rigorous Causality Assessment includes review of data, determination of need for further investigation (e.g., tests, epidemiological evaluations)

Causes of AEFI

- Body's reaction to the vaccine
 - “Vaccine reaction”
 - Allergies, anaphylaxis
- Error related to the way the vaccine is given
 - “Program error”
 - Unsafe injections and storage
- Unsafe manufacture
 - Exceedingly rare with new regulations
- Fainting upon injection
 - “Injection reaction”
- Coincidental

Vaccines are Safe and Effective!

- **Most AEFI cases** reported between 2006-2009 were coincidental.
 - **None** was proven to be vaccine reaction
- **In reality, most preventable AEFIs are due to unsafe injection and storage practices**

Unsafe Storage





Spoiled vaccine

Prefilled Syringes



Aspirating Needles



Improper Handling

**Inappropriate cooling
pack**



Needle and syringe found in a trash can outside a barangay health station.

Inappropriate disposal



A child picked up the syringe, played with it, and threw it away in the trash can in the street.

Based on the 2008 NDHS result:

- 25 infants die per 1,000 live births every year
- 34 under five children die per 1,000 per year

- This means that **140 children die every day**
 - **Diarrhea, pneumonia, neonatal sepsis, etc.**
 - **This translates into 1560 infants dying within 3 days after receiving an immunization from causes not related to the vaccine**
- Surveillance data shows that **most of the deaths** associated with AEFI are **COINCIDENTAL**

“ GEMS of the Immunization Program”

MALACAÑANG
Manila

BY THE PRESIDENT OF THE PHILIPPINES

EXECUTIVE ORDER NO. 663

IMPLEMENTING THE NATIONAL COMMITMENT FOR “*BAKUNA ANG UNA
SA SANGGOL AT INA*”, ATTAINING WORLD HEALTH
ORGANIZATION’S GOALS TO ELIMINATE MEASLES AND
NEONATAL TETANUS, ERADICATE POLIO, CONTROL HEPATITIS B
AND OTHER VACCINE-PREVENTABLE DISEASES

Gloria M. Arroyo



- First ever Presidential Issuance to Strengthen Routine Health programs
- Among other things, Strengthens Surveillance
- Clarified the Midwifery Law
 - Midwives should provide all immunizations

ive in the



Republic of the Philippines
Department of Health

OFFICE OF THE SECRETARY

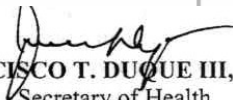
1st Floor, Bldg. 1, San Lazaro Compound, Rizal Avenue, Sta. Cruz, Manila
Telefax: (0632) 711-1829 Trunkline: 743-8301 loc 1700-1701
Email Address: osec@doh.gov.ph Web site: <http://www.doh.gov.ph>



This issuance made the Philippines the 13th country and the 1st developing country with a policy on the legal assistance for health workers and medical support for those who had adverse event following immunization (AEFI)

any cases for acts committed in the performance of their duty and in good faith or in any case, after appropriate investigation by RESU/NEC.

Office


FRANCISCO T. DUQUE III, MD, MSc
Secretary of Health

ie



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Department of Health
NATIONAL EPIDEMIOLOGY CENTER
Bldg. 9, San Lazaro Compound
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Tel. No. (02)7423945 / 7431937
Fax No. (02)743-6076 / 741-7048



September 19, 2006

DEPARTMENT PERSONNEL ORDER
No. 2006-2467

*Ensures the All Health Workers
Adhere to Safe and Effective Use of
Vaccines.*

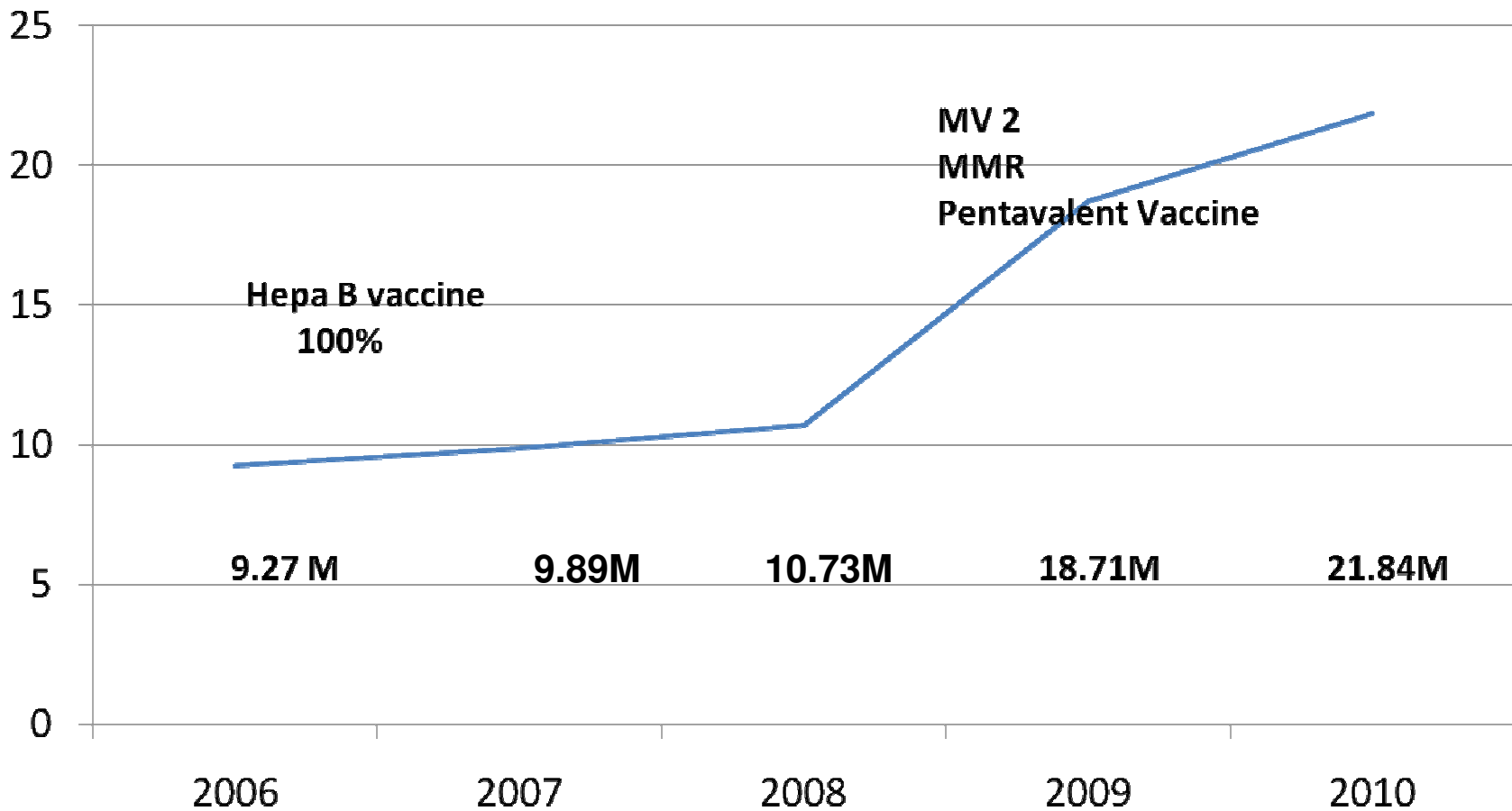
Chairperson: Undersecretary of Health

Co-chairperson: Director, NEC

Members: EXPERTS, Legal Officer, NCDPC, BFAD, RITM, UNICEF, WHO,
Professional Organizations

Secretariat: NEC

EPI Budget (in USD)



Vaccines save lives!



***Please support safe vaccination
of all mothers and children***

Protecting Filipino Children

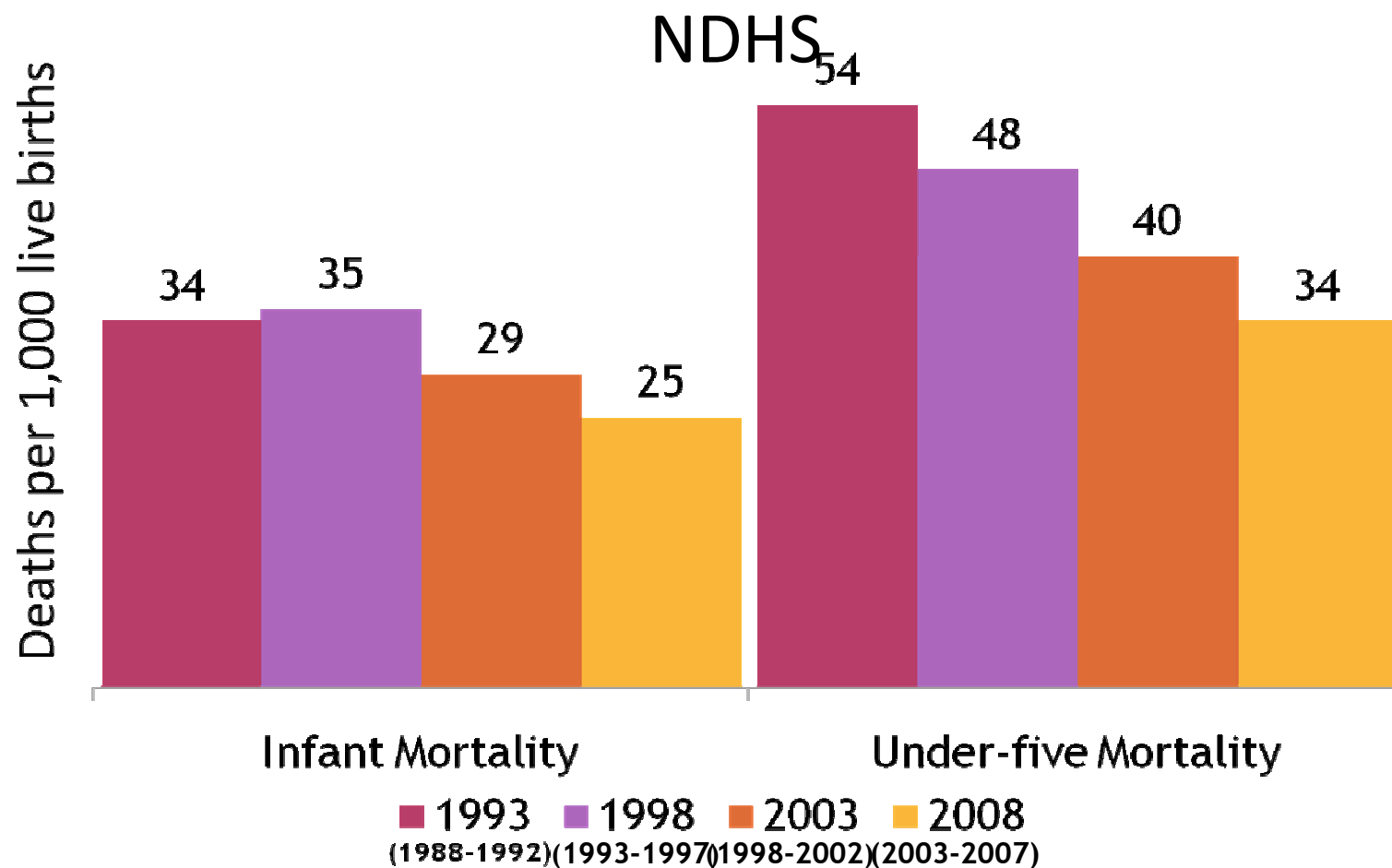
BEYOND EPI.....

MILLENNIUM DEVELOPMENT GOAL CHALLENGE

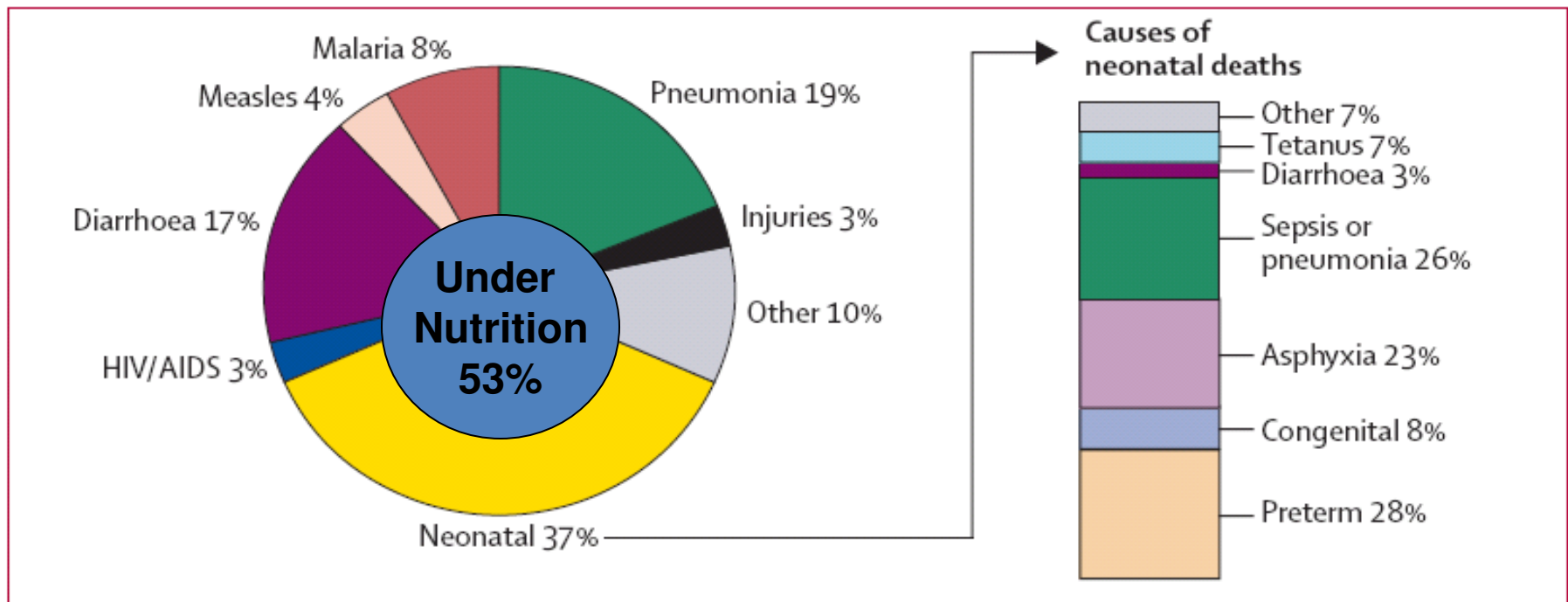
Indicators	NDS 1993	NDHS 1998	NDHS 2003	NDHS 2008	2015 (target)
Under-Five Mortality (5-year average)	54	48	40	34	18
<i>(percent reduction from 1993 ref. period)</i>		<i>11%</i>	<i>26%</i>	<i>37%</i>	<i>67%</i>

INFANT AND UNDER-FIVE MORTALITY

Trends in under-five mortality rates, 1993-2008



Direct Causes of Underfive and Neonatal Deaths



Source: **CHERG estimates of Underfive Deaths, 2000-2003**

Underlying Causes

- **inequity**
- **highly marginalized urban poor**
- **constrained funding for child survival**
- **poor compliance to laws and policies**
- **diminishing health human resource**
- **fragmented local health delivery system**

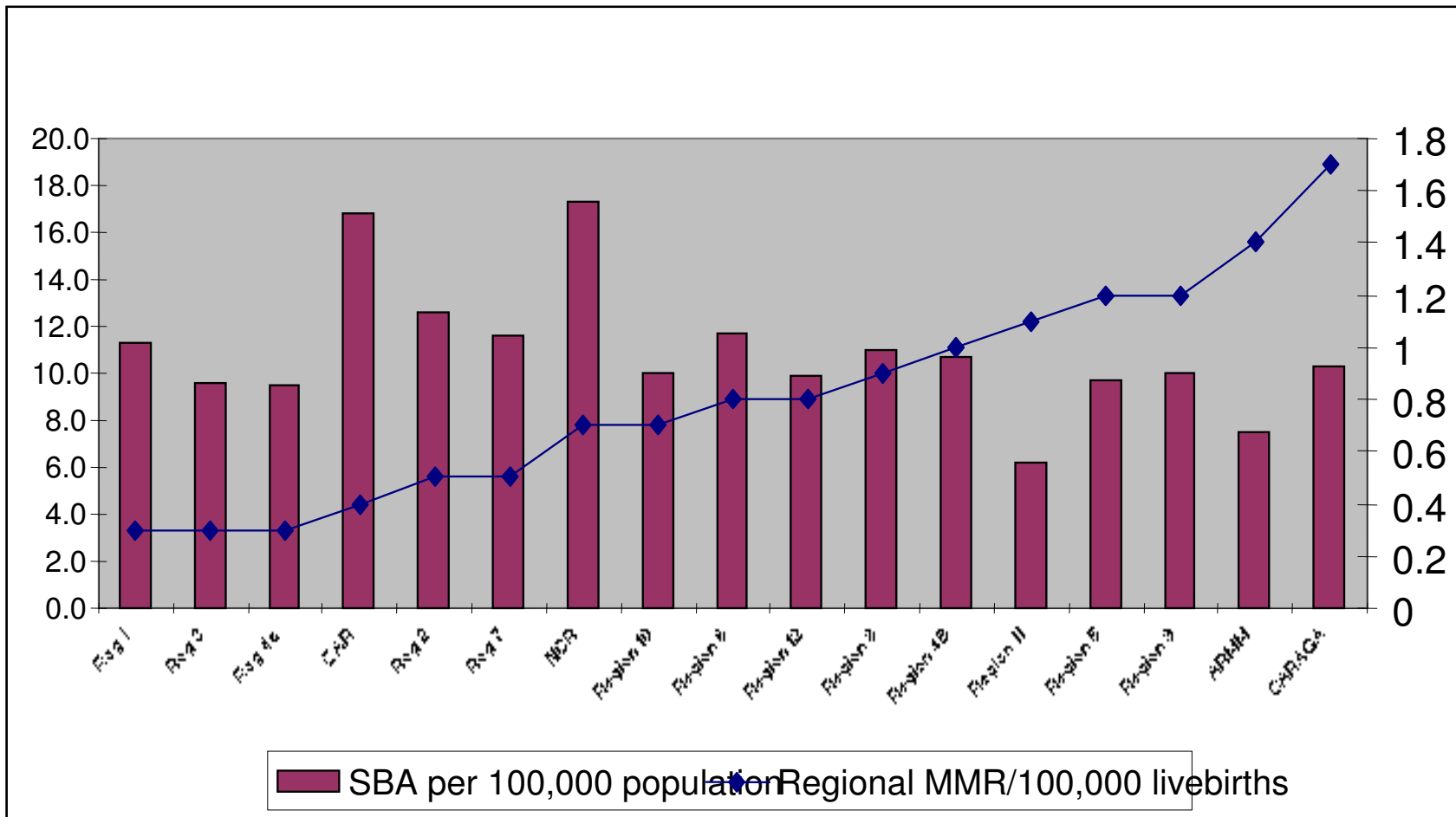
Access to Child Health Services by Wealth Quintile, 2003 NDHS

Access to Health Intervention and Services	Poorest Quintile	Richest Quintile
% children with ARI symptoms who sought treatment from health facility	43.6	57.0
% of children with diarrhea given ORS	30.6	50.6
% children consumed Vitamin A supplements	64.4	87.3
% children received iron drops	47.3	69.3
% children received 6 antigen immunizations	55.5	83.0
% unvaccinated with measles and any antigen	30.0	8.0
% received antenatal care from health professionals	80.0	97.6
% deliveries attended by health professionals	25.1	92.4

Problems in Accessing Health Care by Wealth Index Quintile, 2003 NDHS

Problems in Accessing Health Care	Lowest Quintile	Highest Quintile
• getting money for treatment	87.1	45.6
• having to take transport	57.1	12.0
• distance to health facility	59.1	13.6
• knowing where to go for treatment	27.4	8.6
• getting permission to go for treatment	22.0	6.8
• not wanting to go alone	44.0	22.0
• concern of absence of a female provider	31.5	17.2
• any of the specified problems	93.5	59.7

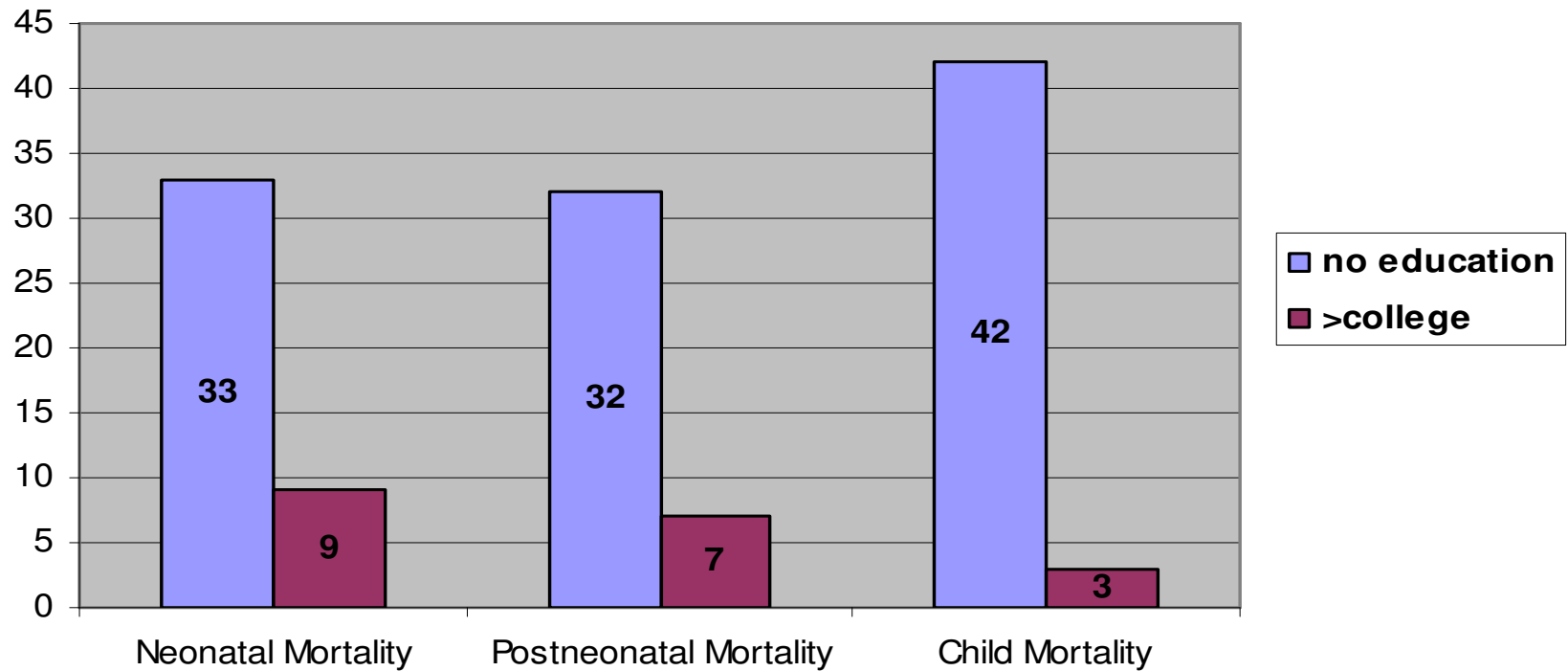
Limited Skilled Health Professionals (2005, FHSIS)



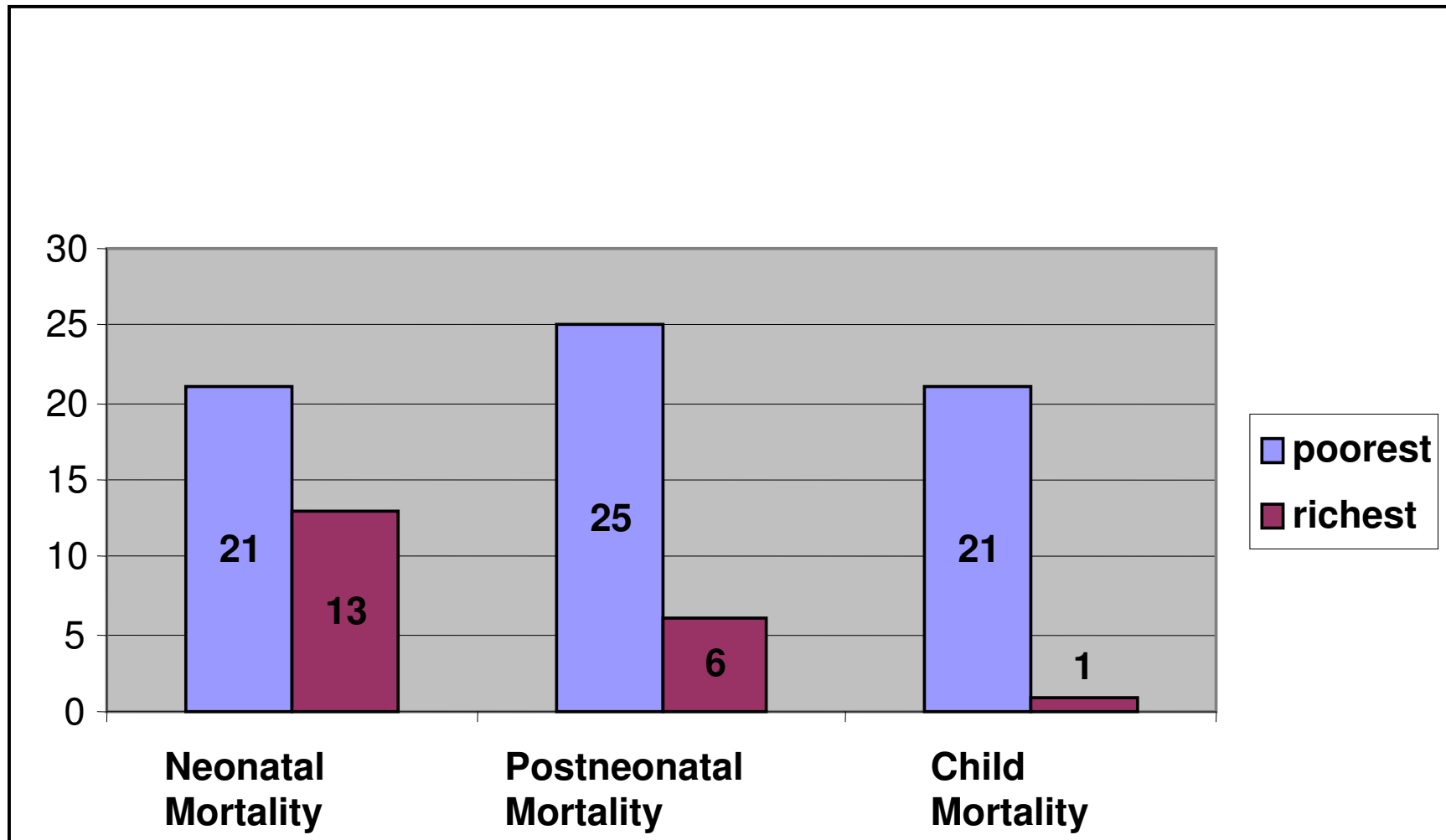
Varying Levels of UFMR By Demographic Characteristics

Demographic Factors	Classification	UFMR
Type of Residence	Rural	52
	Urban	30
Child's Sex	Male	48
	Female	34
Birth Order	1	36
	2-3	31
	4-6	45
	7+	83
Mother's Age at Birth (years)	< 20	56
	20-29	36
	30-39	43
	40-49	89
Previous Birth Interval (years)	< 2	58
	2	38
	3	30
	4+	31

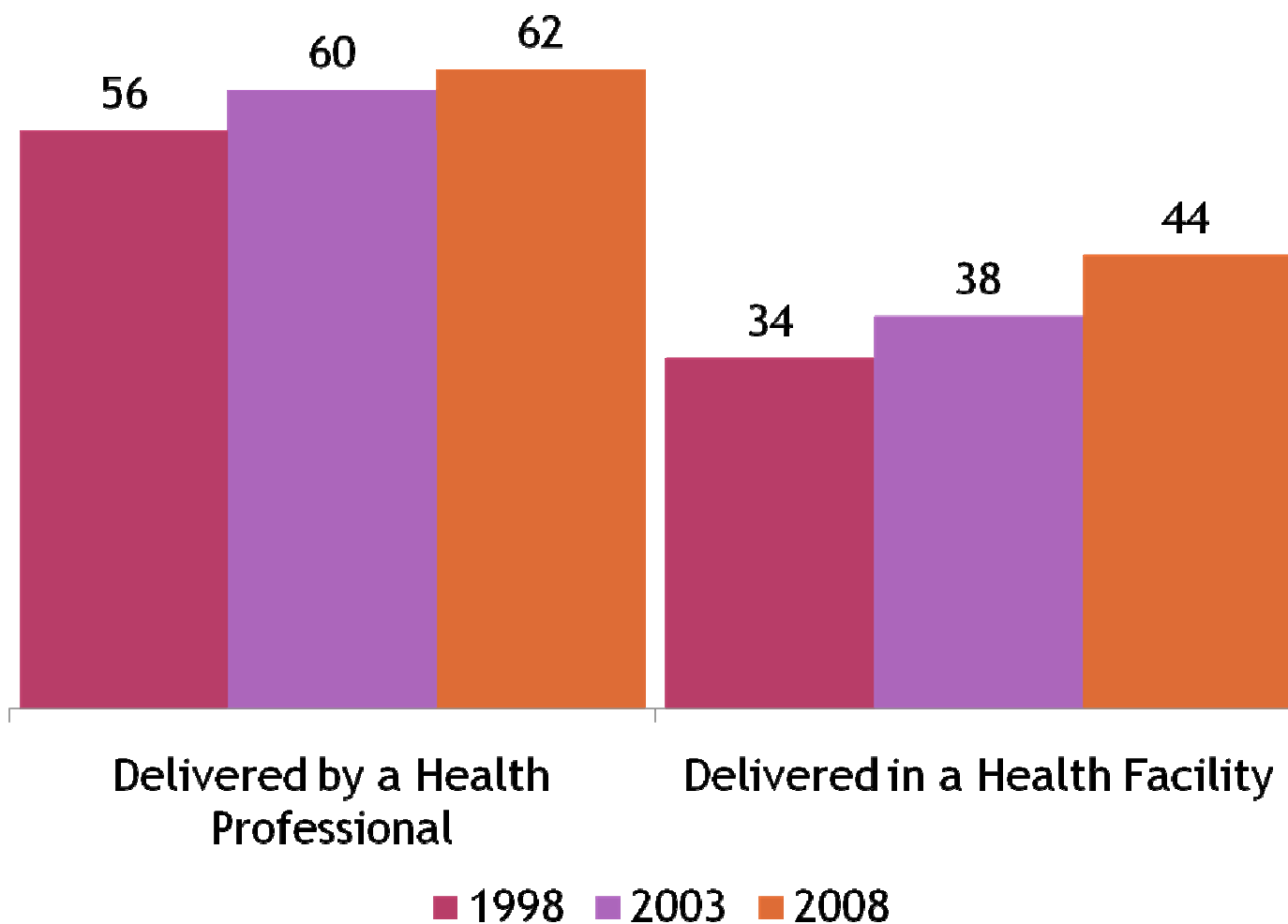
Childhood Death Rates by Mothers' Level of Educational Attainment



Childhood Deaths By Wealth Index, 2003 NDHS



ATTENDANT AT BIRTH AND PLACE OF DELIVERY, PHILIPPINES 1998-2008



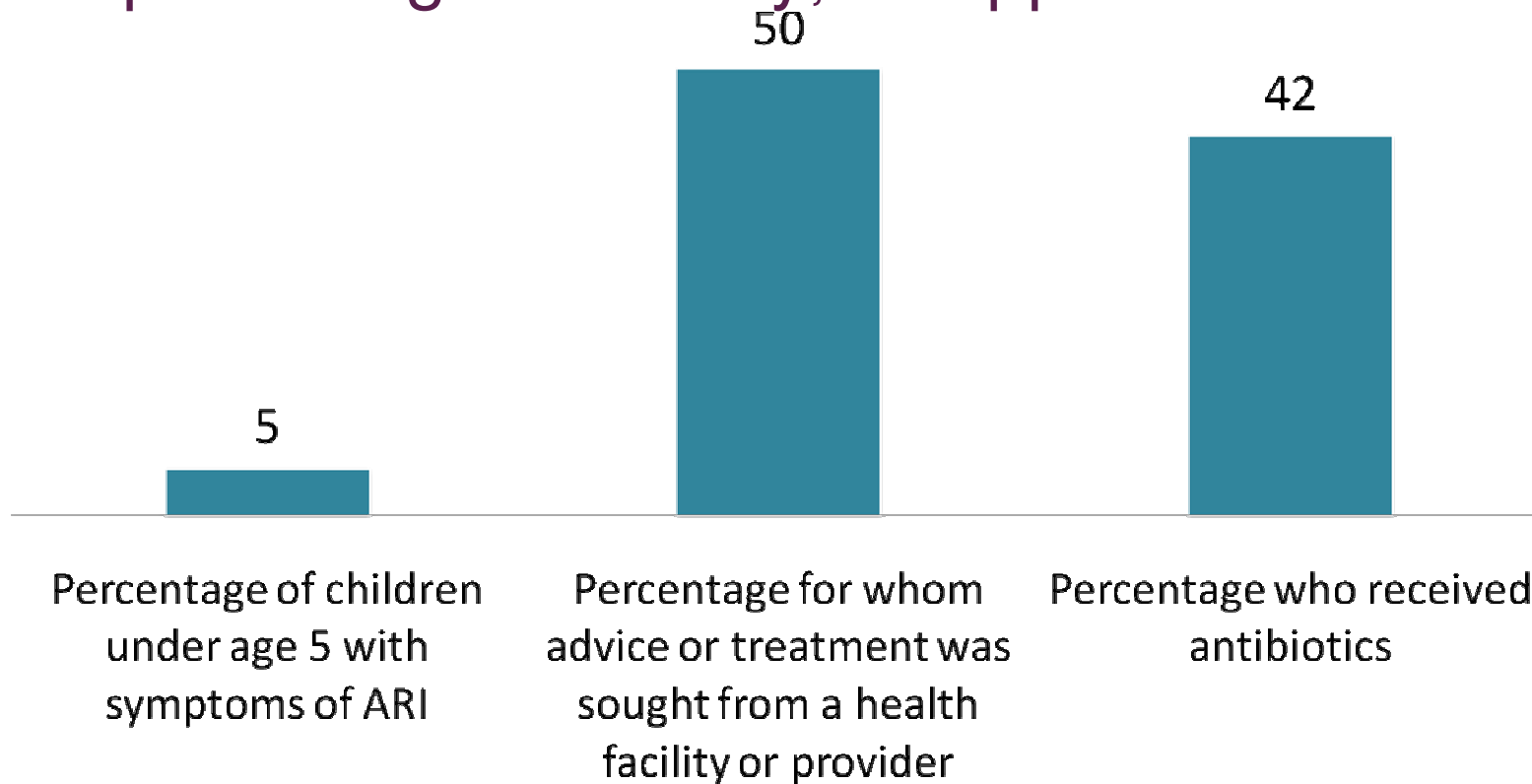
PLACE OF DELIVERY

Among live births in the five years preceding the survey, the percentage delivered in a health facility, and the percentage delivered at home, according to birth order and residence, Philippines 2008

Characteristics	Percentage delivered in a health facility	Percentage delivered at home
Birth order		
1	59.8	40.0
2-3	46.7	52.9
4-5	30.7	69.0
6+	19.8	79.8
Residence		
Urban	59.2	40.3
Rural	29.8	70.0

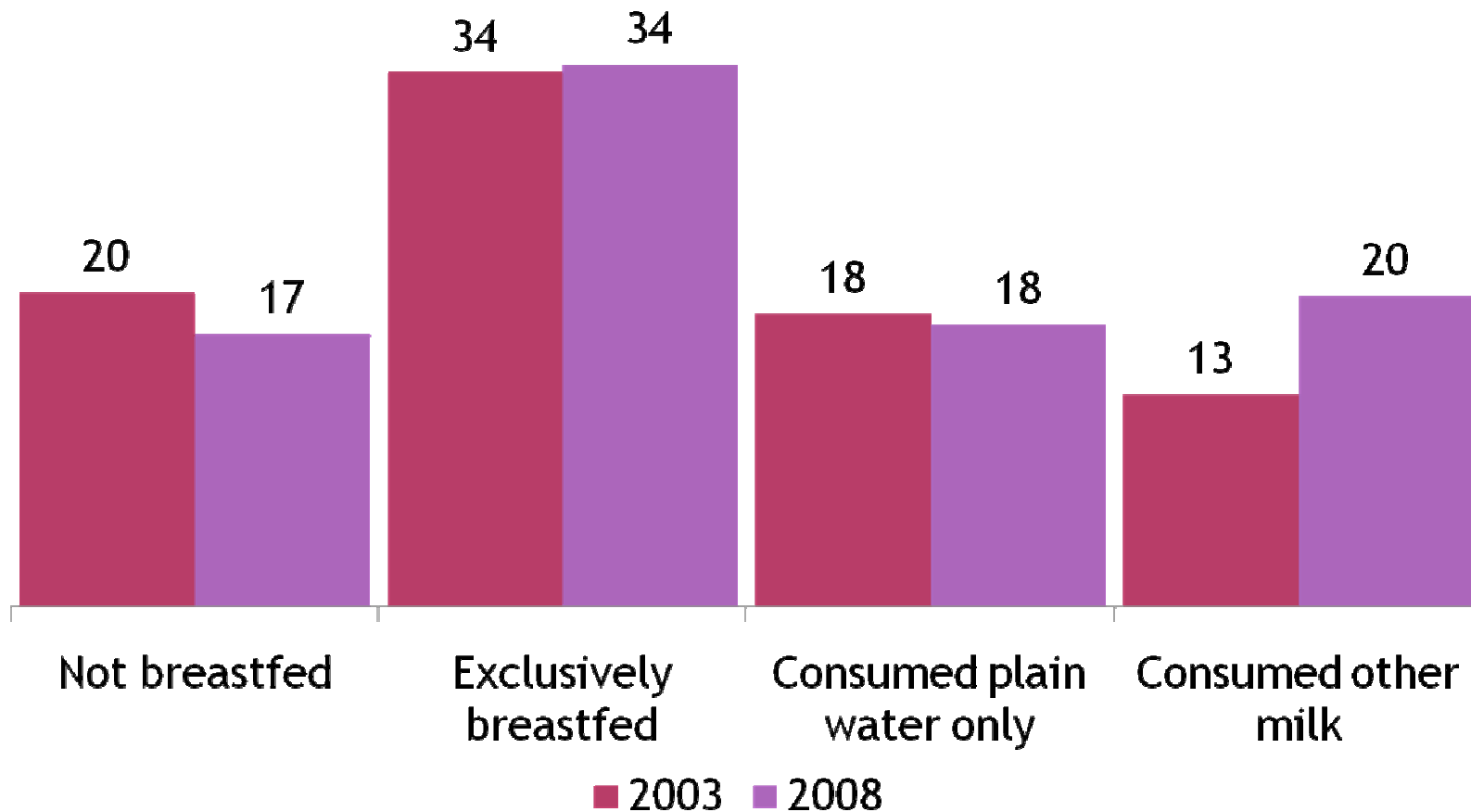
CHILDHOOD DISEASES

Children under age 5 with symptoms of acute respiratory infection (ARI) in the two weeks preceding the survey, Philippines 2008



BREASTFEEDING

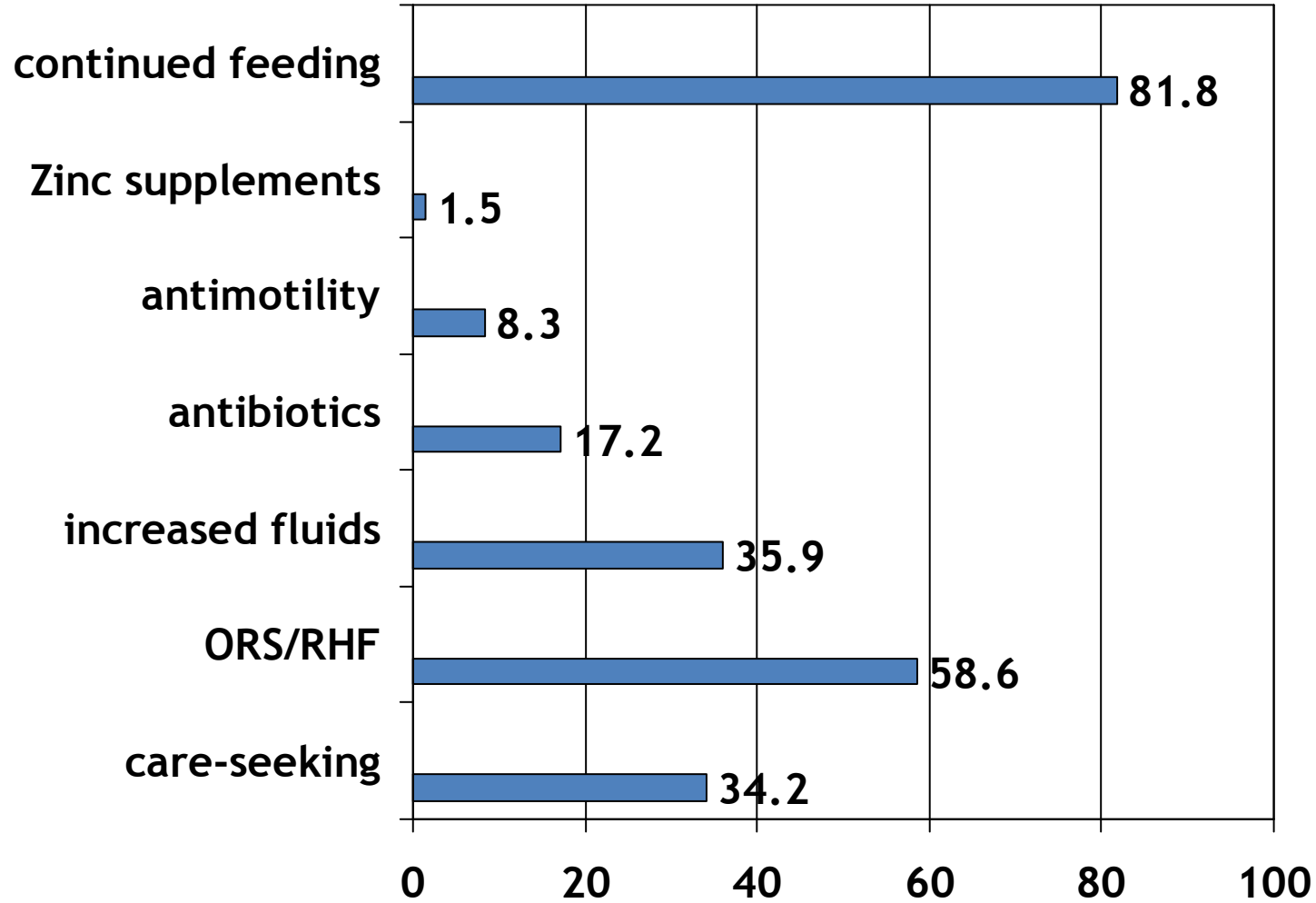
Breastfeeding status of children below 6 months old, Philippines 2003 and 2008



Breastfeeding and Appropriate Infant Feeding prevents

- **16,000** under five deaths
- **1.2million** episodes of illness
- **10 million** days of illness
- **450,000** health facility consultations
- **36,000** hospital admissions

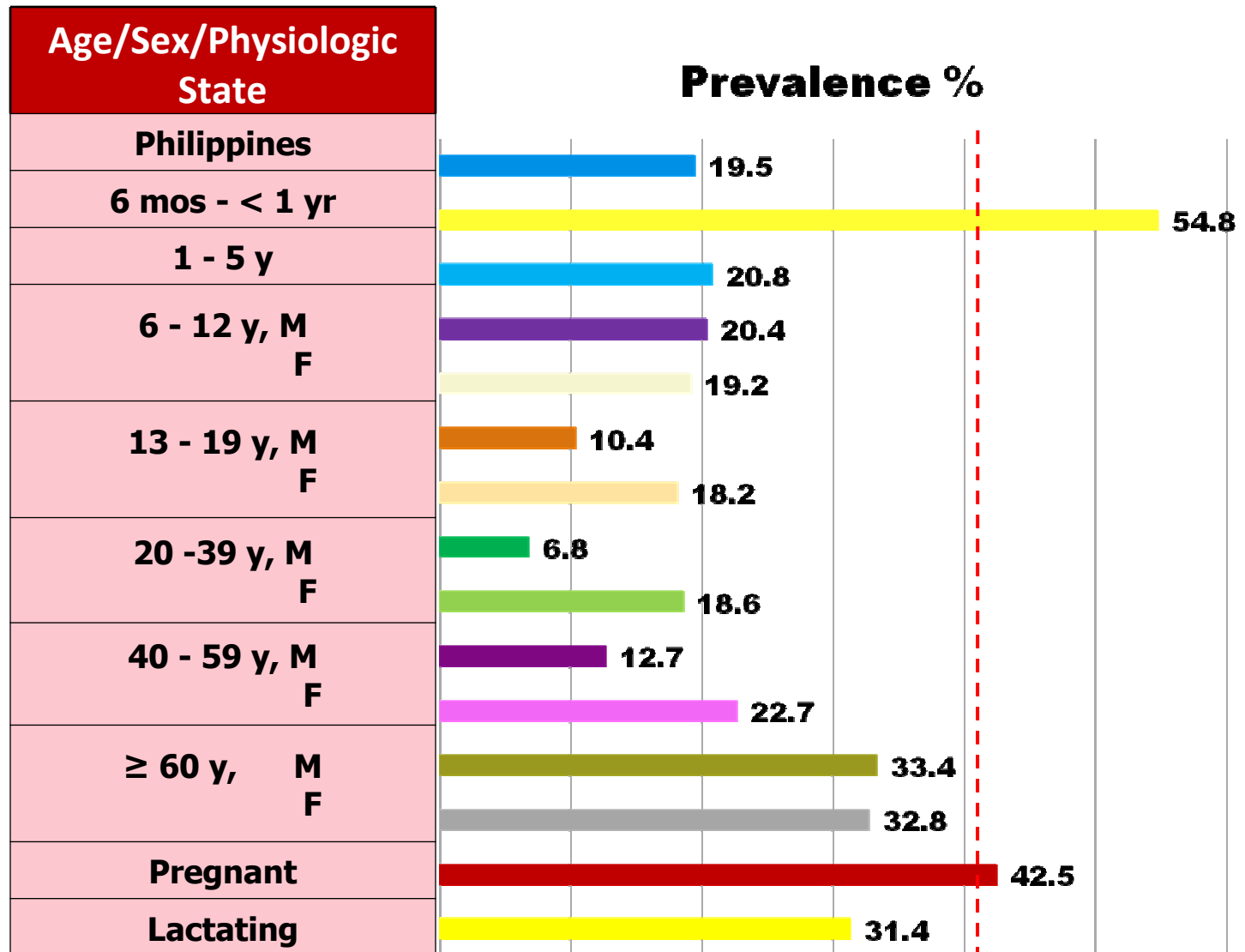
Diarrhea Treatment



Magnitude of STH

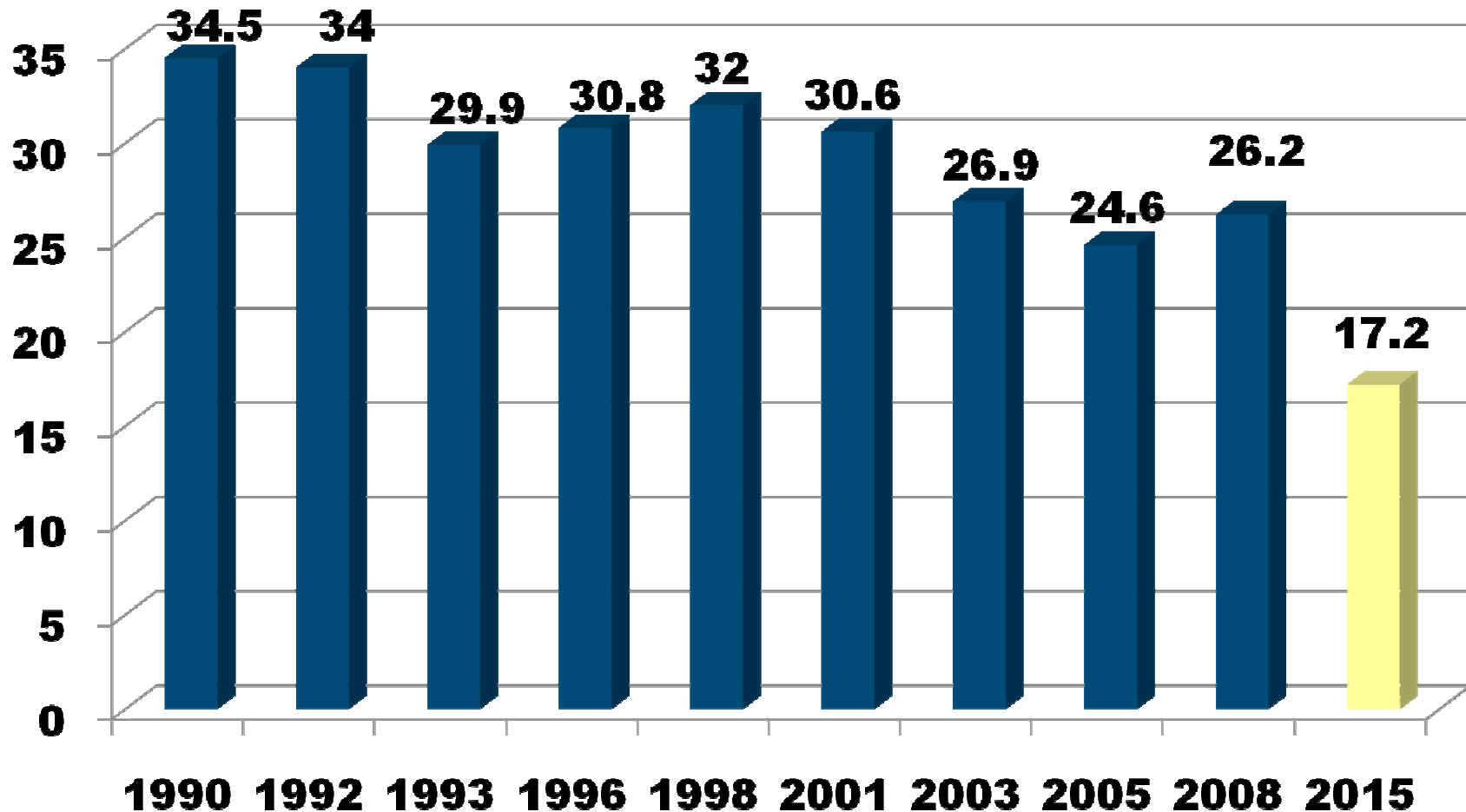
- In the Philippines:
 - Prevalence Rate (PR) among children 6–14 y/o ranged from 6% - 97% (CDCS 1998-2002)
 - PR among children 1–5 y/o is 66% (UNICEF, 2004)
- Associated factors:
 - Poverty
 - Poor nutrition
 - Inadequate sanitation
 - Lack of clean drinking water

Prevalence of anemia by age, sex and physiologic state: Philippines, 2008



Source: 2008 NNS-FNRI

Trends in the Prevalence of Underweight Among 0-5 Year old Children 1990-2008, FNRI-NNS



The problem: Philippines

- 2 out of 10 households or about 16 million Filipinos are without sustainable access to safe water supply
- Increasing reliance on water vendors
 - 12% of population in urban areas
 - irregular monitoring of water refilling stations and bottled water
- 6 out of 10 households with access to improved water sources face threat of water contaminants such as coliform bacteria which cause large scale community outbreaks

The problem: Philippines

- There are far serious matters like up to 58 percent of groundwater intended for drinking are contaminated with coliform bacteria, and needs treatment
- 48% of pollutants came from domestic sources
- Out of 421 rivers in the country, 50 rivers were polluted and 40 were biologically dead

- PEM, 2003, DENR, 2004

Sanitation

- **Number & percentage of HH w/ sanitary toilet facilities has increased annually from 73.9% (2005) to 75.4% (2006)**
- **Existing sewerage and sanitation facilities are unsatisfactory and inadequate, only about 4% have access to sewerage**
- **Low priority is accorded to sewerage and sanitation over water supply (only 3% of WATSAN investment)**
- **Poor enforcement of regulation (e.g. poor construction of septic tanks)**
- **Some still practice open defecation**

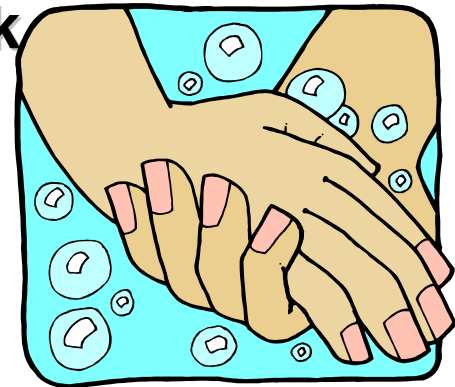
Hygiene

➤ Hand washing

- **Before eating: 90% of adults, older persons and adolescents; >50% of 0-12 y/o**
- **Before food preparation: 1/4 of adult population**
- **After using the toilet: 1/5 of 0-12 y/o; 37% of adolescents, 44% of adults, 50% of older persons**

➤ **Almost daily bathing in all age groups**

- ## ➤ **10-20% of food borne disease outbreaks are due to contamination by the food handlers**

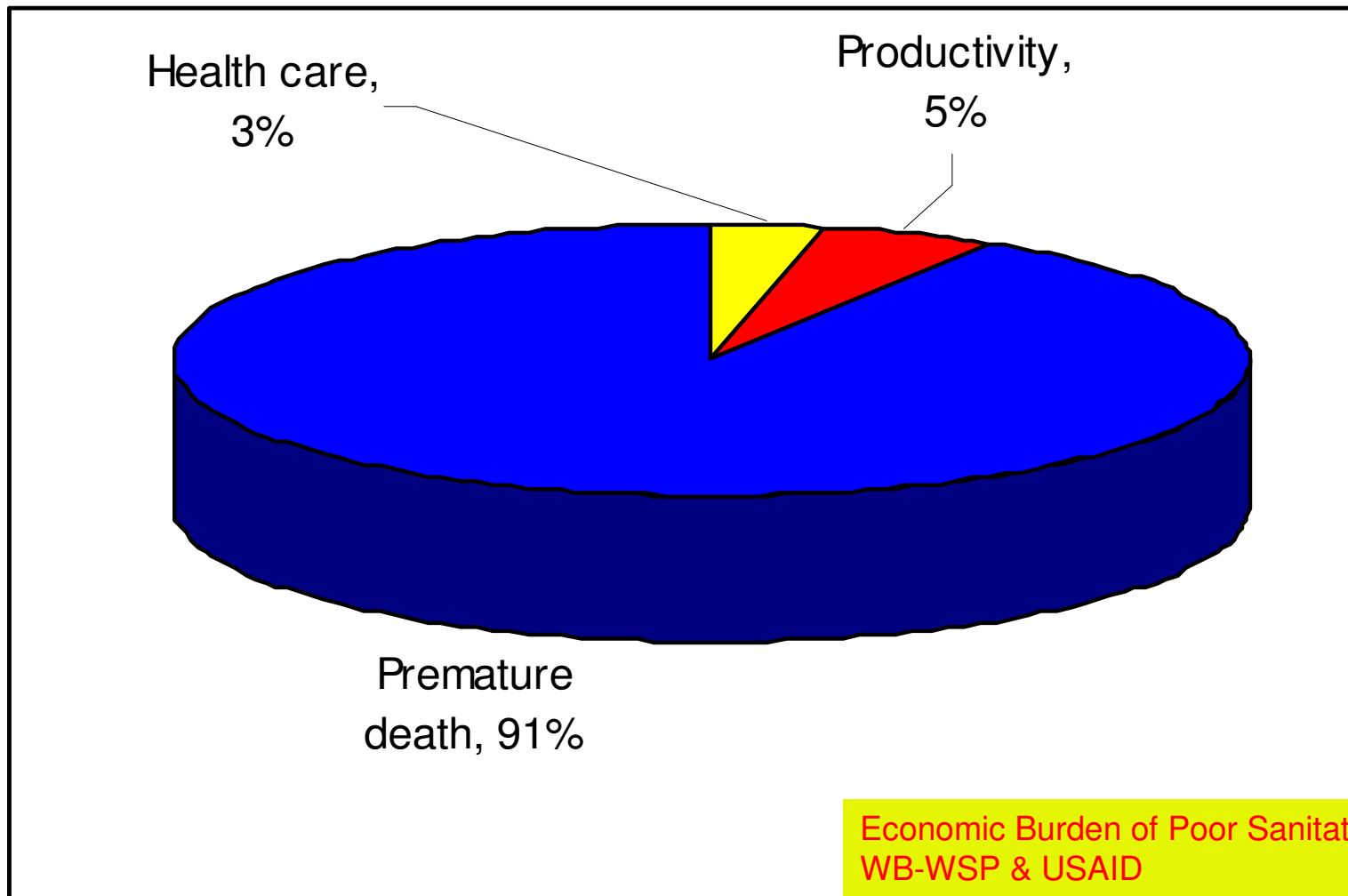


Percentage of Diseases and Deaths attributed to Air and Water Pollution, Sanitation and their Economic Costs

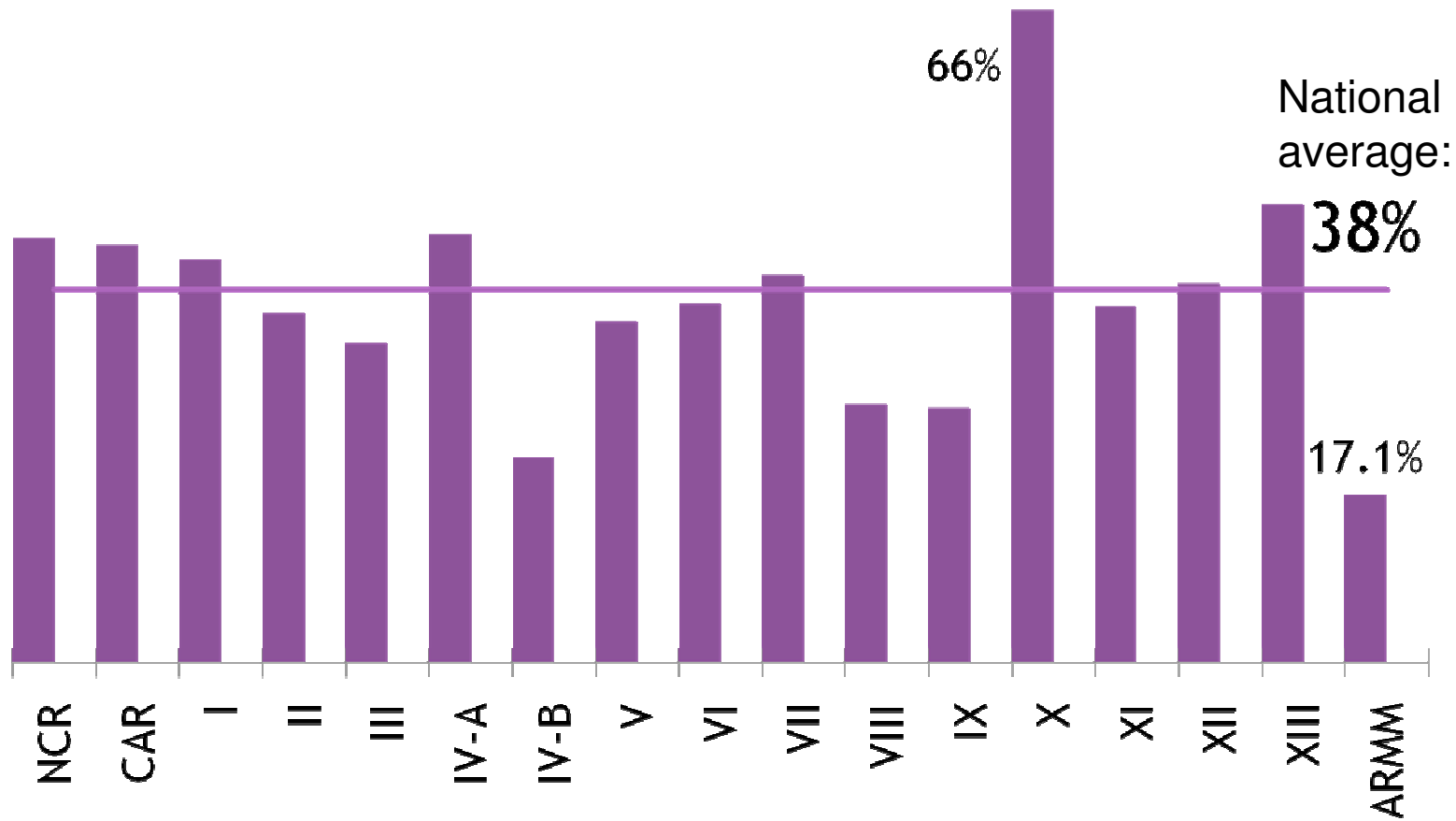
	% of reported diseases	% of reported deaths	Economic costs (US\$ million/yr)
Air pollution	5	4	153
Water pollution, sanitation	17	1.5	134
Total	22	5.5	287

PEM, 2007

Health-related costs from poor sanitation (US\$ 1 billion/ year)

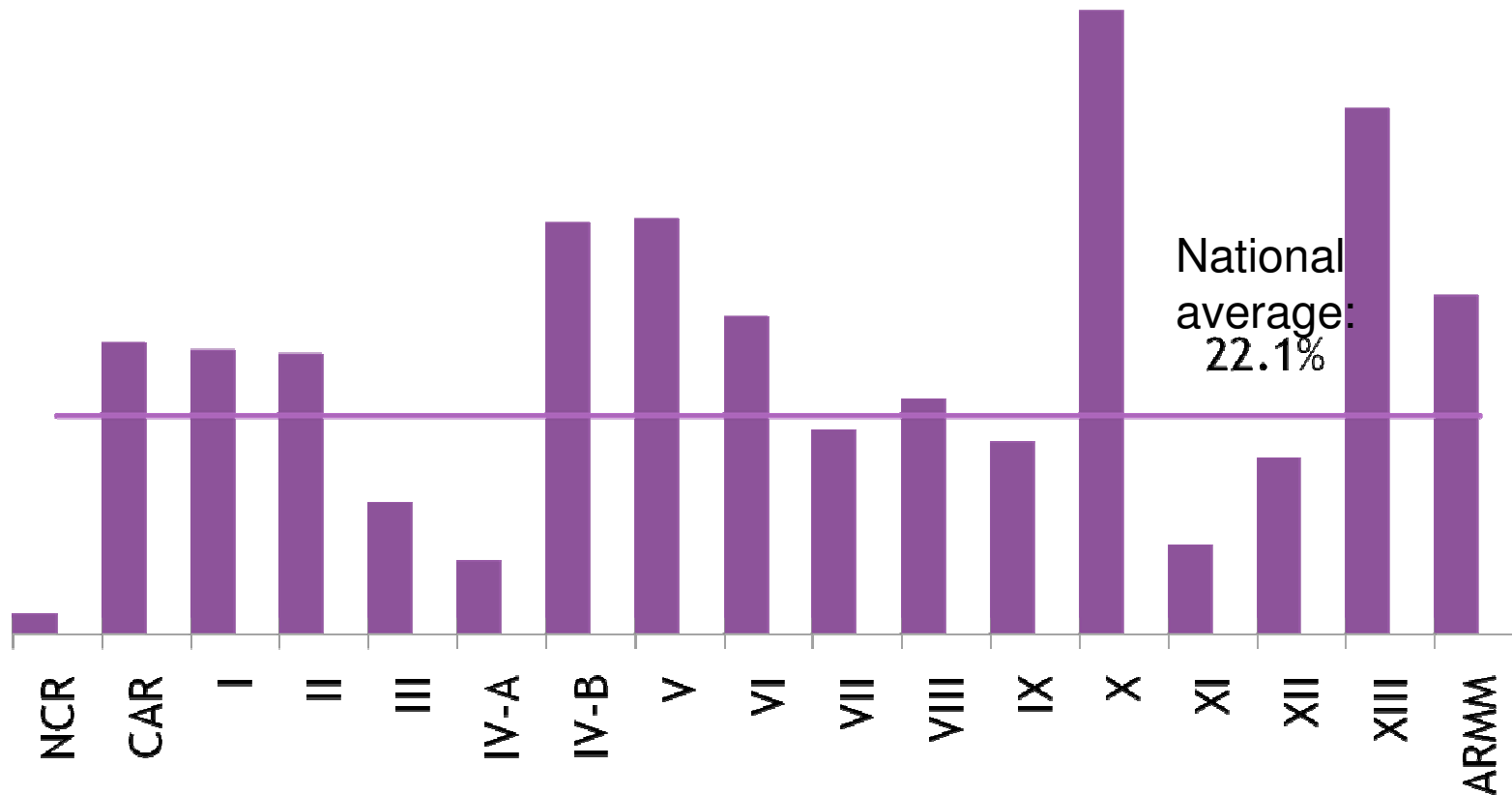


PHILHEALTH COVERAGE



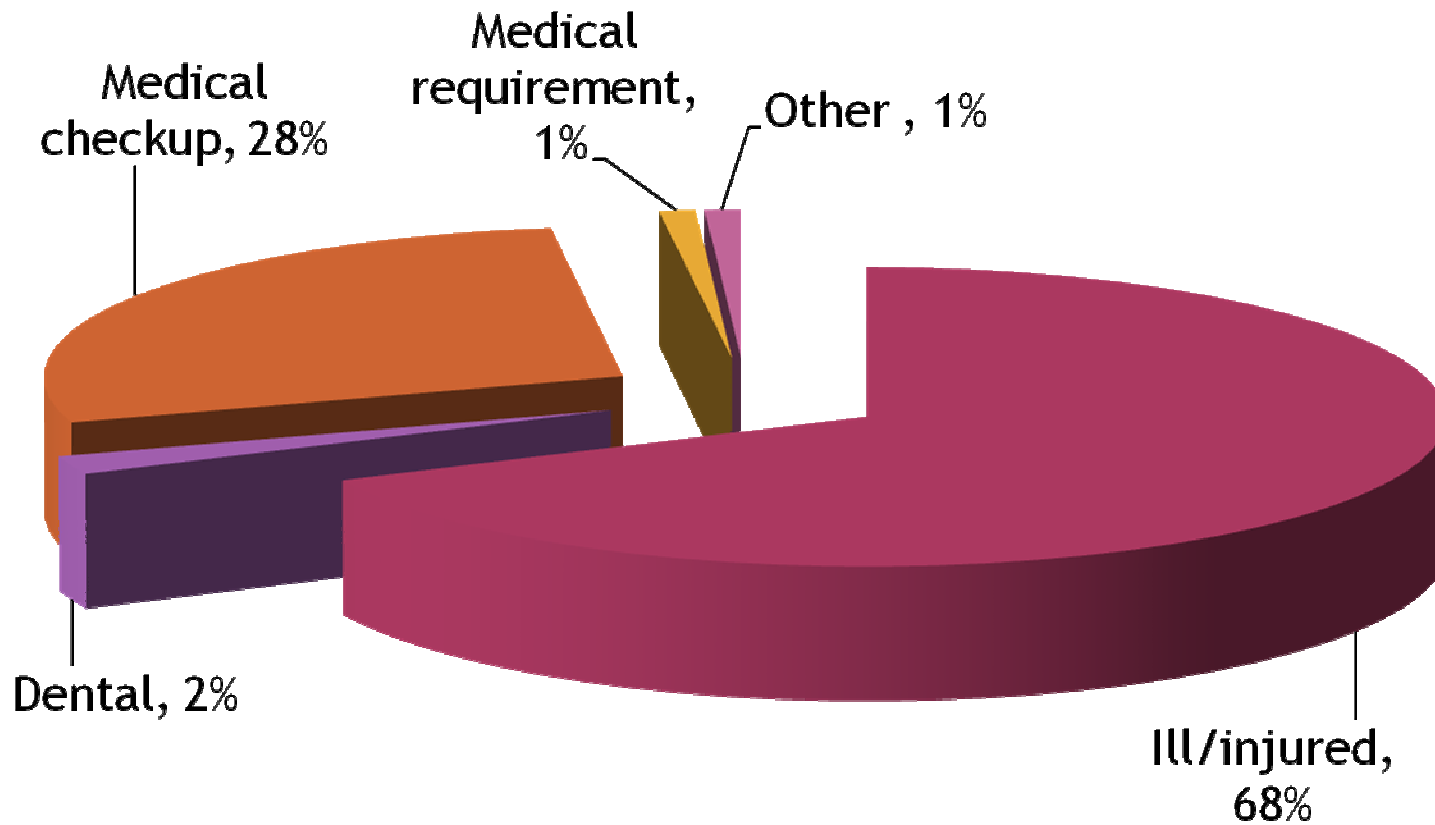
- 38% of population with PhilHealth coverage compared to 30% in the 2003 NDHS

COVERAGE IN SPONSORED PROGRAM

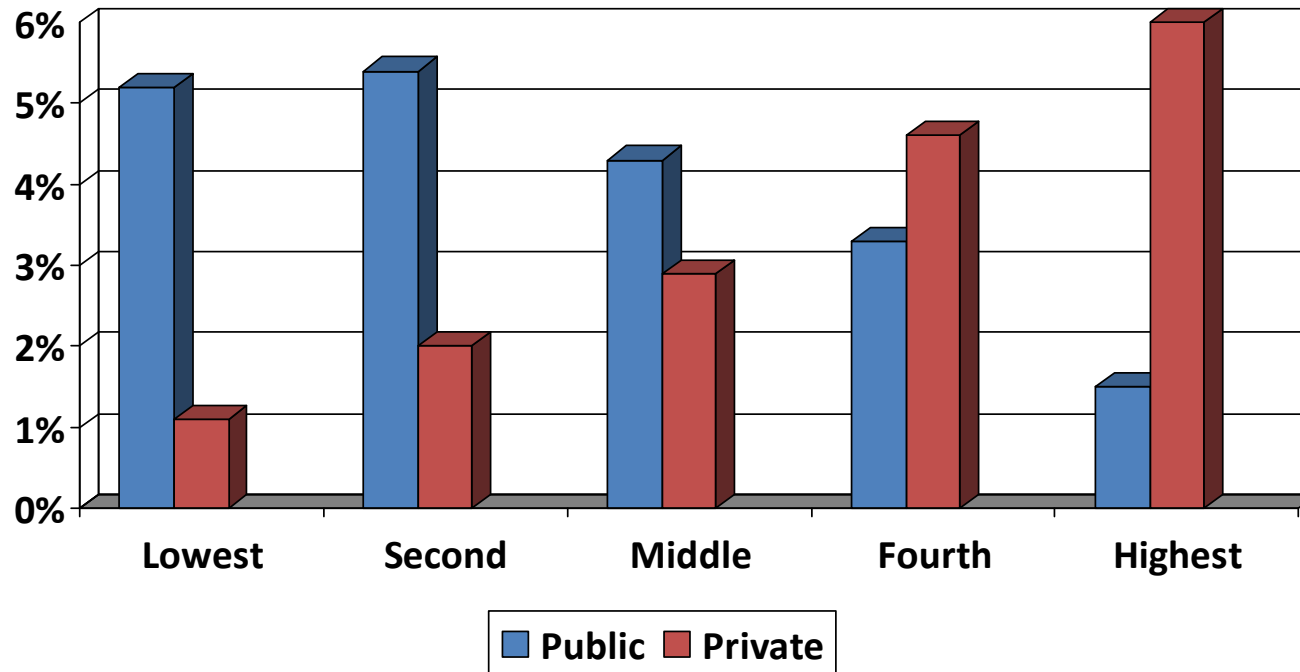


- Among beneficiaries belonging to the lowest and second lowest income quintiles, only 73% and 49% are covered under the sponsored program respectively

REASON FOR USE OF HEALTH CARE SERVICES



USE OF HEALTH CARE SERVICES BY ECONOMIC GROUP

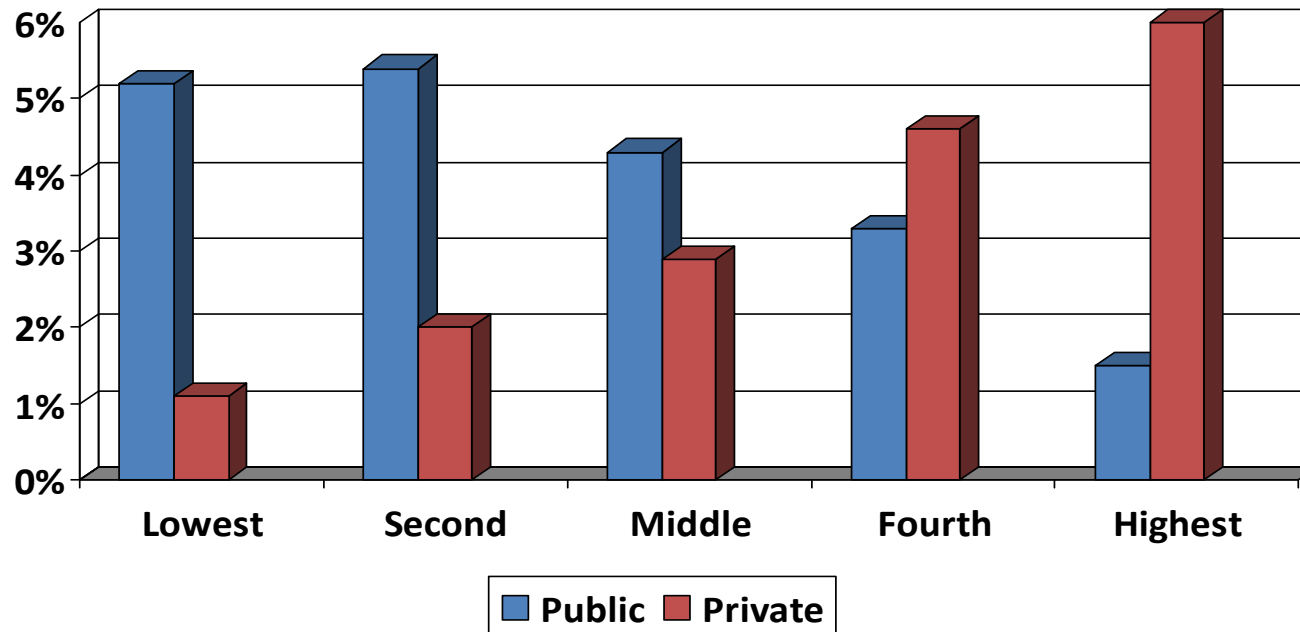


- 3.9% and 3.3% visited or sought advice/treatment from public and private health care providers in past 30 days
- Use of private health care increases with economic status while the use of publicly provided health care moves in the opposite direction (Table 14.3)

COSTS OF IN-PATIENT CARE

- Average cost of confinement is Php16,800
 - Less than 1% reported obtaining in-patient care for free
 - Average cost of confinement in public facilities is Php9,800
 - Average cost of confinement in private facilities is Php24,300

USE OF HEALTH CARE SERVICES BY ECONOMIC GROUP



- 3.9% and 3.3% visited or sought advice/treatment from public and private health care providers in past 30 days
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VARIATIONS IN THE USE OF HEALTH CARE SERVICES

- Among those who used health care services:
 - Use of regional hospital services highest in NCR and lowest in Bicol
 - Use of provincial and district hospital services highest in CAR and lowest in NCR
 - Use of RHU services highest in SOCCSKARGEN and lowest in CAR
 - Use of private hospital services highest in CALABARZON and lowest in Bicol
 - Use of alternative and non-professional health care services highest in Bicol

Predisposing Factors

- **maternal and child malnutrition**
- **high fertility and short birth intervals**
- **poor maternal care**
- **insufficient newborn care**
- **inappropriate infant and child feeding practices**
- **poor access to safe water and sanitation facilities**
- **poor access to basic health services**

Essential Health Interventions/ Child Survival Package

- 1. Skilled Attendance at prenatal, natal and post natal**
- 2. Newborn Care**
- 3. Infant and Young Child Feeding (IYCF)**
4. Immunization
- 5. Integrated Management of Childhood Illness (IMCI)**
- 6. Micronutrient Supplementation and De-worming**
- 7. Birth Spacing (part of pre and postnatal care)**
- 8. Injury prevention and control**
- 9. Water, Sanitation and Hygiene**
- 10. Use of Insecticide treated nets (in Malaria endemic areas)**

Let's turn the crisis around and
transform it into an opportunity to
move forward

If having less makes us more focused
and selective in our spending, or more
rational in our choices, then this crisis
would have served us well.

Thank you