

Health inequality monitoring: with a special focus on low- and middle-income countries

Lecture 8: Cumulative example of health inequality monitoring in the Philippines



**World Health
Organization**

Defining a health topic (Lecture 1)

- **Reproductive, maternal and child health** is a relevant and appropriate topic for health inequality monitoring in the Philippines

Selecting relevant health indicators (Lecture 2)

- Broad health topic, so all components of the monitoring, evaluation and review framework have relevance
- Outcomes and impact indicators are most closely relevant to topic
- Here, the example focuses on outcome indicators that span reproductive health services, maternal health services, preventive care for children and care-seeking for children

Selecting relevant health indicators (Lecture 2)

	Outcomes indicator
Reproductive health services	Contraceptive prevalence: modern methods
	Contraceptive prevalence: modern and traditional methods
	Family planning needs satisfied
Maternal health services	Antenatal care: at least one visit
	Antenatal care: at least four visits
	Births attended by skilled health personnel
Preventive care for children	Early initiation of breastfeeding
	DTP3 immunization coverage among 1-year-olds
	Full immunization coverage among 1-year-olds
	Measles immunization coverage among 1-year-olds
	Vitamin A supplementation among children under five
Care seeking for children	Children under five with diarrhoea receiving oral rehydration therapy

Selecting relevant equity stratifiers (Lecture 2)

- Wealth
- Education
- Sex
- Urban or rural area
- Region

Data source mapping (Lecture 3)

Step 1: Data sources at the national level in the Philippines (partial table)

Data source type	Data source	Year(s) of data collection				Notes
Administrative	Live births by attendance	1995–2008				Annual collection
Vital registration	Philippines vital registration (births and deaths)	Ongoing				
Survey	Philippines standard DHS	1993	1998	2003	2008	

Data source mapping (Lecture 3)

Step 2: Data sources with information on specified equity stratifiers in the Philippines (partial table)

No.	Data source and year	Equity stratifier				
		Income, expenditure, consumption or asset index	Education	Sex	Place of residence	Province or region
1	Live births by attendance 1995–2008					√
2	Vital registration (births and deaths)			√		√
3	DHS 2008	√	√	√	√	√
4	DHS 2003	√	√	√	√	√
5	DHS 1998	√	√	√	√	√
6	DHS 1993		√	√	√	√

Data source mapping (Lecture 3)

Step 3: Data sources with information on specified health topics in the Philippines (partial table)

	Data source number					
Reproductive health services	3	4	5	6	...	
Maternal health services	1	3	4	5	6	...
Preventative care for children	3	4	5	6	...	
Care seeking for children	3	4	5	6	...	

Data source mapping (Lecture 3)

Step 4: Data source map in the Philippines, compiling data source information on specified equity stratifiers and health topics (partial table)

	Equity stratifier				
	Income, expenditure, consumption or asset index	Education	Sex	Place of residence	Province or region
Reproductive health services	3, 4, 5 ...	3, 4, 5, 6 ...	Not applicable	3, 4, 5, 6 ...	3, 4, 5, 6 ...
Maternal health services	3, 4, 5 ...	3, 4, 5, 6 ...	Not applicable	3, 4, 5, 6 ...	1, 3, 4, 5, 6 ...
Preventative care for children	3, 4, 5 ...	3, 4, 5, 6 ...	3, 4, 5, 6 ...	3, 4, 5, 6 ...	3, 4, 5, 6 ...
Care seeking for children	3, 4, 5 ...	3, 4, 5, 6 ...	3, 4, 5, 6 ...	3, 4, 5, 6 ...	3, 4, 5, 6 ...

Measuring health inequalities

(Lectures 4 and 5)

Table1 Measures used to quantify health inequality, by five equity stratifiers

Equity stratifier	Simple measures of inequality		Complex measures of inequality	
	Absolute	Relative	Absolute	Relative
Wealth	Difference	Ratio	Slope index of inequality	Concentration index
Education	Difference	Ratio	Slope index of inequality	Concentration index
Area	Difference	Ratio		
Sex	Difference	Ratio		
Region	Difference	Ratio	Variance or mean difference from overall mean	Theil index

Considerations for reporting (Lectures 6 and 7)

- Two indicators had very low sample sizes when disaggregated, and were excluded from inequality reporting:
 - Children with diarrhoea receiving oral rehydration therapy
 - Children with acute respiratory infection symptoms taken to a health facility
- Value judgments:
 - What level of inequality is deemed meaningful?
 - What magnitude of difference over time indicates an improvement?
 - Against which other countries should the Philippines be benchmarked?
 - Which indicators should be highlighted/emphasized?
 - Are simple measures an appropriate representation of the situation?

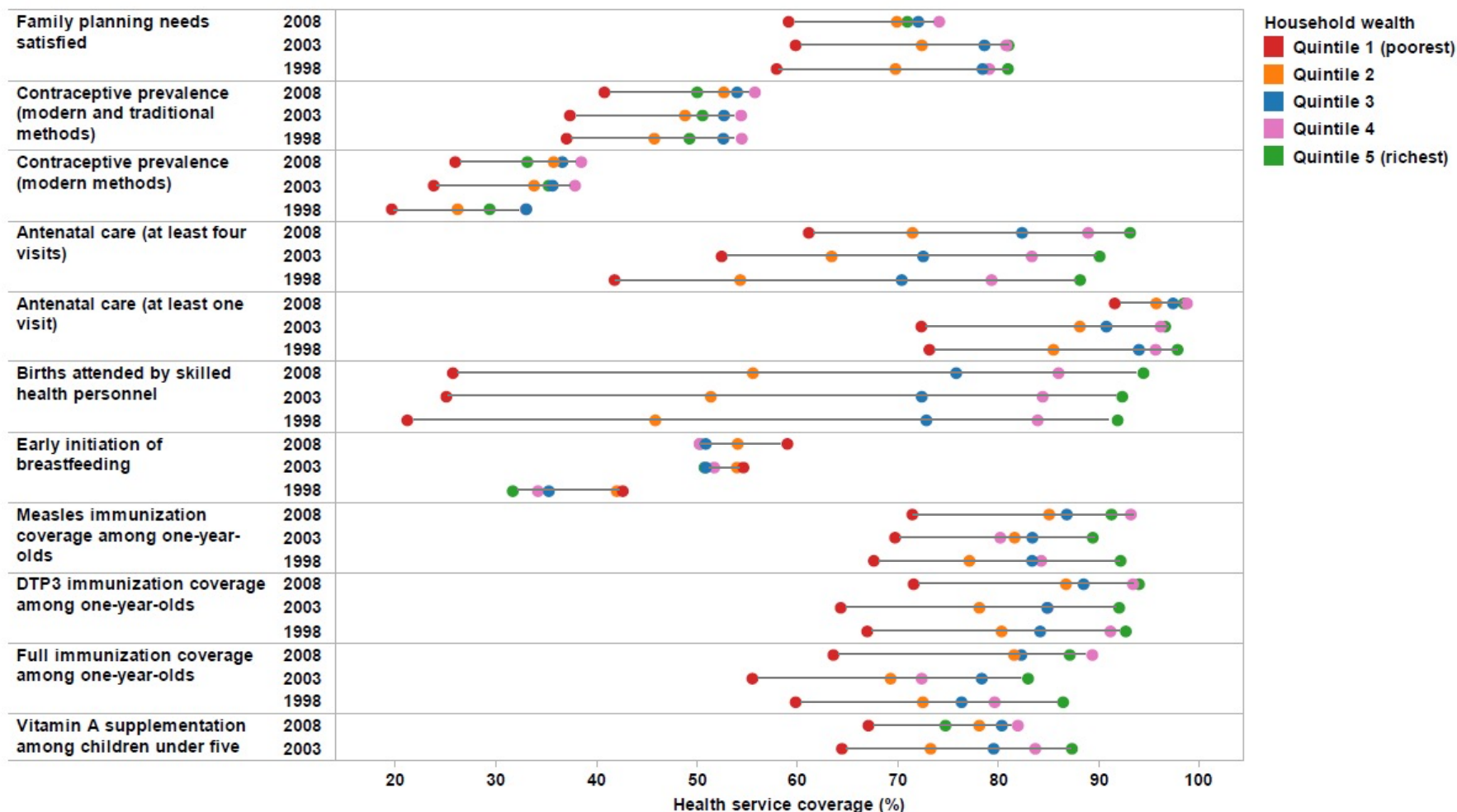
Reporting latest status (Lectures 6 and 7)

Table 2 Latest status of wealth-based inequality in selected reproductive, maternal and child health service indicators in the Philippines, DHS 2008

Indicator	National average (%)	Quintile 1 (poorest) (%)	Quintile 2 (%)	Quintile 3 (%)	Quintile 4 (%)	Quintile 5 (richest) (%)	Difference (quintile 5 – quintile 1) (percentage points)	Ratio (quintile 5 / quintile 1)
Contraceptive prevalence: modern methods	34.0	26.0	35.7	36.6	38.5	33.1	7.2	1.3
Contraceptive prevalence: modern and traditional methods	50.7	40.8	52.7	54.0	55.8	50.0	9.2	1.2
Family planning needs satisfied	69.4	59.1	69.9	72.0	74.1	70.9	11.8	1.2
Antenatal care: at least one visit	96.1	91.6	95.7	97.4	98.8	98.5	6.9	1.1
Antenatal care: at least four visits	77.8	61.1	71.5	82.4	88.9	93.1	32.0	1.5
Births attended by skilled health personnel	62.2	25.7	55.6	75.8	86.0	94.4	68.7	3.7
Early initiation of breastfeeding	53.5	59.0	54.1	50.9	50.3	50.3	–8.7	0.9
DTP3 immunization among 1-year-olds	85.6	71.6	86.7	88.5	93.4	94.0	22.4	1.3
Full immunization coverage among 1-year-olds	79.5	63.6	81.6	82.3	89.4	87.1	23.5	1.4
Measles immunization among 1-year-olds	84.5	71.4	85.1	86.8	93.2	91.3	19.8	1.3
Vitamin A supplementation among children under five	75.9	67.1	78.1	80.3	81.9	74.7	7.7	1.1

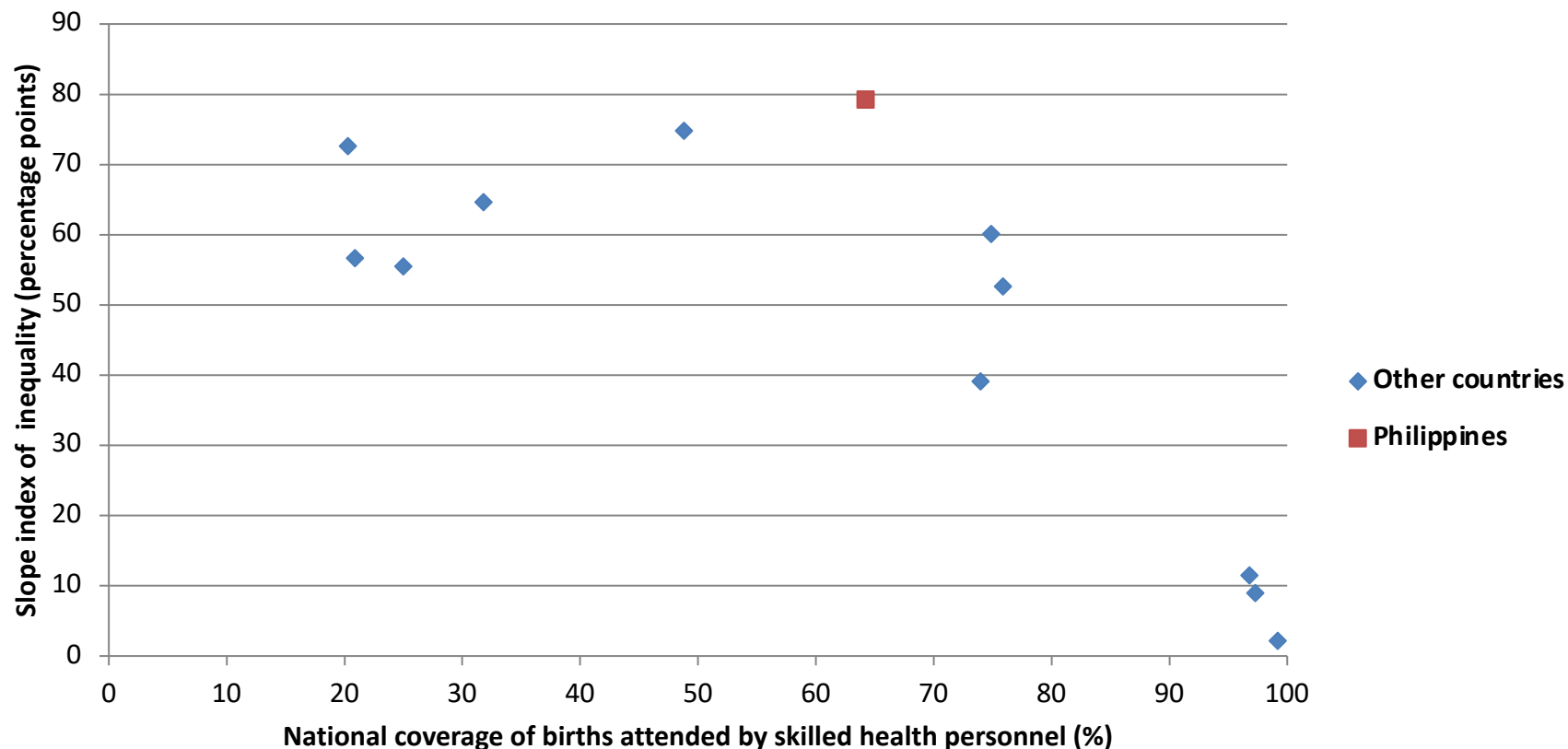
Reporting time trend (Lectures 6 and 7)

Figure 1 Time trend of selected reproductive, maternal and child health service indicators in the Philippines, by wealth quintile, DHS 1998, 2003 and 2008



Reporting benchmarking (Lectures 6 and 7)

Figure 2 Benchmarking the latest status of wealth-based absolute inequality in births attended by skilled health personnel in the Philippines against 11 other low- and middle-income Asia-Pacific countries, DHS and MICS 2005–2010



Defining priority areas (Lecture 7)

Assessing the latest status of inequality and national average in various reproductive, maternal and child health service indicators in the Philippines with a simple numerical scale

Health indicator	Inequality by equity stratifier										National average
	Wealth		Education		Sex		Area		Region		
	Absolute	Relative	Absolute	Relative	Absolute	Relative	Absolute	Relative	Absolute	Relative	
Family planning needs satisfied	2	1	2	2			1	1	3	2	2
Contraceptive prevalence: modern methods	2	2	2	2			1	1	2	3	2
Contraceptive prevalence: modern and traditional methods	2	2	2	2			1	1	2	3	2
Antenatal care: at least one visit	1	1	2	2			1	1	1	1	1
Antenatal care: at least four visits	2	3	3	3			2	1	3	2	2
Births attended by skilled health personnel	3	3	3	3			3	2	3	3	3
Early initiation of breastfeeding	1	1	1	1	1	1	1	1	1	1	2
Measles immunization coverage among 1-year-olds	2	2	3	3	1	1	1	1	3	2	2
DTP3 immunization coverage among 1-year-olds	2	2	3	2	1	1	1	1	3	2	1
Full immunization coverage among 1-year-olds	2	2	3	3	1	1	1	1	3	2	2
Vitamin A supplementation among children under five	2	1	2	2	1	1	1	1	2	2	2

Defining priority areas (Lecture 7)

Prioritizing the latest status of inequality and national average in various reproductive, maternal and child health service indicators in the Philippines, using average scores for health indicators and equity stratifiers

Health indicator	Inequality by equity stratifier											Average inequality score	National average
	Wealth		Education		Sex		Area		Region				
	Absolute	Relative	Absolute	Relative	Absolute	Relative	Absolute	Relative	Absolute	Relative			
Family planning needs satisfied	2	1	2	2			1	1	3	2	→	1.8	2
Contraceptive prevalence: modern methods	2	2	2	2			1	1	2	3	→	1.9	2
Contraceptive prevalence: modern and traditional methods	2	2	2	2			1	1	2	3	→	1.9	2
Antenatal care: at least one visit	1	1	2	2			1	1	1	1	→	1.3	1
Antenatal care: at least four visits	2	3	3	3			2	1	3	2	→	2.4	2
Births attended by skilled health personnel	3	3	3	3			3	2	3	3	→	2.9	3
Early initiation of breastfeeding	1	1	1	1	1	1	1	1	1	1	→	1.0	2
Measles immunization coverage among 1-year-olds	2	2	3	3	1	1	1	1	3	2	→	1.9	2
DTP3 immunization coverage among 1-year-olds	2	2	3	2	1	1	1	1	3	2	→	1.8	1
Full immunization coverage among 1-year-olds	2	2	3	3	1	1	1	1	3	2	→	1.9	2
Vitamin A supplementation among children under five	2	1	2	2	1	1	1	1	2	2	→	1.5	2
	↓		↓		↓		↓		↓				
Average score- equity stratifiers	1.9		2.3		1.0		1.2		2.2				

Implementing changes

- Births attended by skilled health personnel was identified as a high-priority indicator
 - There is a need to train additional skilled providers, keep them working in the Philippines and develop a financing system that will bring skilled providers to underserved areas
 - Thus, this may be an expensive, long-term investment
- By comparison, DTP3 immunization was a lower-priority indicator
 - HOWEVER, it may make more sense to prioritize DTP3 in a national policy agenda, as coverage may be more easily and cost-effectively improved
- For policy-makers and/or the public, an inequality assessment should highlight a variety of relevant indicators

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Full text available online:

http://apps.who.int/iris/bitstream/10665/85345/1/9789241548632_eng.pdf

HANDBOOK ON

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