# Measuring Universal Coverage

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# Outline

- Universal coverage
- Financial risk protection and poverty impact
  - Current measures
  - Main results
  - Limitations
- Access to health services
  - Current measures
  - Main results
  - Limitations
- Future research areas

# Universal Coverage

- Universal coverage is not new
  - 1948: the aspiration to attain universal coverage was included in WHO's constitutions
  - 1978: the Alma-Ata declaration
  - 2005: World Health Assembly Resolution (58.33)
  - 2008: World Health Report on Primary Health Care
  - 2010: World Health Report on Health Systems Financing- The Path to Universal Coverage

- However, the concept universal coverage has been used with different and somewhat confusing meanings over time.
  - Free of charge on specific disease interventions
  - Free services for all
  - Everyone covered by health insurance

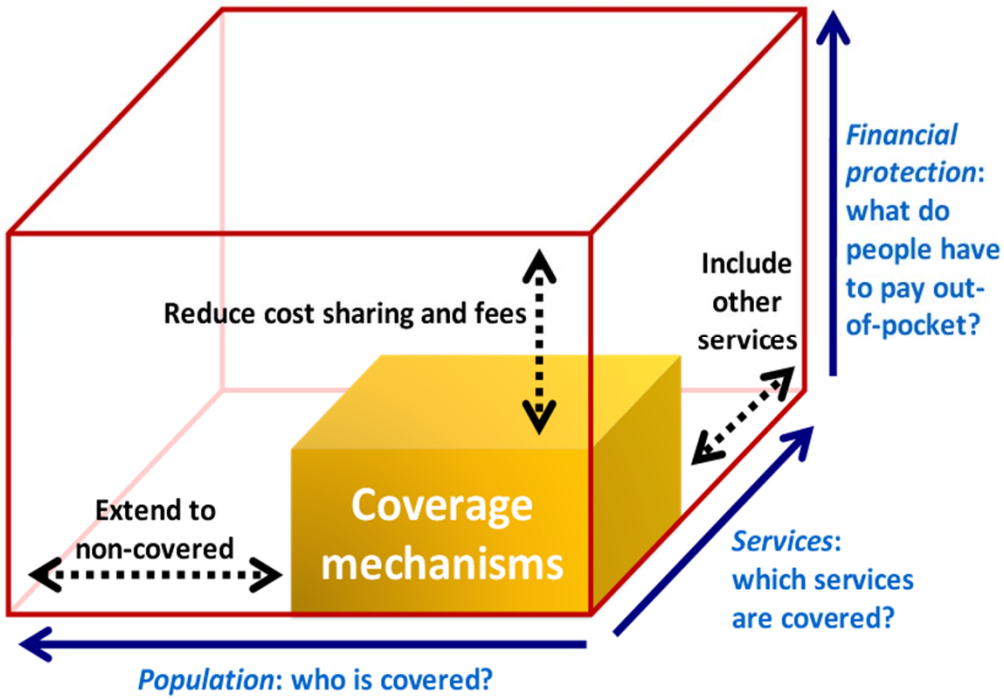
# Definition of Universal Coverage

## Universal Coverage

- All countries should develop their health financing systems to ensure all people have access to needed services without the risk of financial hardship linked to paying for care.
- Universal Coverage is coverage with health services; with financial risk protection; for all

***World Health Assembly resolution on "Sustainable health financing, universal coverage and social health insurance" 2005.***

## Three Dimensions



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# What Do We Measure?

**Financial protection** and **access to services**

- Using different indicators to measure the two elements
- Build a composite (summary) indicator capturing both financial protection and access to services

# Measuring Financial Risk Protection and Poverty Impact

Principle

Household should NOT face financial difficulties as a result of paying for needed health services

- *Indicators*
- *Main findings*
- *limitations*

# The Choice of Indicators

- Percentage of households with catastrophic health expenditure
  - When the medical bills of one or more of their members are high in relation to their capacity to pay, households must reduce their expenditure on other necessities for a period of time.
  - Measured as out-of-pocket payments equal to or exceeding a certain level (such as 40%) of household non-subsistence consumption expenditure or capacity to pay.

$$\frac{oop}{capacity\_to\_pay} \geq 40\%$$

- Impoverishment
  - Difference in head counts before and after out-of-pocket health payments
- Intensity of poverty
  - Difference in poverty gap before and after OOP out-of-pocket health payments

# Out-of-pocket Payments (OOP)

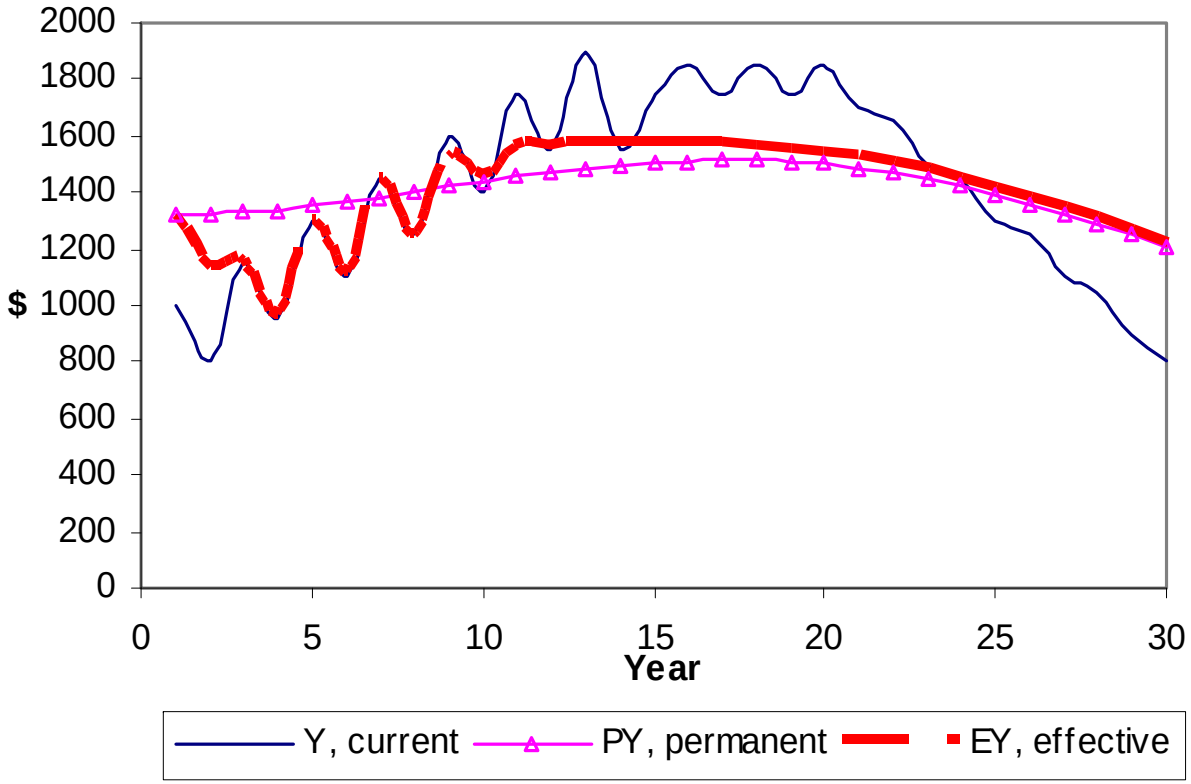
- 'Out-of-pocket health payments' refers to the payments made by households at the point that they receive health services.

- Include
  - doctor's consultation fees,
  - purchases of medication
  - hospital bills
  - Lab costs
  - spending on alternative and traditional medicine

- Exclude
  - transportation
  - special nutrition
  - insurance reimbursemen

# How to Measure Household's Capacity to Pay?

- Current income
- Permanent income
- Effective income



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# Estimation of Effective Income from Household Surveys

- Consumption expenditure is used to estimate effective income
  - Household consumption expenditure comprises both monetary and in-kind payments on all goods and services, plus the money value of the consumption of home-made products.
  - Reported income, reported expenditure and asset index
    - Expenditure data in household survey is more reliable than reported income
    - Assets reflect wealth (permanent income); expenditures reflect current living condition

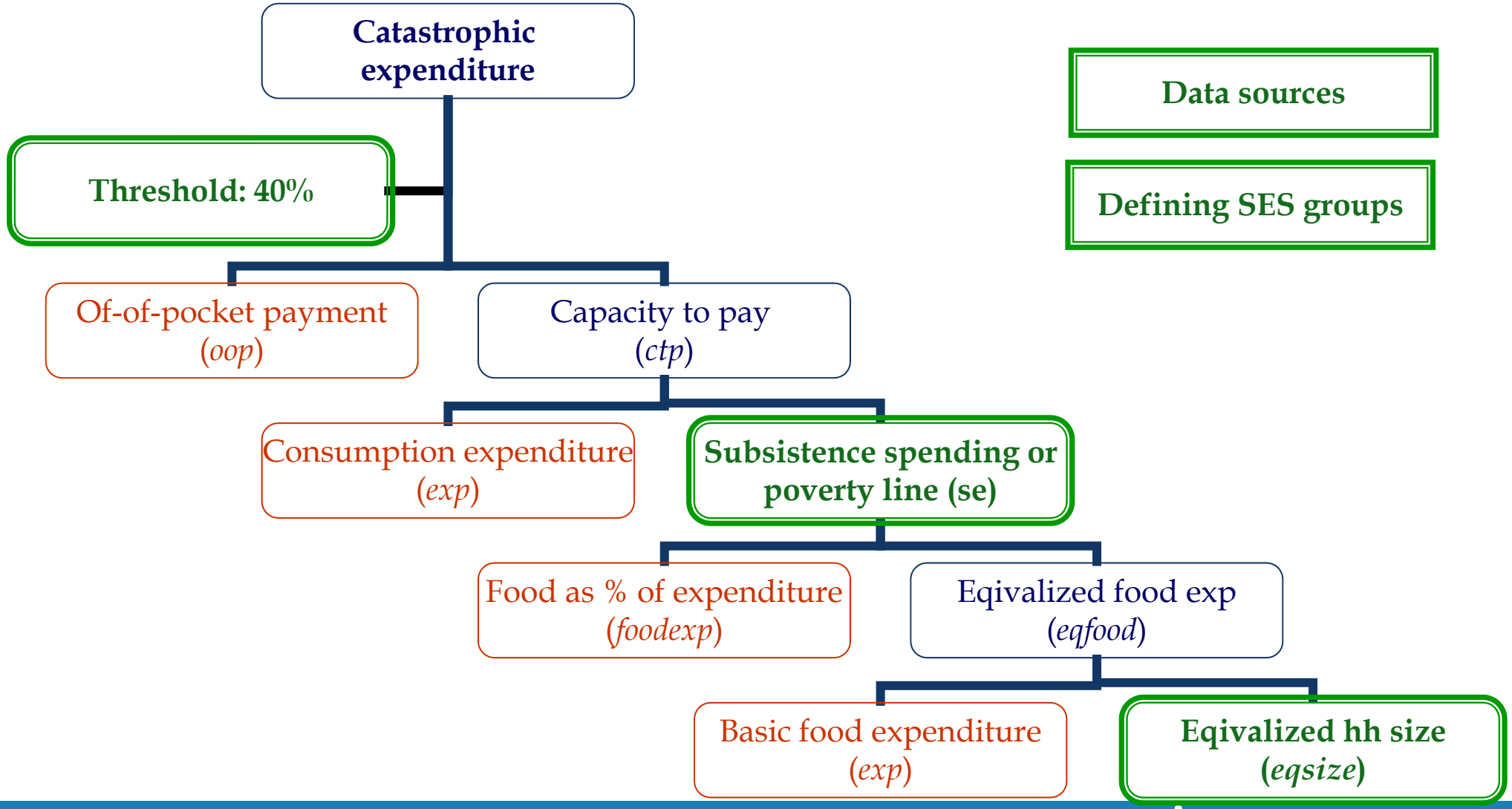
Is household consumption expenditure a good measure of capacity to pay for health service?


# Subsistence Spending

- **Household basic food expenditure**
  - NOT including eating out in a restaurant
  - NOT include alcohol and tobacco
- **Household basic food plus other basic spending**
- **The international poverty line**
  - $1 a day per person (1985), converted to local currency, survey year using food PPP adjusted by household size
- **Food based poverty line**
  - the average basic food expenditure of households whose food share of total household expenditure is between the 45th and 55th percentile
  - adjusted by equivalent household size

$$eqsize_h = hhsize_h^{\beta} \qquad \beta = 0.56$$

# Critical Steps and Assumptions



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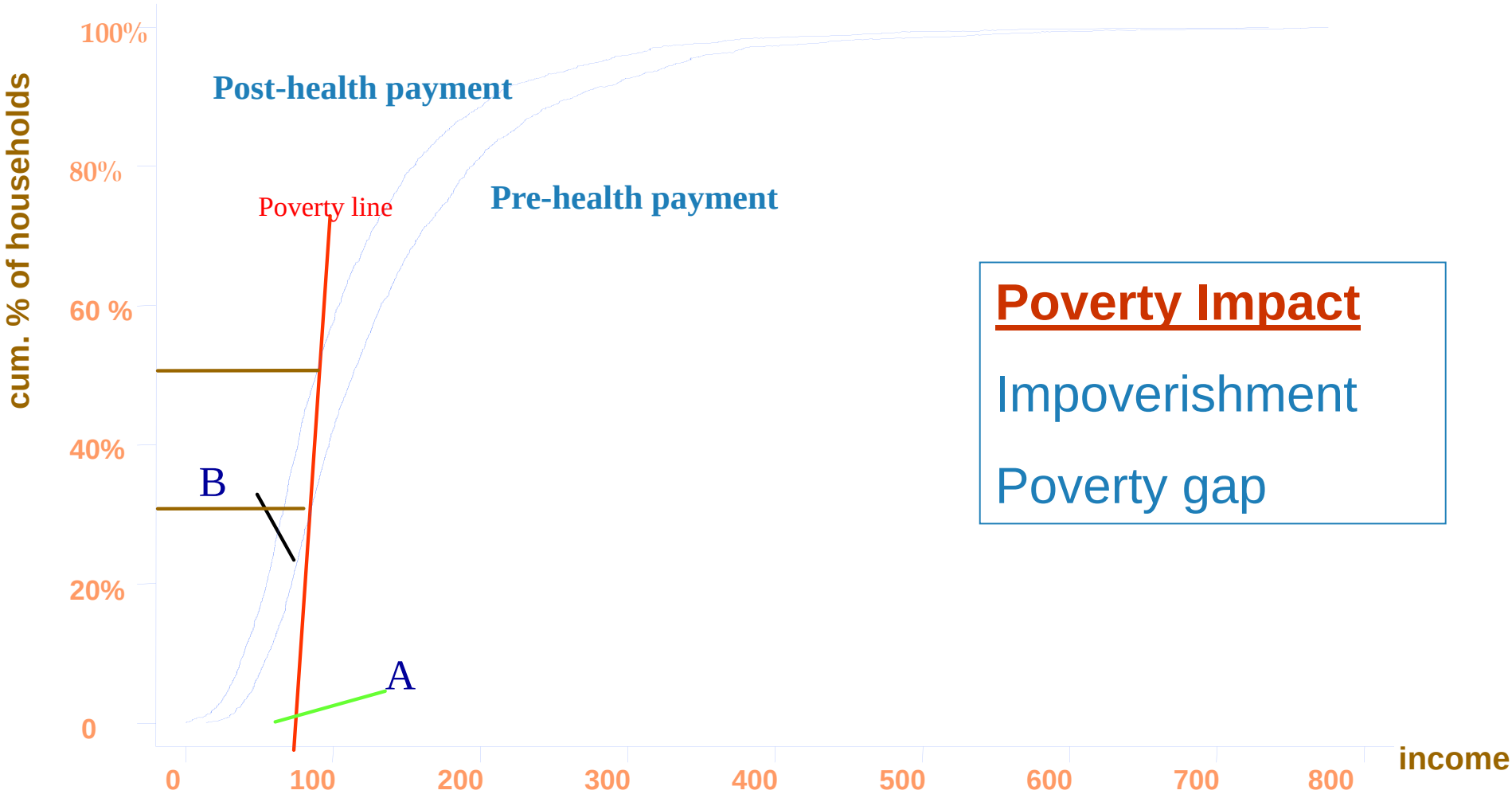
# Poverty Impact

- Impoverishment
  - Difference in head counts difference before and after out-of-pocket health payments
- Intensity of poverty
  - Difference in poverty gap before and after OOP out-of-pocket health payments

# Threshold Measure: Income Approach




**Poverty Impact**

Impoverishment

Poverty gap



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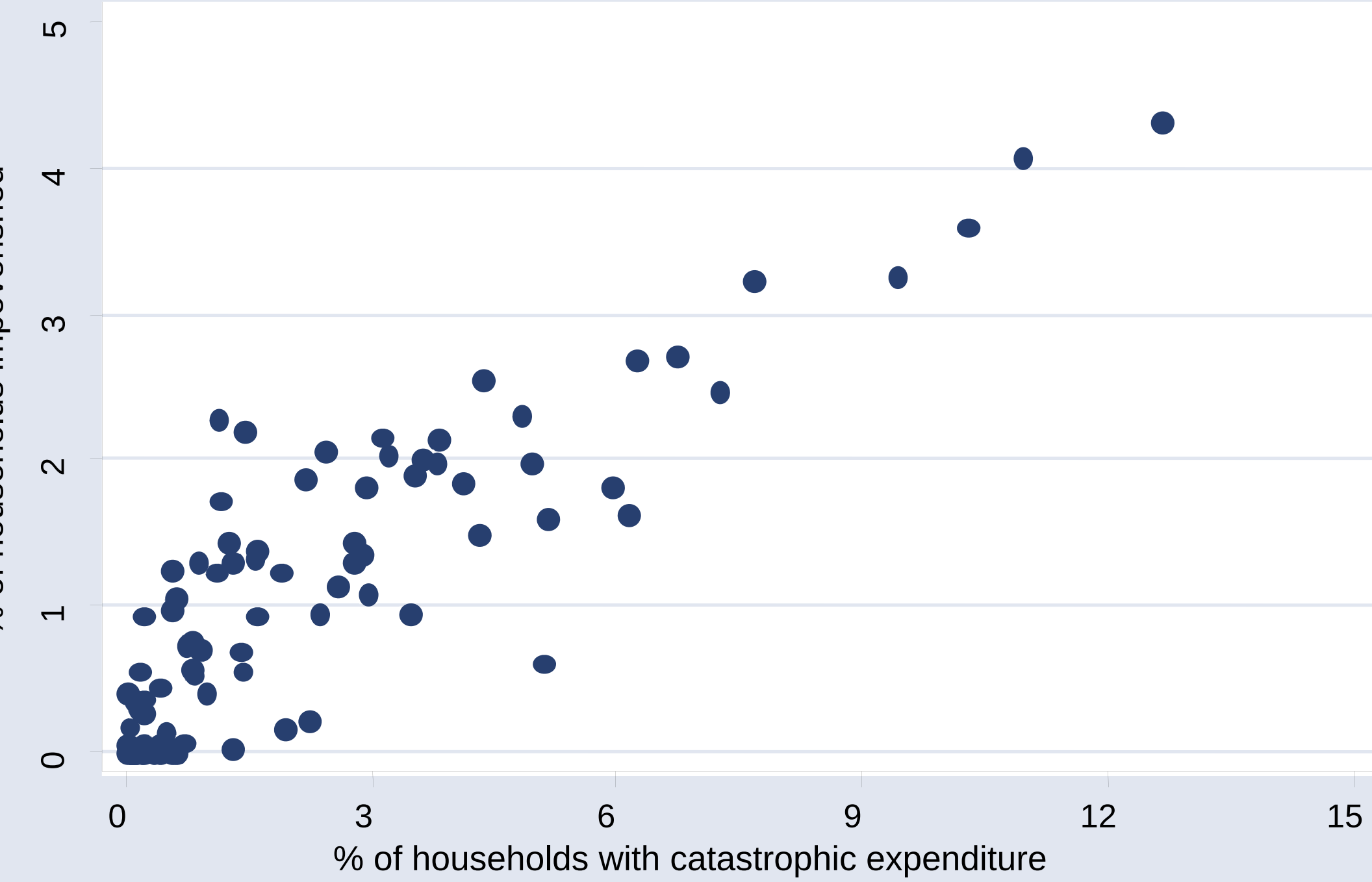
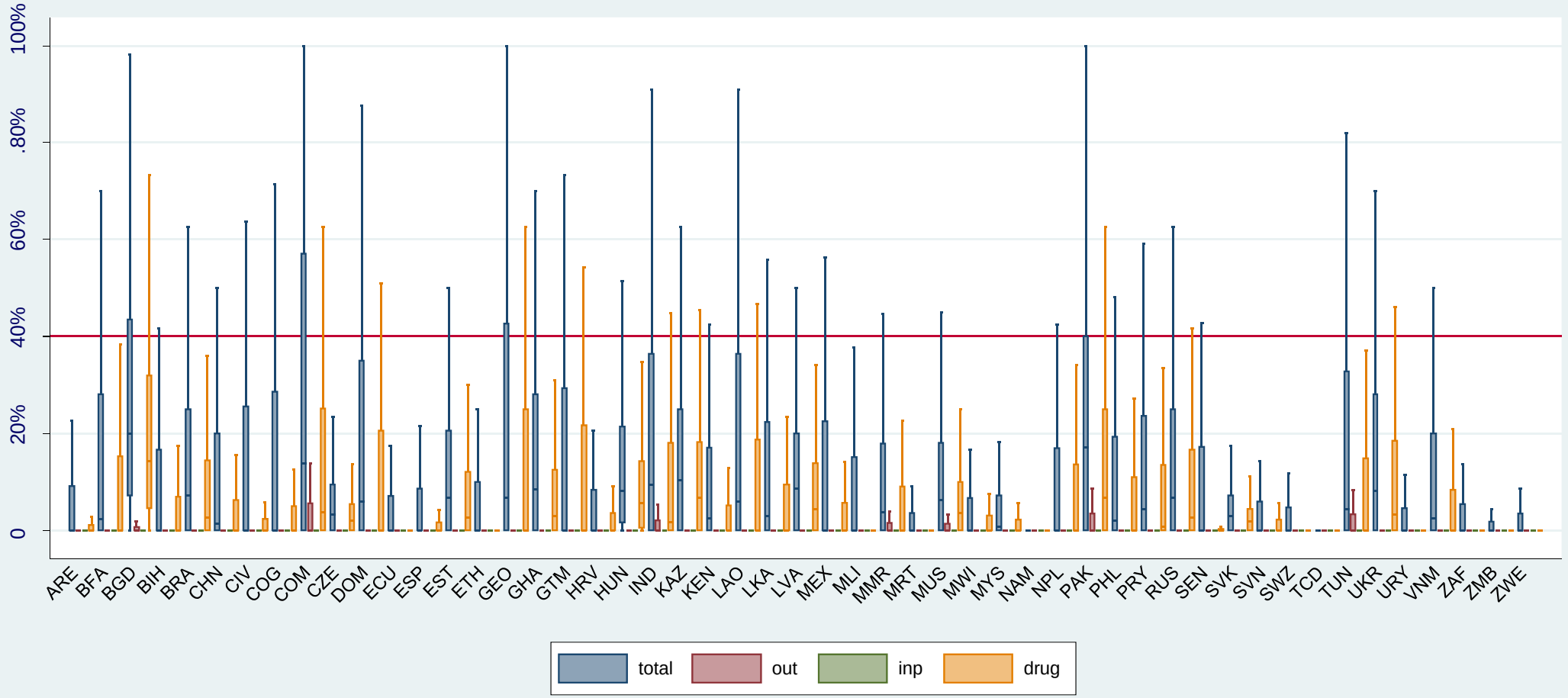
# Households with Catastrophic Expenditures and Impoverishment



# The Burden of Health Payments by Different Services




Data source: WHS 2002/2003



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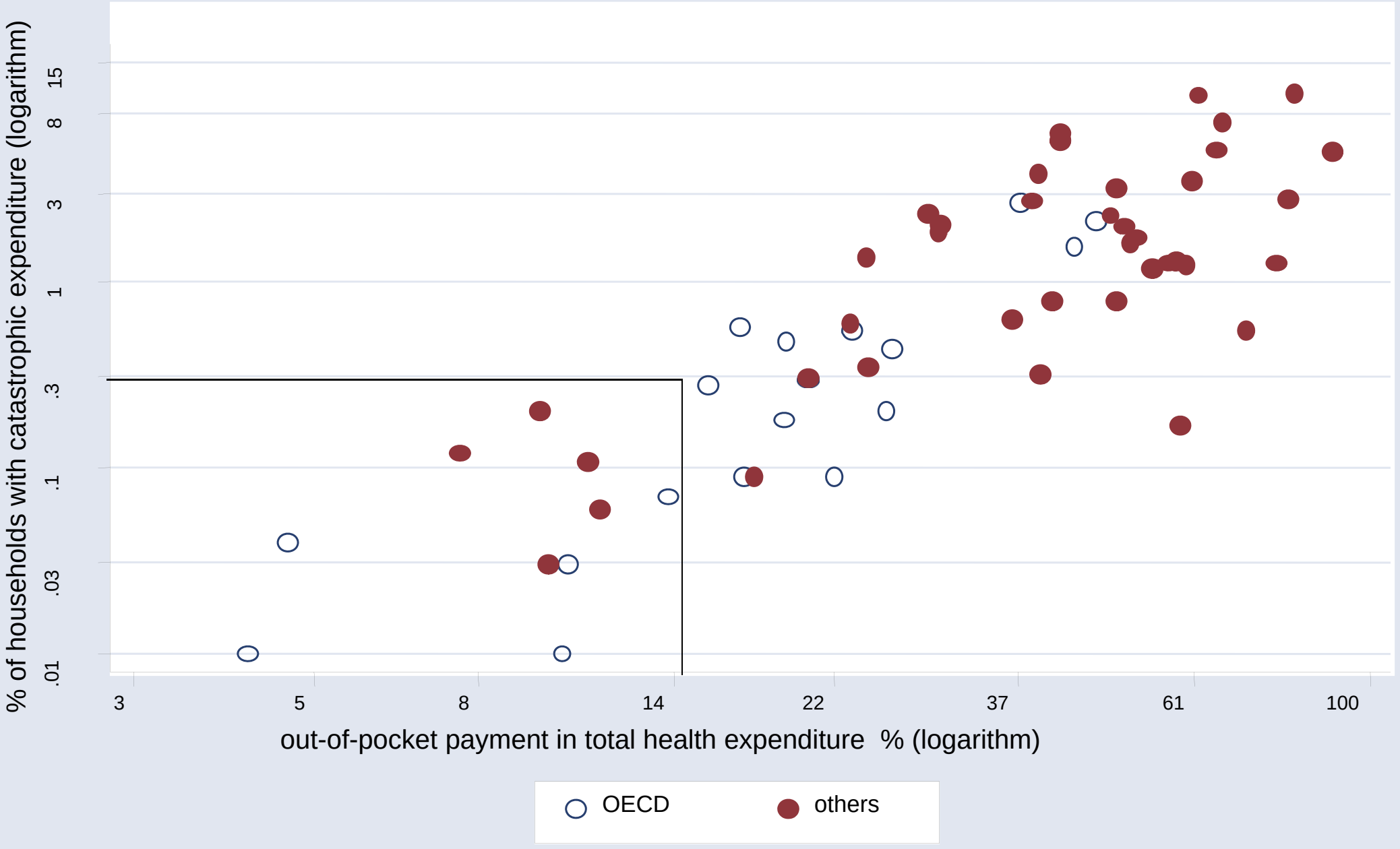
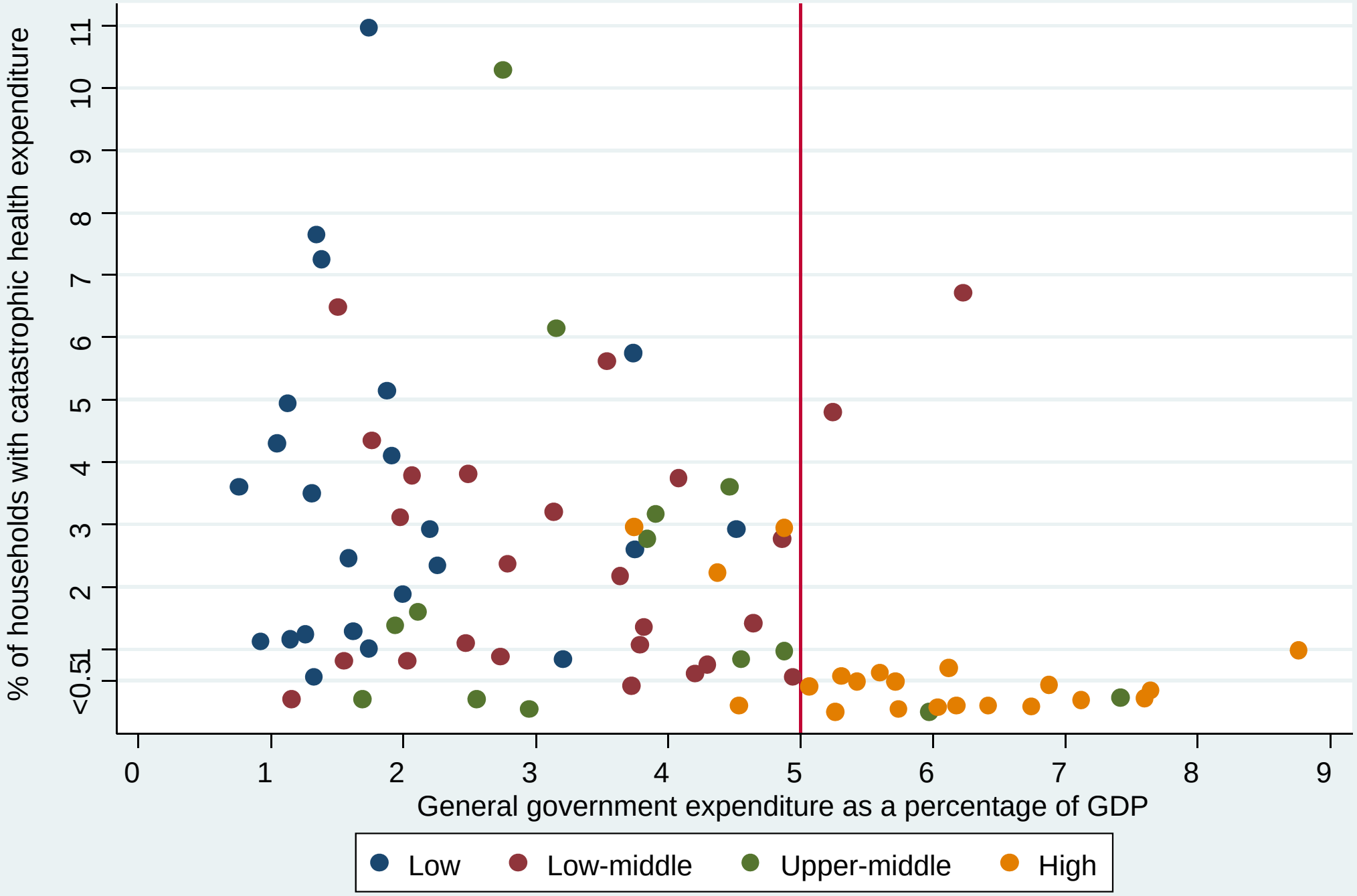
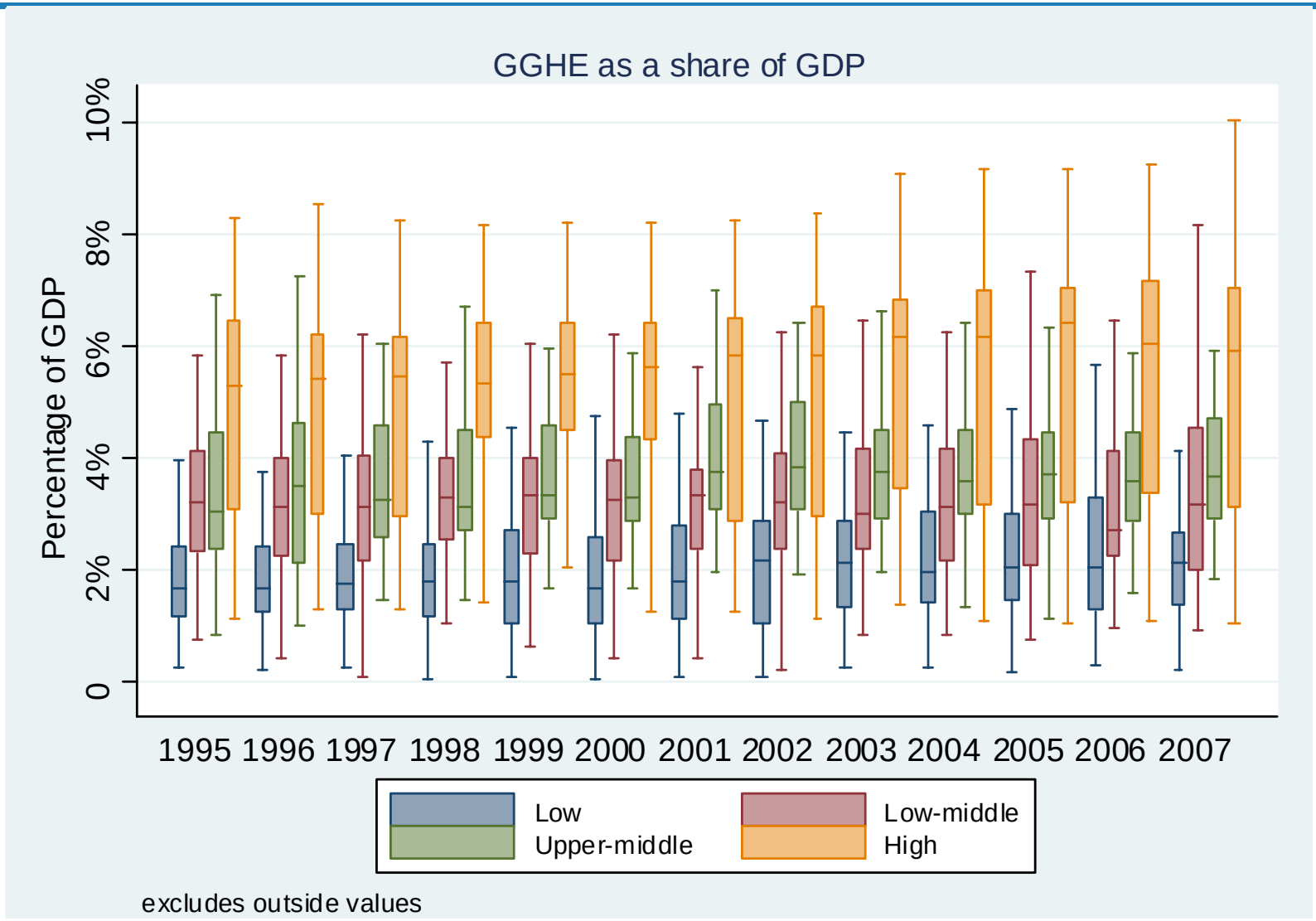
# Proportion of households with catastrophic expenditures vs. share of out-of-pocket payment in total health expenditure



# Catastrophic Health Expenditure and Government Health Expenditure



# Government Expenditure on Health as a Share of GDP



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# Highlights on Catastrophic Expenditure From Previous Study

- Reducing out-of-pocket payment is one of the key factors in protecting households form financial catastrophe.
  - OOP%THE<20%; GGHE%GDP>5-6%
- No difference is found between social health insurance or tax-based financing systems in terms of protecting households against catastrophic expenditures.
- OOP on outpatient services and medicines contribute to catastrophic expenditure as well, particularly for those with chronic health conditions.
- Income inequality associated with a high level of catastrophic health expenditure.
- Countries at different income levels may have different focus:
  - Increasing the availability of health services with current prepayment level may cause more households to face financial catastrophe in low and middle income countries, but not in high income countries.
  - Demographic factors (children and elderly population) are associated with high catastrophic expenditure in middle income, but not in low and high income countries

# Limitations of the Indicators

- Non-users of health services are not considered in the analysis
- The impact of health payment on poverty and household financial burden is restricted to the recall period used in data collection.
- Long term coping impact on household is not considered
- Definition of household capacity to pay
  - the trade off between underestimate and overestimate households' capacity to pay

# Data Issues
## Comparability: cross country and over time

- Data sources
  - Multipurpose surveys
    - Living Standard Measurement Survey (LSMS)
    - Socio-economic Survey (SES)
  - Household budget surveys
    - Income and Expenditure Survey (IES)
    - Household Budget survey (HBS)
    - Household Expenditure Survey (HES)
  - Health service surveys
    - Health Expenditure and Service Survey (HESS)
    - World Health Survey (WHS)
- Measurement errors
  - Sampling error
  - Non-sampling error
    - Survey design
    - The focus of the survey (types of the survey)
    - The length of questionnaires
    - Recall period
    - In-kind payment and durable goods
  - Data collection
    - Seasonal factor, interviewer, unexpected factor
  - Data entry

# Measuring Access to Health Services

Principle

Everyone should have access to needed effective interventions

- *Indicators*
- *Main findings*
- *limitations*

# Access

- Access to what?
  - Access to health facilities?
  - Access to medicines?
  - What about efficacy?
  - What about quality?

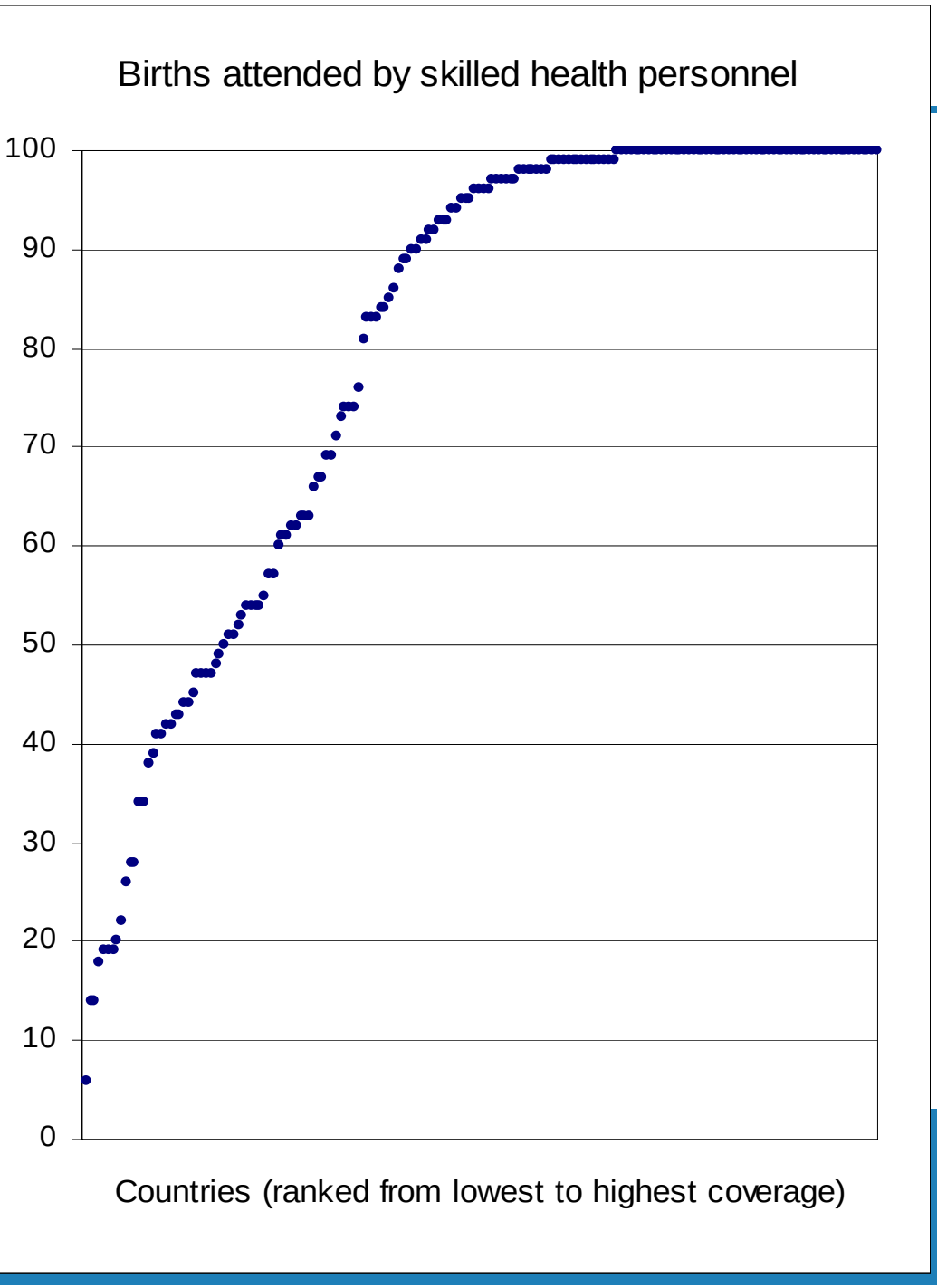
**Effective interventions**

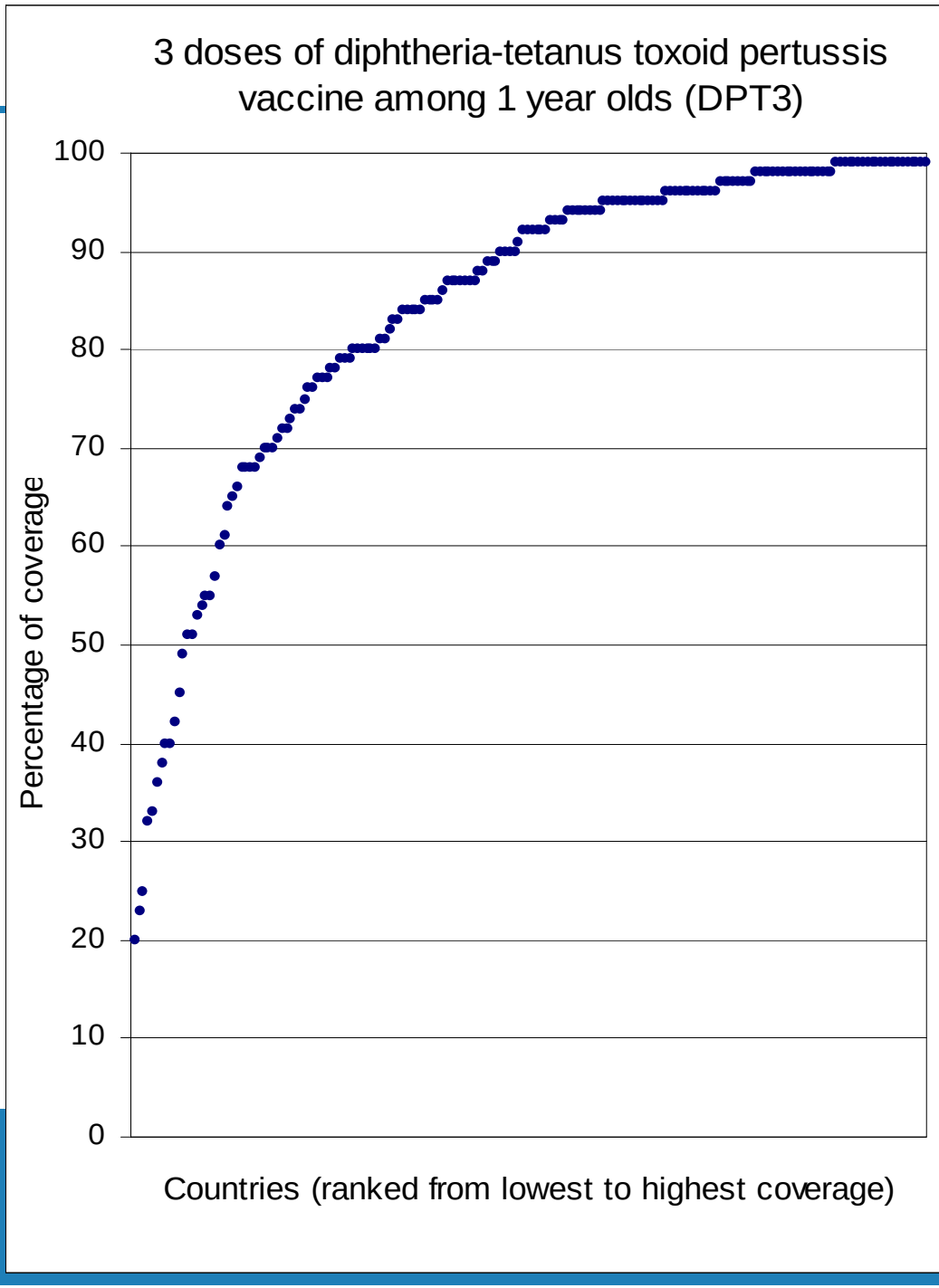
- What are we measuring?
  - Availability of opportunities? (ILO-staff related access deficit)
  - Actual use of needed interventions (commonly used currently)?
  - Health gain from using the services (effective coverage)?

# Currently Used Indicators

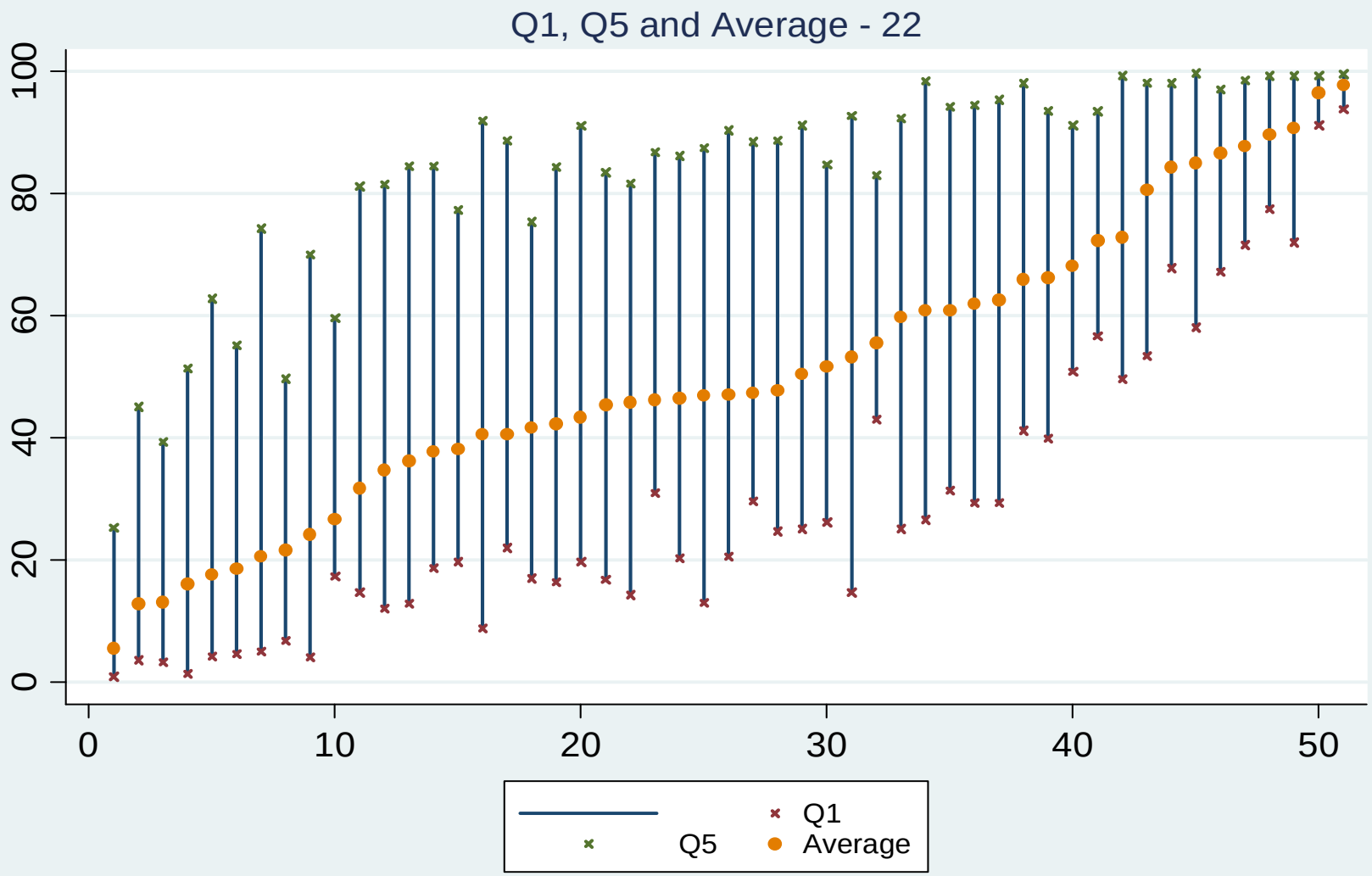
- Skilled birth attendance
- Immunization coverage
- Health service utilization
- Tracer indicators for certain well defined diseases, such as hypertension, diabetes…

## Figure 2. Coverage of births by skilled health personnel and DPT3 vaccination



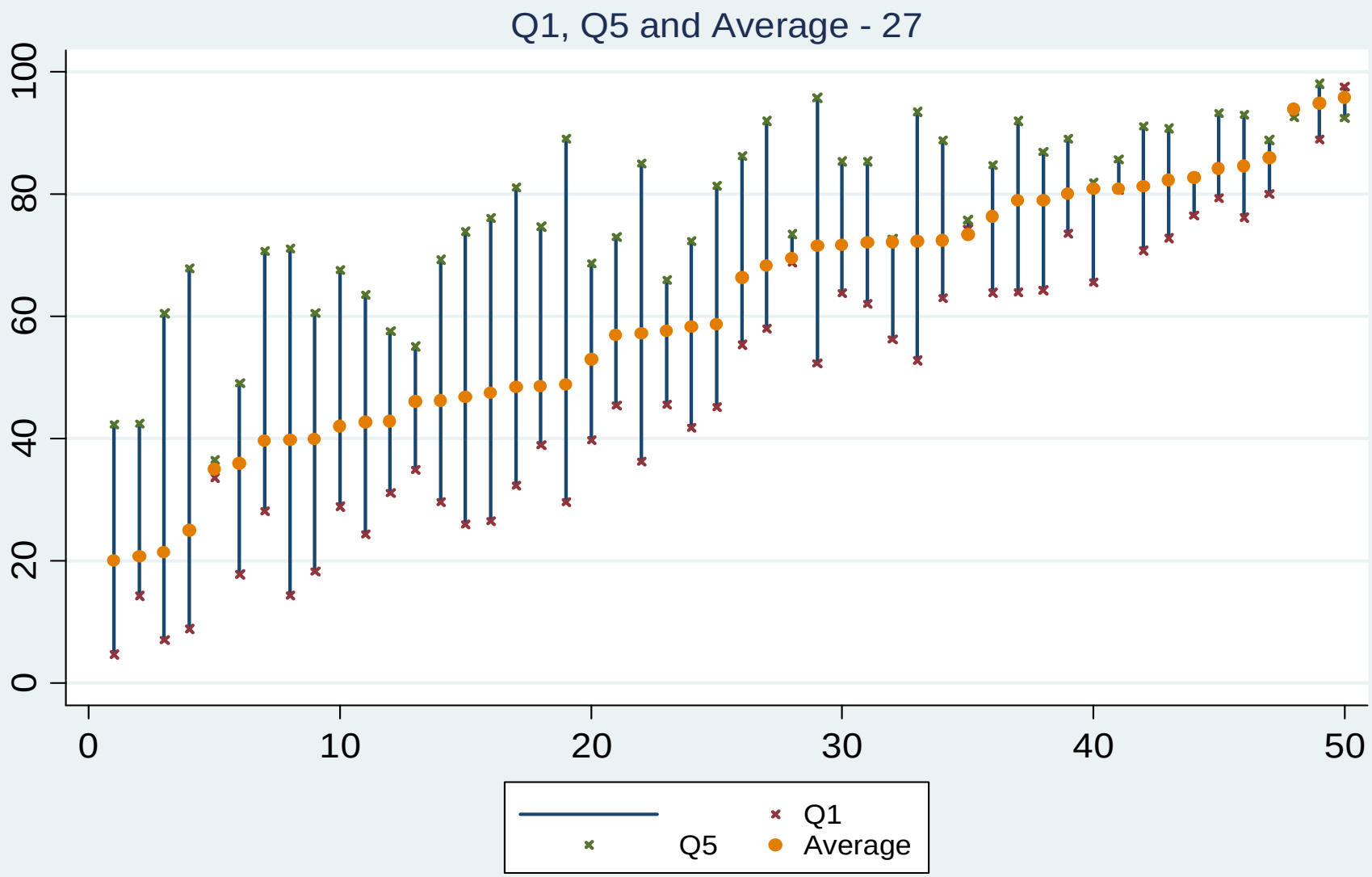



# Percentage of births by medically trained person (q1, q5 and average)



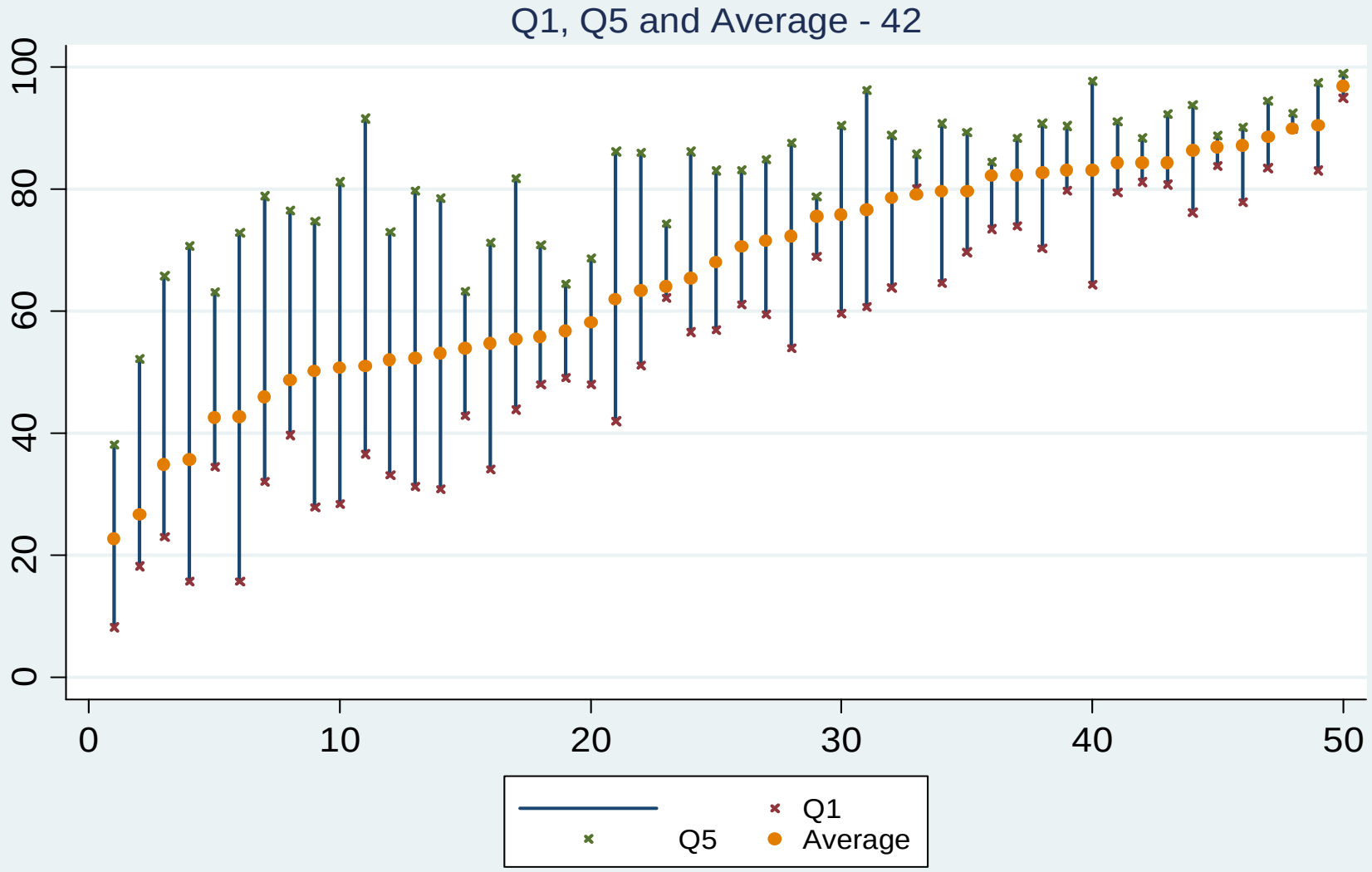

Source: Latest available DHS for each country (excl. CIS countries)

# DPT3 (q1, q5 and average)




Source: Latest available DHS for each country (excl. CIS countries)

# Measles (q1, q5 and average)




Source: Latest available DHS for each country (excl. CIS countries)



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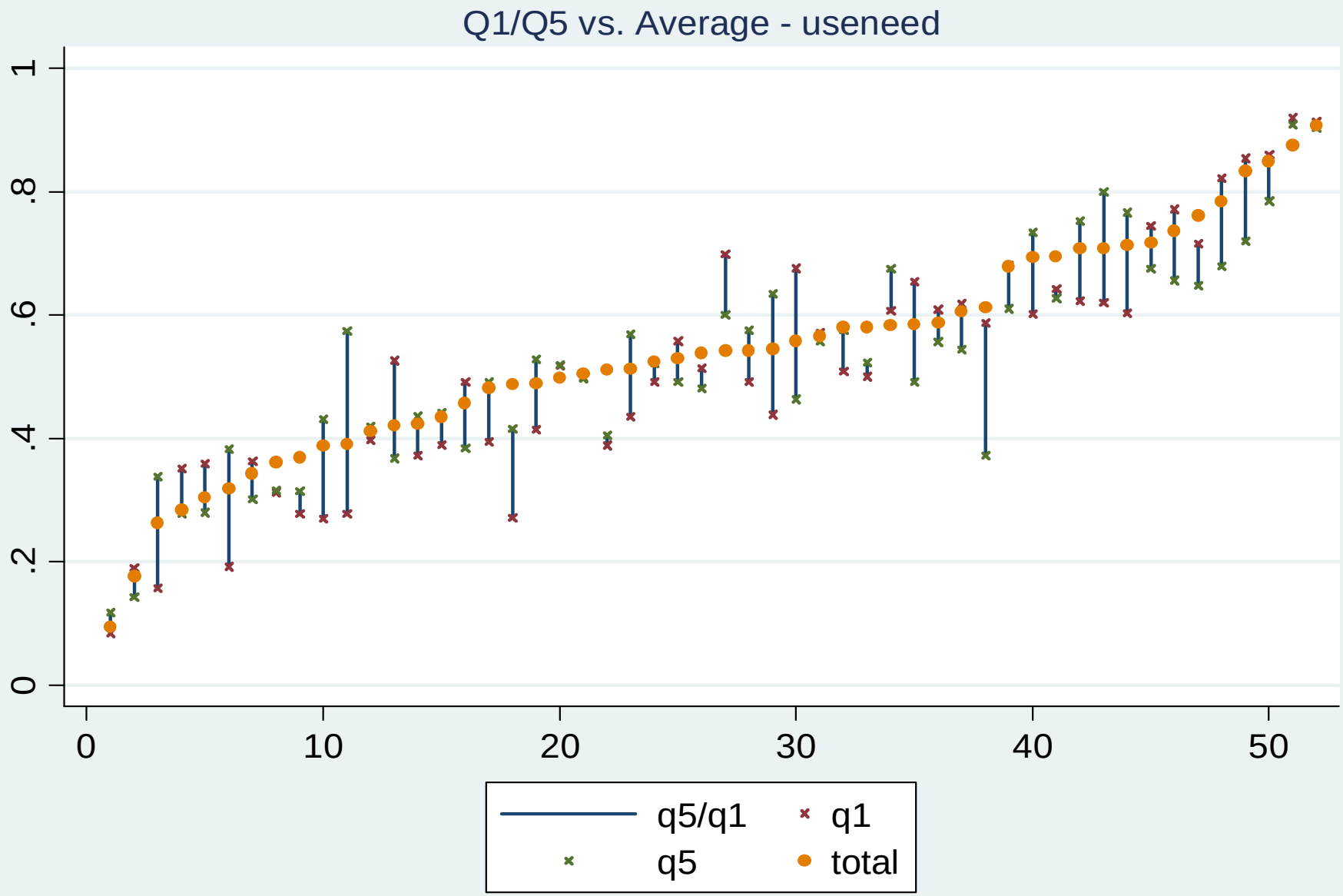
# Utilisation Rate Given Self-reported Need (WHS)



# Pros and Cons of Currently Used Indicators (1)

## Health service utilization

- Merits
  - Reflect whole population and whole system functions
- Limitations
  - Based on self reported need which may result from different expectations and norms for health as well as biases by age, sex, health system indicators and other characteristics
  - Do not reflect the quality of services
  - Instrument for data collection is not standard

# Pros and Cons of Currently Used Indicators (2)

## Skilled birth attendance

- Merits
  - Need is clearly defined
  - Proven to be effective to reduce MMR and IMR
- Limitations
  - Only apply to certain population groups
  - Competency of health professionals is unknown
  - Data quality in low income countries is still an issue
  - Not sensitive for higher income countries

# Pros and Cons of Currently Used Indicators (3)

## Immunization coverage

- Merits
  - Need is clearly defined
  - Proven to be effective
  - Quality of services is fairly homogeneous
- Limitations
  - Only apply to certain population groups
  - Some vaccine coverage can be high through campaign
  - Not sensitive for higher income countries

# Future Research

What would be a summary indicator look like considering both financial protection and access to services (universal coverage)?

### Elements

- Individual's health need
- Availability of services
- Health gain from the intervention
- Household's capacity to pay
- Quality of services

### Underlying principles

- Equity consideration
  - Rich vs. poor
- Efficiency consideration (cost-effectiveness of interventions)
  - Individual level vs. population level

# Thank you for your attention!

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Discussion papers
http://www.who.int/health_financing

Background papers for the world health report 2010 (Health systems financing-the path way to universal coverage
http://www.who.int/healthsystems/topics/financing/healthreport/whr_background/en/index.html



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