

Module 3: Financial Protection

Catastrophic and Impoverishing Health Expenditure

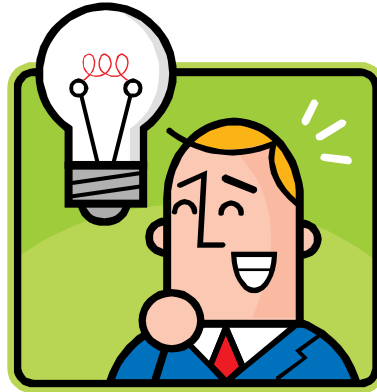
This presentation was prepared by Adam Wagstaff and Caryn Bredenkamp

Financial Protection in a nutshell



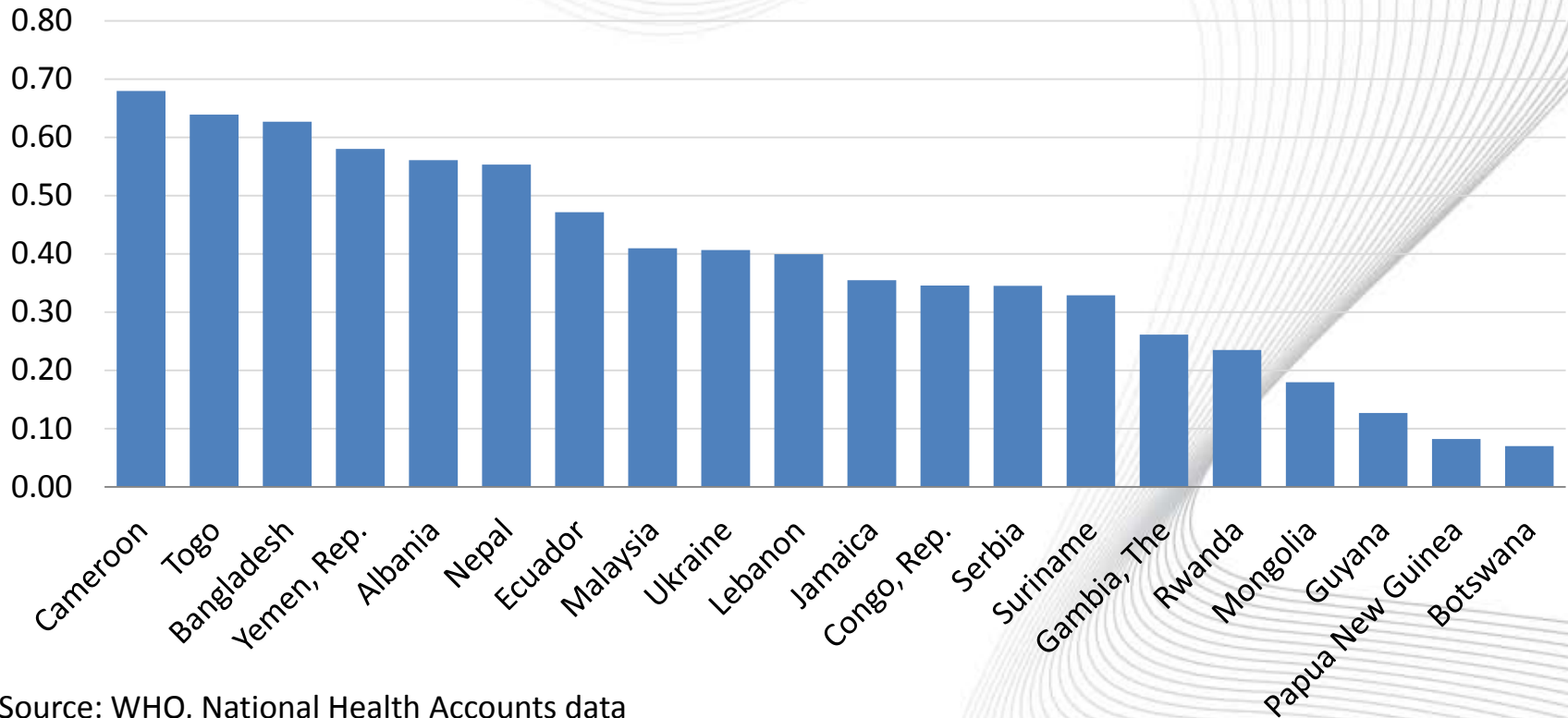
- Financial protection has to do with the extent to which household wellbeing is affected by out of pocket payments.
- It calls for data from household surveys on out-of-pocket spending on health care, as well as measures of total consumption/expenditure and poverty lines.
- ADePT shows the distribution of out-of-pocket payments, the budget share, the incidence and intensity of catastrophic payments, and the incidence and depth of impoverishing expenditure .

The basic idea



Out-of-pocket spending on health

Out of Pocket Payments as share of Total Health Spending for Selected Countries, 2008



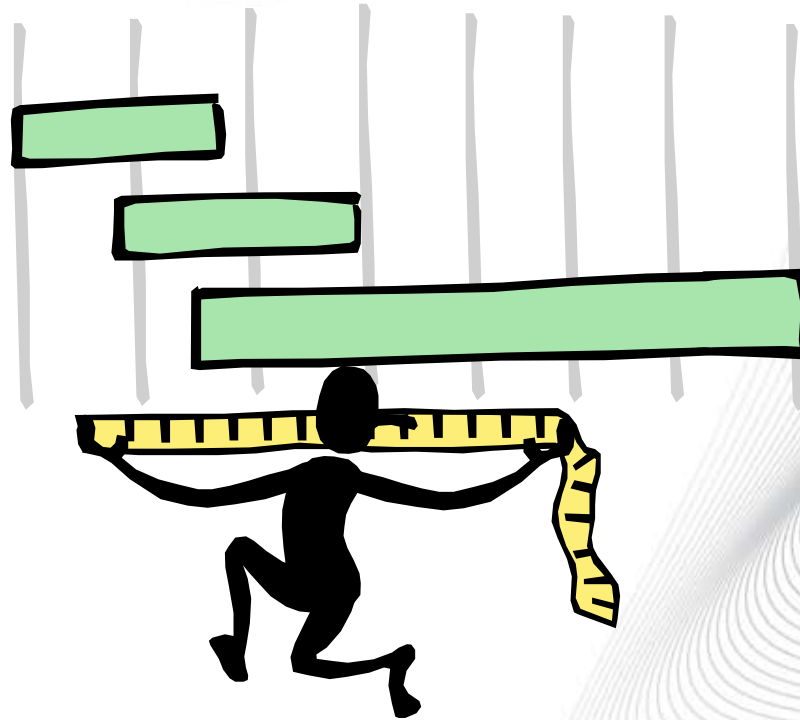
Source: WHO, National Health Accounts data

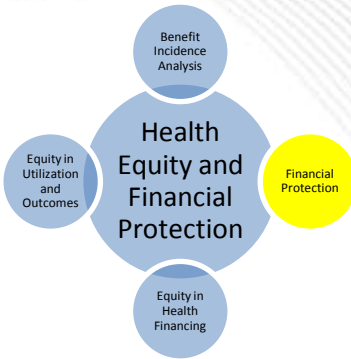
To what extent does the health system protect people from the (potentially devastating) effect of out-of-pocket payments?

The basic idea (cont'd)

- Out-of-pocket expenditure (OOP) on medical care is considered involuntary
- OOP displaces resources available for other goods and services. It enables households to restore well-being, not increase it
- Measures of financial protection relate OOP to a threshold
 - Classify spending as “catastrophic” if it exceeds a certain fraction of household pre-payment income or consumption
 - Classify spending as “impoverishing” if it’s so large it pushes households below the poverty line

Let's get measuring!





Monitoring in action – FP

These data come from household survey



Quintile	HH #	Discretionary consumption	Out-of-pocket spending	OOP as % DC	Catastrophic? (> 10% DC)
Poorest 20%	1	100	1	1%	0
	2	110	10	9%	0
	3	120	0	0%	0

	1500	1000	300	30%	1
2nd poorest	1501	1100	20	2%	0
	1502	1250	500	40%	1
	1503	1500	1000	67%	1

	3000	1900	75	4%	0
Middle 20%	3001	2000	200	10%	0
	3002	2200	1000	45%	1
	3003	2250	25	1%	0

	4500	3020	0	0%	0
2nd richest	4501	3021	400	13%	1
	4502	3300	25	1%	0
	4503	3350	1200	36%	1

	6000	4950	10	0%	0
Richest 20%	6001	5000	0	0%	0
	6002	5100	2000	39%	1
	6003	5250	1500	29%	1

	7500	8000	50	1%	0
Average				16%	40%

What's 'catastrophic' spending?

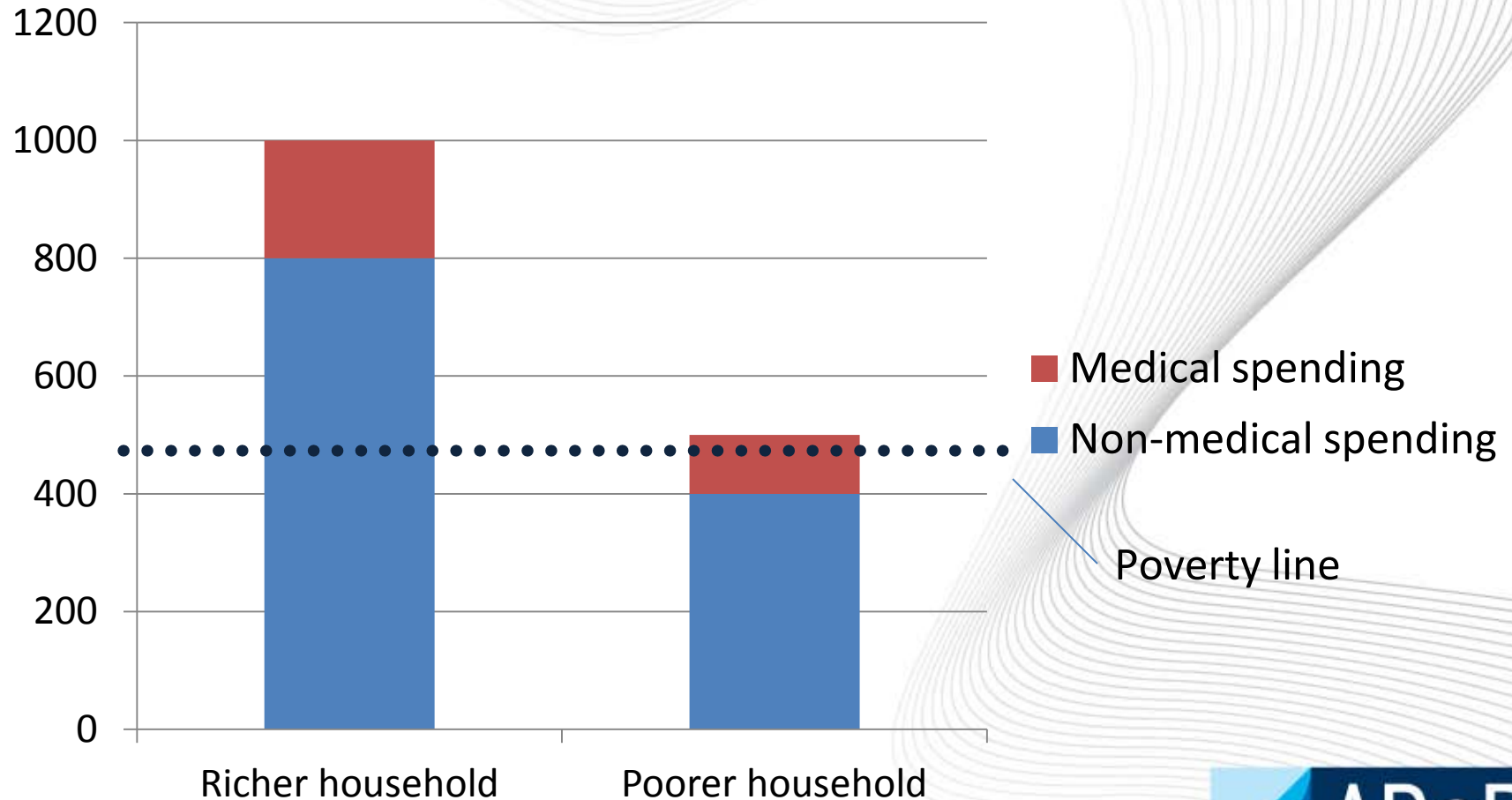
- Measure whether, and by how much, health spending exceeds a defined threshold (e.g. 10%, 15%, 25%, 40%) of pre-payment income/consumption
- Can define threshold as share of:
 - Total consumption, or
 - Non-food (i.e. discretionary) consumption. This 2nd approach can deduct either:
 - Actual food consumption, or
 - An estimate of the amount the household ought to have spent on food (but note that this can lead to negative non-food consumption!)

Catastrophic payments: an example

	Assume share spent on health	Catastrophic payment headcount	Overshoot
Person 1	45%	1	35%
Person 2	30%	1	20%
Person 3	20%	1	10%
Person 4	10%	0	0%
Person 5	5%	0	0%
Total (%)		3/5=60%	65%
Mean overshoot(%)			65/5=13%
Mean <u>positive</u> overshoot (%)			65/3=21.7%

* Assumes catastrophic payment defined at threshold of 10% of prepayment income

Catastrophic payments don't get at the degree of economic hardship caused

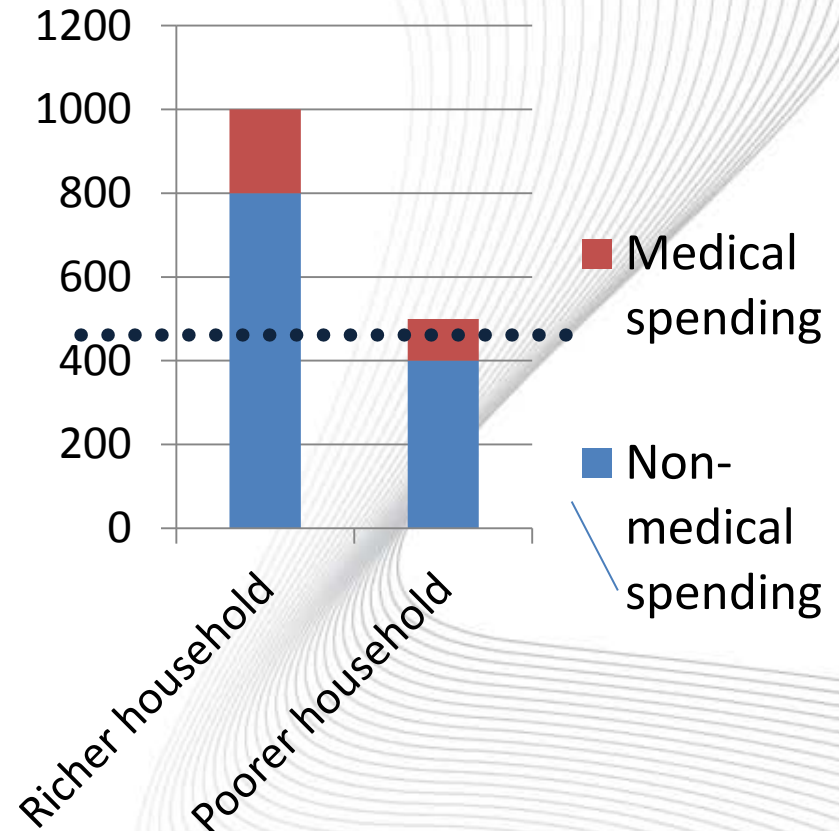


Impoverishing health expenditures

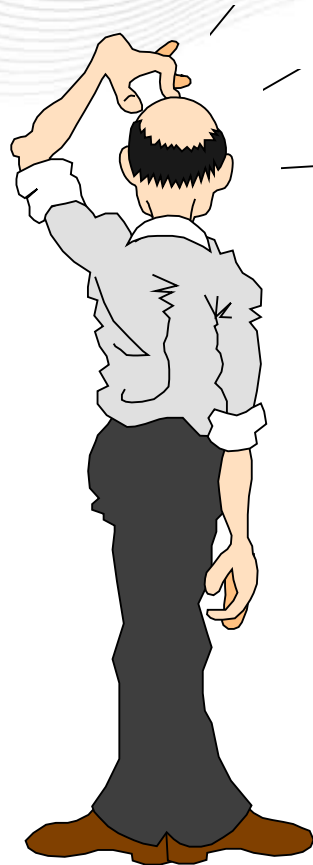
- Compares the amount of poverty when (a) OOP are counted in total consumption, and (b) when they are not
- Looks at the effect of health care payments on:
 - the poverty headcount (the fraction of households in poverty), and
 - the poverty gap (total – or average—shortfall from the poverty line across all poor households)

An example

- Depending on whether we include OOP in the consumption aggregate:
 - We get 1 more household in poverty, and
 - The poverty gap rises by an amount equal to the poorer household's shortfall from the poverty line



How to do it in ADePT?



What ADePT does: catastrophic payments

- ADePT calculates the catastrophic headcount and catastrophic payment gap/overshoot for multiple thresholds – for both total and non-food expenditure
- Then, it shows how these measures are distributed across income or consumption quintiles

What ADePT does: impoverishing payments

- ADePT calculates the poverty headcount including (gross of) and excluding (net of) health expenditures
- Then it produces a diagram (Pen's Parade) illustrating the magnitude of impoverishment

What ADePT asks for

- Out-of-pocket spending on health
- Total household consumption (or expenditure)
- For catastrophic payments:
 - Total household non-food consumption (or expenditure)
- For impoverishment:
 - Poverty line(s) in local currency
- Weights and survey settings
- Household ID

Select ADePT Module



ADePT

- Poverty
- Labor
- Gender
- Education
- Inequality
- Social protection
- Health
 - Health Outcomes
 - Health Financing**

Don't show this window at startup

VERSION

5

WORLD BANK | DECRG

KENYA (WHS)

Project Module Tools Help

Datasets Variables Data1

Add...
Remove
Browse...

Label	Dataset
Data1	C:\Adept Training\Demodatasets\WHS-Kenya2004Adept.dta

(1) Choose dataset

(5) Select tables and (6) Graphs

Health Financing tables selected:7 | feasible:14 | total:18

- Original Data Report
- T1: Sources of Finance by Household Characteristi
- T2: Sources of Finance by Individual Characteristic
- Financial protection (7/7/7)**
 - TF1: Incidence and Intensity of Catastrophic H
 - TF2: Incidence and Intensity of Catastrophic H
 - TF3: Distribution-sensitive Catastrophic Payme
 - TF4: Distribution-sensitive Catastrophic Payme
 - TF5: Measures of Poverty Based on Consump
 - GF1: Health Payment Shares
 - GF2: Effect of Health Payments on Pen's Para
- Progressivity and redistributive effect (0/6)**
 - TP1: Average Per Capita Health Finance
 - TP2: Shares of Total Financing
 - TP3: Financing Budget Shares
 - TP4: Decomposition of Redistributive Impact c
 - GP1: Concentration Curves for Health Paymer
 - GP2: Concentration Curves for Health Paymer
 - GP3: Health Payment Shares by Quantiles

Choose (2) total household consumption and household size

Health financing Basic variables

Total consumption: hh_exp Household size: hh_size
 Non-food consumption: hh_nonfoodexp Household weights: hh_sampleweight
 Number of quantiles: 5 (quintiles) 10 (deciles) Poverty line(s): PL1 PL2

Choose (3) poverty line and household weight

(4) Choose out-of-pocket health spending variable

Sources of finance
 Taxes
 Social insurance contributions
 Private insurance premiums
 Out-of-pocket: hh_healthexp

7) Click "Generate"

For all tables
 Standard errors (slow)
 Frequencies
 Generate

Table description and if-condition ADePT system messages
 Data Report presents information on variables selected for the analysis. For each variable it shows the number of observations with non-missing values, mean, minimum, maximum, percentiles, number of unique values, and a type (binary, categorical, continuous) of a variable. The statistics are generated for variables in every dataset loaded into ADePT.
 IF-condition Set

Check your data

	N	mean	min	max
KENYA				
hhsz (Household size)	4,639	4.2	1.0	14.0
hhexp (Total consumption)	4,590	8,110.1	0.0	520,000.0
nonfoodexp (Non-food consumption)	4,590	4,766.3	0.0	470,000.0
PL2 (Custom category 2)	4,640	2,138.7	2,138.7	2,138.7
PL1 (Custom category 1)	4,640	1,069.3	1,069.3	1,069.3
hhsampweight (Household weights)	4,354	3,212.6	1.0	98,054.0
hhhealthexp (Out-of-pocket)	4,597	639.6	0.0	400,000.0

Interpret results Kenya: Catastrophic Health Payments

Table F2: Incidence and intensity of catastrophic health payments, using **nonfood** expenditure

	<u>Threshold budget share</u>				
	5%	10%	15%	25%	40%
Headcount	41.8	35.3	30.6	23.4	17.0
Overshoot	12.6	10.8	9.3	6.8	4.2
Mean positive overshoot	31.6	32.4	32.6	32.2	28.8

Interpret results Kenya:

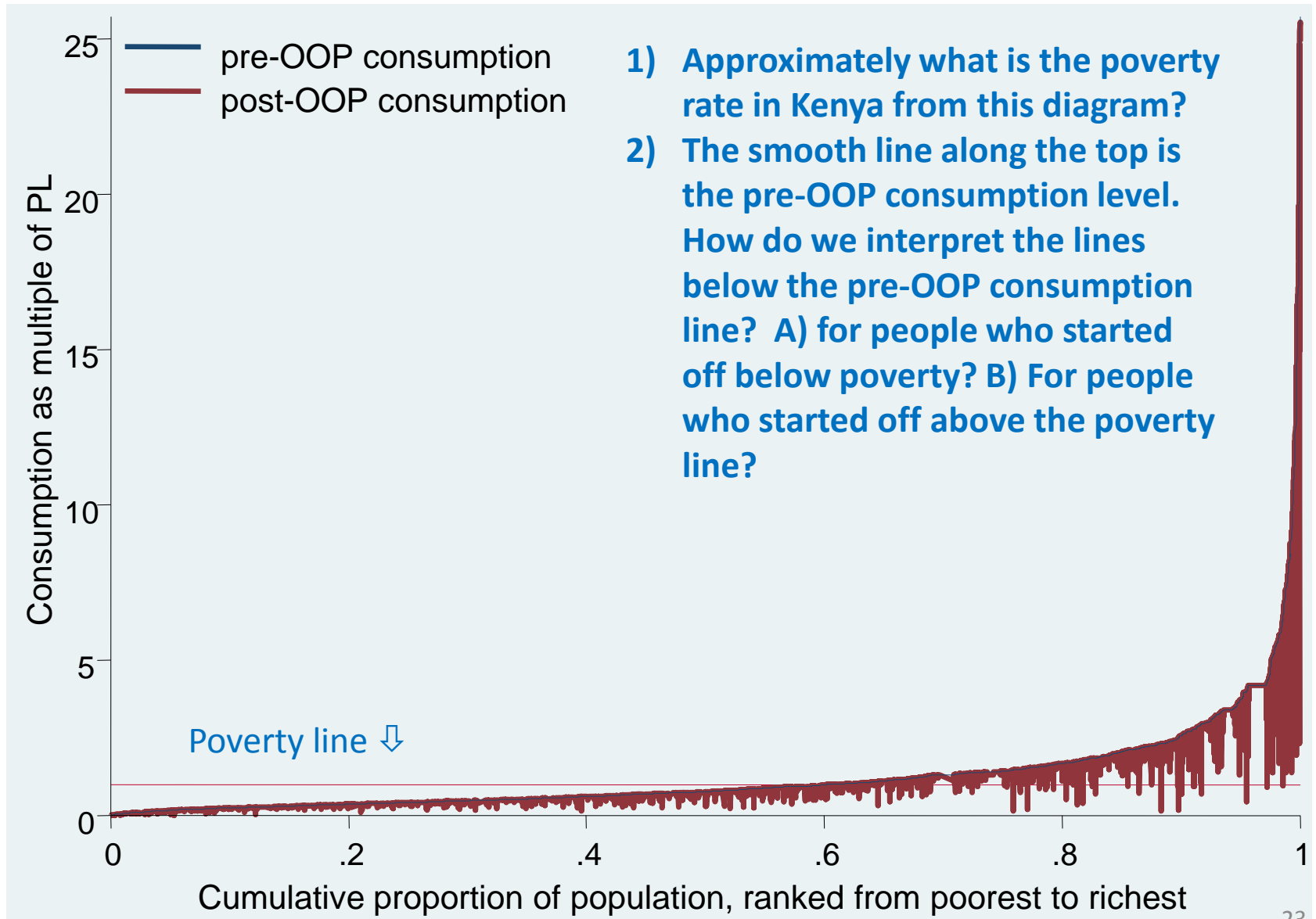
Impoverishment analysis

Table F5: Measures of poverty based on consumption gross and net of spending on health care (PL1=PPP\$1.25)

	Gross of health payments	Net of health payments
Poverty headcount (%)	58.4	61.3
Poverty gap (shillings)	310.7	333.0
Normalized poverty gap (% of poverty line)	29.1	31.2
Normalized mean positive poverty gap (% of poverty line)	49.5	50.6

- 1. How much did out-of-pocket health spending contribute to increasing poverty?**
- 2. In terms of “depth of poverty”, or how far below the poverty line people are pushed, what was the impact of out-of-pocket spending?**

Interpreting the Pen's Parade diagram



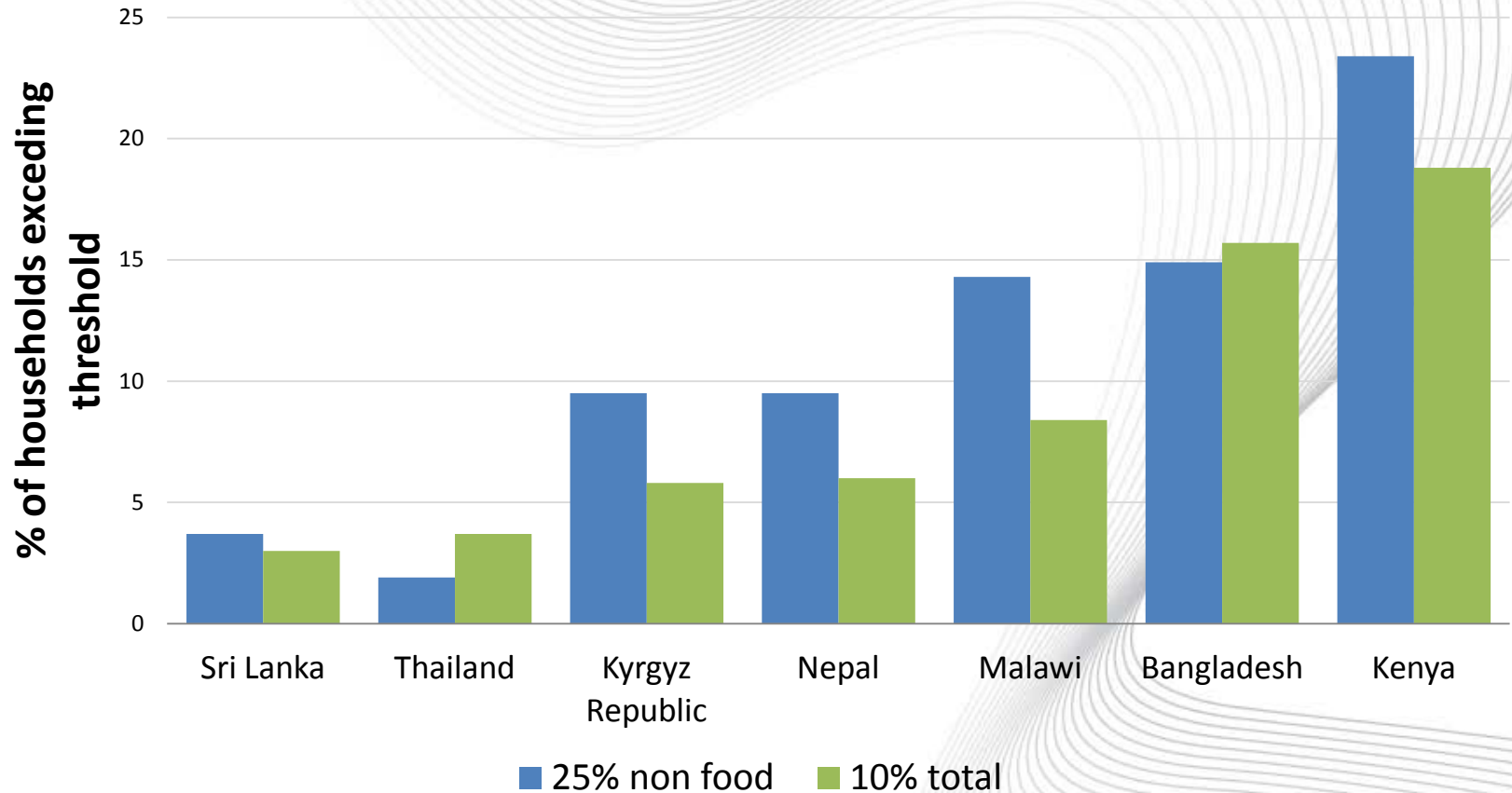
Presenting your results to policymakers



Increase in poverty due to health payments

	Gross of health payments	Net of health payments	Percentage point change	Percent (%) change
Poverty headcount	58.4	61.3	2.9	5.0%
Poverty gap	310.7	333.9	23.2	7.5%

How does Kenya compare?



Source: van Doorslaer, O'Donnell, et al. 2007 "Catastrophic payments for health care in Asia" *Health Economics* 16: 1159-84; Malawi Integrated Household Survey 2004; Kenya World Health Survey

Policy levers-i

- Two possible levers :
 1. Reduce the fraction of the cost of care that people pay out-of-pocket
 - Applies to everyone, but especially to the poor and near-poor. Risk pooling arrangements, including subsidized 'insurance' for the poor and near-poor
 2. Reduce the cost of care, by reducing inefficiency, curbing unnecessary care (e.g. 'irrational' drug prescribing), and strengthening lower-level providers
 - These supply-side measures may have a greater impact than demand-side measures!
- With ADePT you can see how the results would change if, for example, everyone's out-of-pocket payments were to fall by 20%

Policy levers-ii

- Examples of programs that reduce the fraction of the cost of care that people pay out-of-pocket:
 - Multiple examples of formal health insurance programs, and tax-financed risk-pooling programs like NHS.
 - Also, targeted fee-exemption programs for the poor
- Examples of a program that reduces the cost of care, by reducing inefficiency, curbing unnecessary care:
 - Essential drug lists.
 - Quality-enhancement programs.
 - Shifting from fee-for-service to case-based payments.
 - Etc.

Limitations and assumptions

- (1) Health spending is assumed to be funded entirely from CURRENT non-medical consumption
- (2) Methods focus on the costs of medical care, not income losses, associated with illness
- (3) High out-of-pocket costs may deter people from seeking care so that a country in which people appear to pay little out of pocket may be one in which people do not use health services.

Where to go from here?



Data sources for financial protection

- Continuous measure of living standards:
 - Livings standards measurement survey (LSMS)
 - Household budget survey (HBS)
 - World Health Survey (WHS)
 - Other multi-purpose surveys
- Poverty line
 - National poverty lines, or
 - Convert poverty lines of \$1.25 per day and \$2.00 per day to local currency using PPP\$ conversion rate for 2005, and then to relevant year by deflating by the CPI using data from the World Bank WDI database

