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# Extended Cost Effectiveness Analysis (ECEA)

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Presented at the 'Workshop of the Costing and  
Financing Studies of Routine Immunization'  
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- **Background**  
a new perspective on economic evaluation
- **Equity**  
definitions & examples
- **Financial risk protection**  
definitions & examples
- **Case study**  
public finance of TB treatment in India



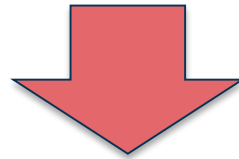
# Background

A new perspective on economic evaluation

# Background (1)

- Traditional economic evaluation focus

Cost-effectiveness of technical interventions targeting specific diseases  
(e.g. antiretroviral therapy for HIV/AIDS)



- Decision-making & priority setting focus

Resources allocated across different options

- 1) Health interventions
- 2) Health service delivery platforms
- 3) Health policy levers

(e.g. public finance, conditional cash transfers, taxation)

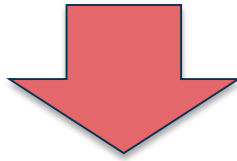
Take consideration of several criteria:

-- burden, costs, equity, medical impoverishment

# Economic evaluation of health policy instruments

From:

Cost Effectiveness Analysis (CEA)



To:

Extended Cost Effectiveness Analysis (ECEA)

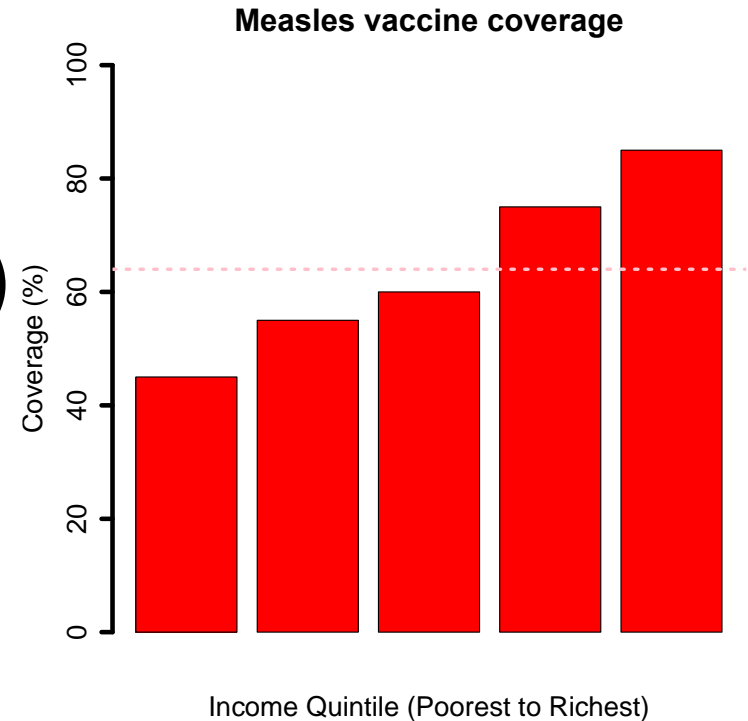
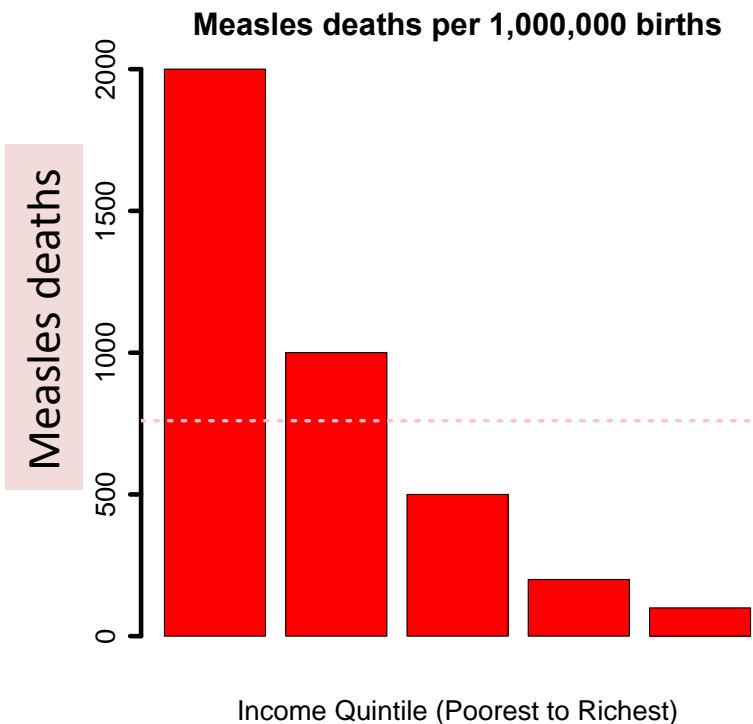
- (1) Distributional consequences across wealth strata of populations
- (2) Insurance and financial protection benefits for households
- (3) Financial consequences for households



Equity

## Principles of equity (2)

- Fairness in the distribution of health coverage (ex: measles vaccine coverage)



- Fairness in the distribution of health outcomes (ex: measles deaths)



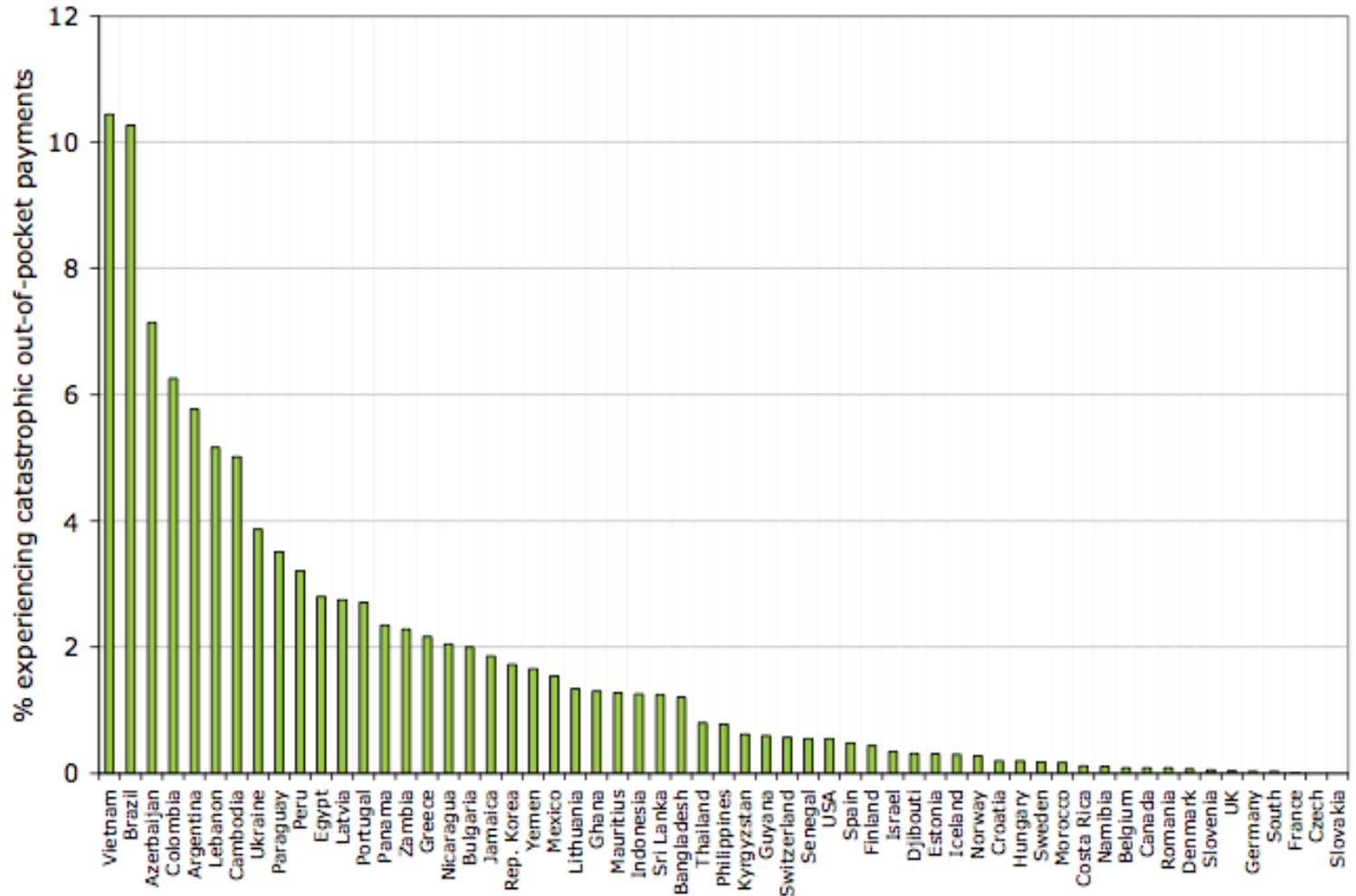
# Financial risk protection



# Medical impoverishment

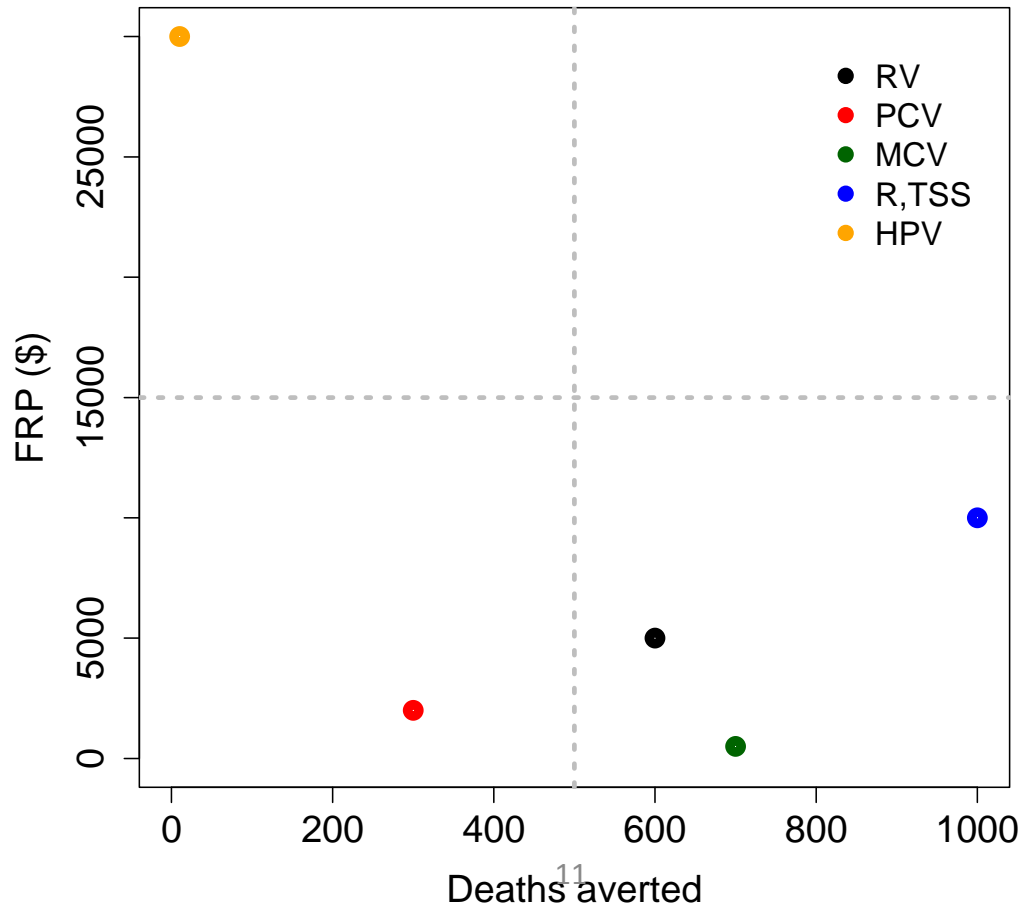
- When confronted with expensive medical expenditures, poor people can face high out-of-pocket (OOP) payments and fall into poverty
  - Threshold-base approach
  - Forced Asset Sales
  - Money-metric value of insurance

**Figure 4: The incidence of catastrophic out-of-pocket payments in 59 countries**



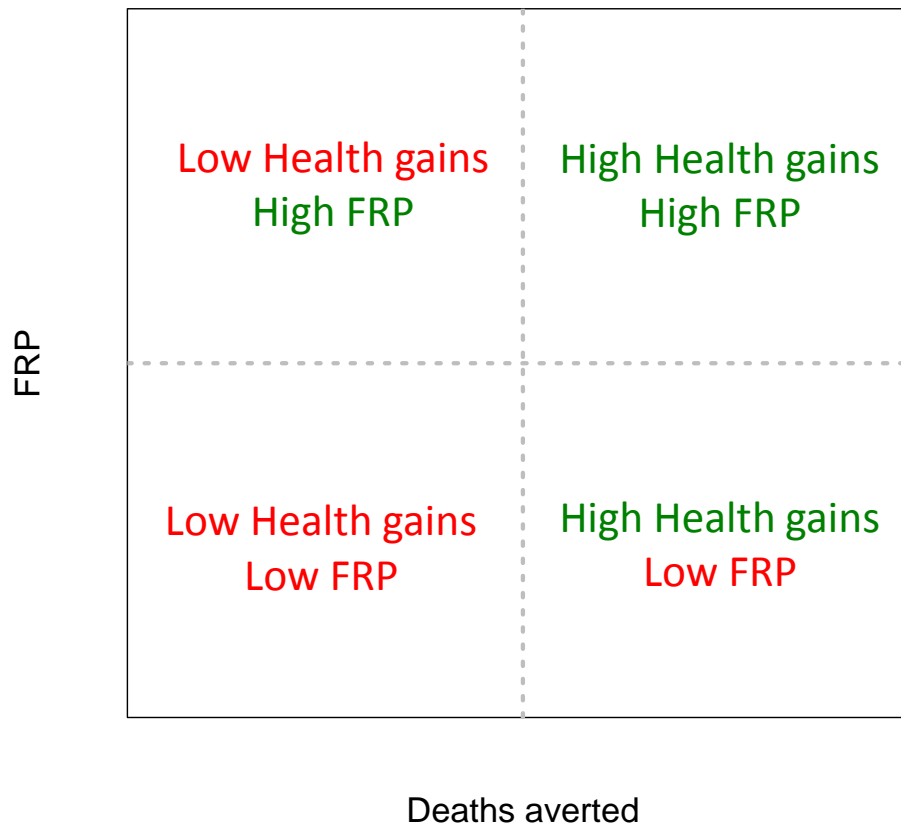
e.g. how do vaccines position themselves?

Health gains & financial protection afforded, per \$1M spent



FRP = financial risk protection  
(prevention of medical  
improvement)

- Design basic insurance packages



FRP = financial risk protection  
(prevention of medical  
impoverishment)

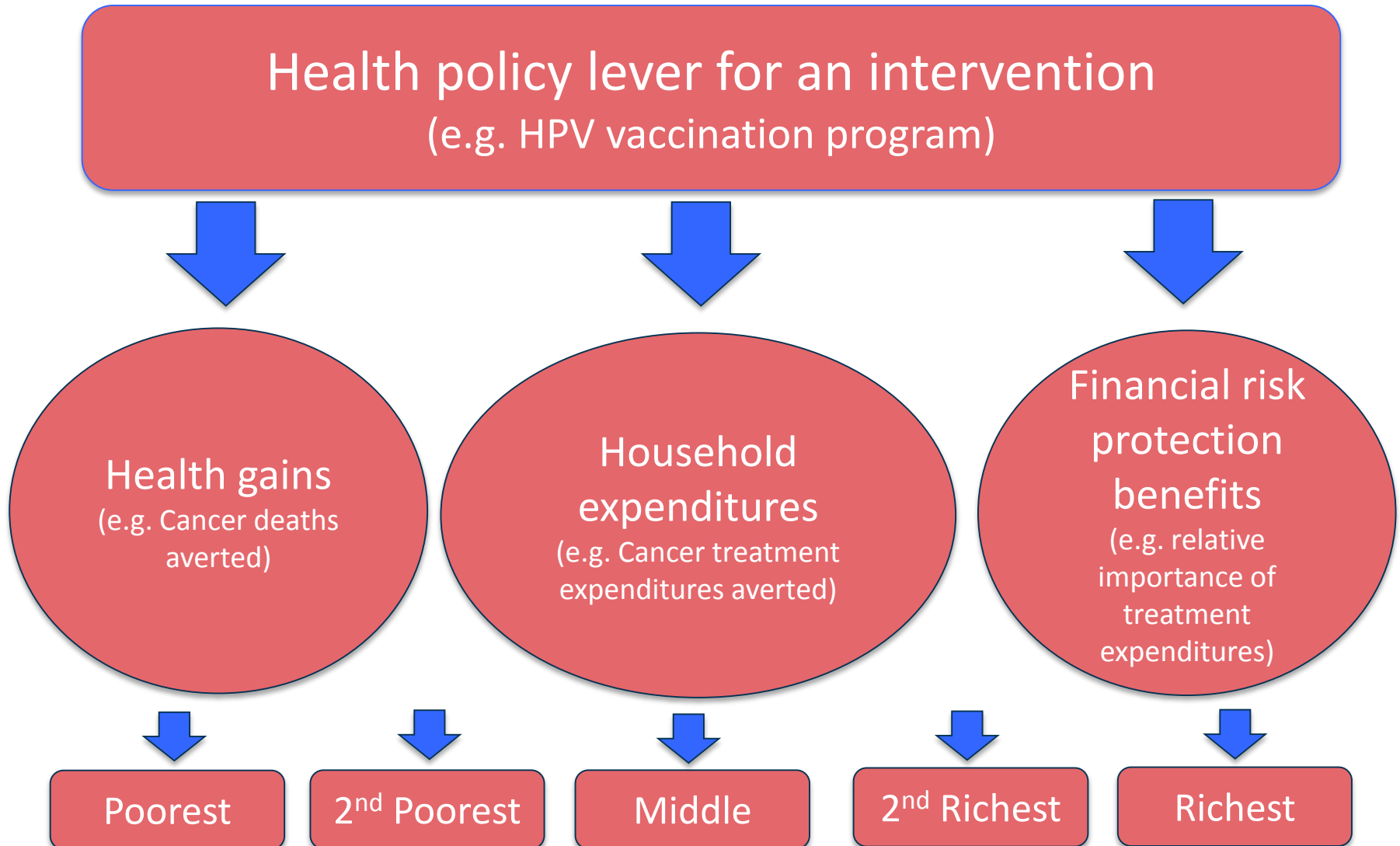
# Impact of HPV vaccination policy in on distributional and financial risk protection



Vaccination of  
adolescent girls

Screening  
women

# Summary measures of ECEA

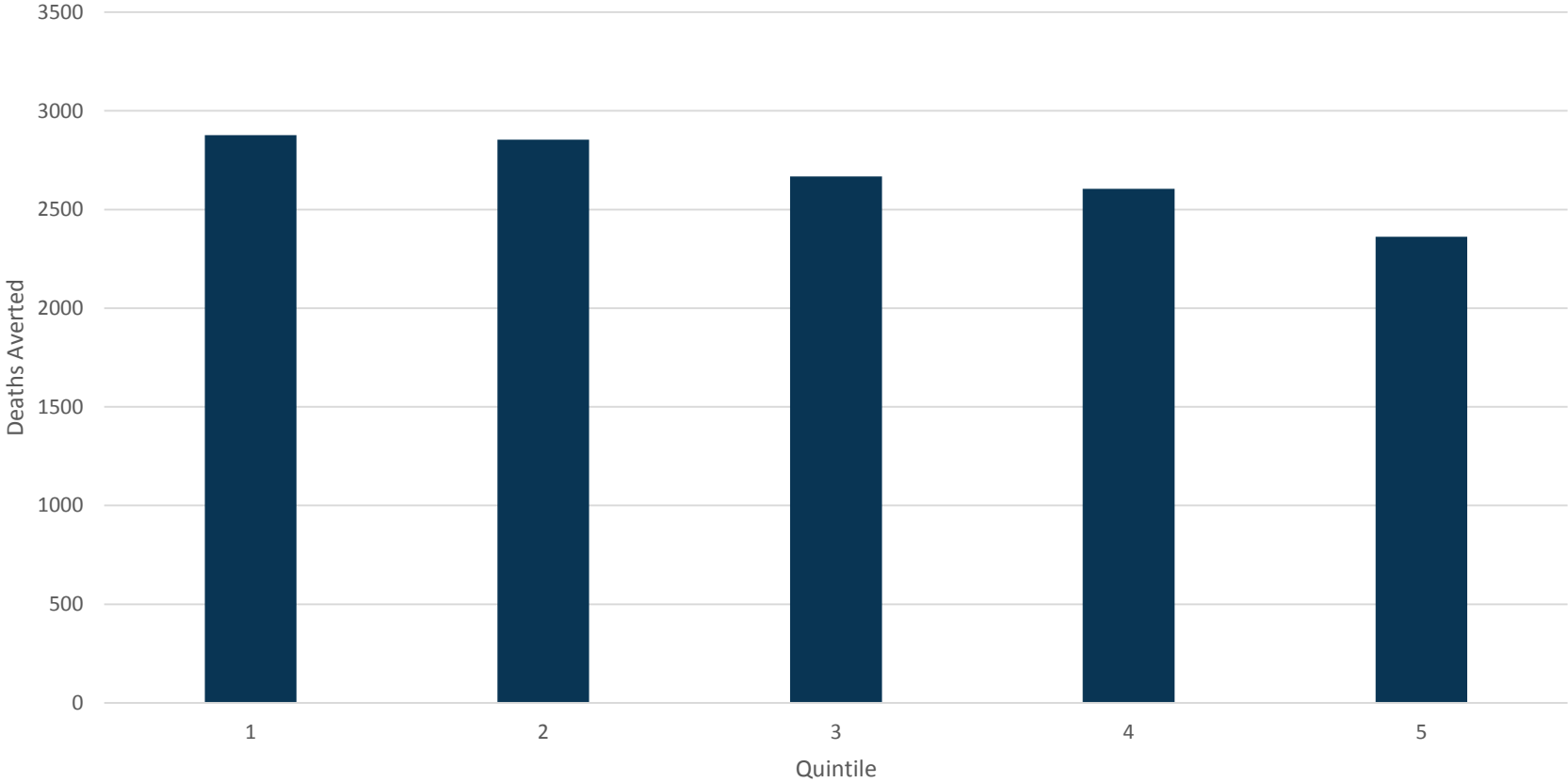


# Benefits and costs of a publically financed HPV vaccination policy in China (US \$ 2009)

<i>Quintile</i>	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	<i>V</i>
<i>Deaths averted per million women</i>	2877	2854	2667	2604	2362
<i>Government costs per million women (Incremental)</i>	\$31,417,285	\$31,420,191	\$31,440,420	\$31,446,679	\$31,359,970
<i>Gov't cost/death averted</i>	\$3,540	\$3,511	\$3,312	\$3,256	\$2,999
<i>Treatment seeking cases of cancer averted per million women</i>	3540	3511	3312	3256	2999
<i>Patient cost savings per million women</i>	\$1,636,273	\$2,249,614	\$2,894,017	\$4,625,166	\$7,655,200
<i>Savings as a percentage of total income</i>	59%	39%	34%	37%	32%
<i>Cancer reduction</i>	44%	44%	43%	43%	44%

# Health Gains

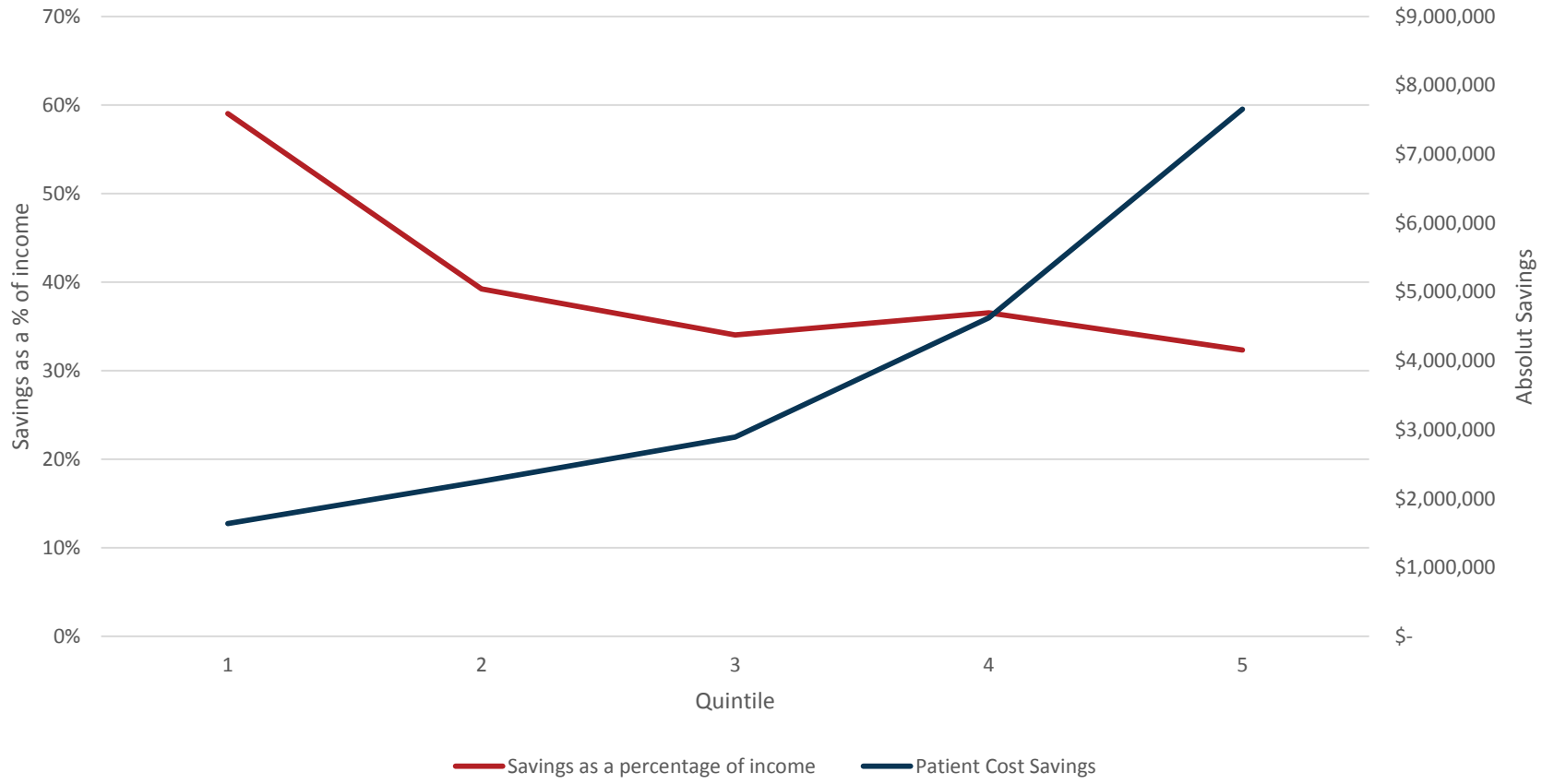
Deaths Averted





# Savings and Financial Risk Protection

Savings vs. Financial Risk Protection



# Thank you

## DCP3 Team

- Stéphane Verguet
- Dean Jamison
- Rachel Nugent
- Zach Olson
- Elizabeth Brouwer

## HPV vaccination ECEA

- Monisha Sharma
- Zach Olson
- Stéphane Verguet
- Dean Jamison
- Jane Kim