Assessing Financial Risk Protection through a Health Systems Lens

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Objectives of this seminar

• Understand why financial risk protection is important
• Know how to measure financial risk protection: metrics & data
• Become familiar with financial risk protection in India
• Analyze financial risk protection with a health systems lens
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Financial Risk Protection (FRP)

• Financial risk protection: the extent to which health systems protect people from the financial risks of disease
• Do healthcare costs require households to forego other essential goods and services (e.g. food, housing, education)?
• Must households borrow or sell assets to cover healthcare costs?
  • Linked with human capital, productivity and poverty
• Alongside health outcomes and responsiveness/satisfaction, one of the key outcomes of health system performance (Harvard Control Knobs & WHO Building Blocks frameworks)
• Not about paying nothing: Put financing mechanisms in place that make healthcare expenditure predictable and distributed according to ability-to-pay
Universal health coverage (UHC) ensure people can use the health services they need, of sufficient quality to be effective, without being exposed to financial hardship.

**Use of effective services**

**Financial risk protection**

Sustainable Development Goal (SDG) targets for UHC

3.8.1 WHO Service Coverage Index
IHME Effective Service Index

3.8.2 Catastrophic Health Expenditure (CHE): 10% & 25%
CHE 10%

Financial Risk Protection Globally

• 930 million spent more than 10% on health
• 210 million spent more than 25% on health
• 2.5% of the population impoverished by health spending

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Catastrophic Health Expenditure (CHE)

- Three parts
  - Out-of-pocket health expenditure
  - Consumption expenditure or income
  - Thresholds:
    - 10% of consumption expenditure or income
    - 25% of consumption expenditure or income
    - 40% of capacity-to-pay
Out-of-pocket (OOP) payments

- **OOP:** Direct payments to providers at the time of service
  - Often unplanned, unanticipated
  - For each individual household (fragmented)
  - Must come from existing household financial resources (issue of credit constraints, cash poor)
- Contrast with “pooled” expenditure
  - **Government:** raised through taxes and other government revenues, paid directly to providers or through insurer
  - **Prepaid private:** insurance premiums and other contributions to private insurers
  - **Development assistance for health:** financial and non-financial transfers from high-income countries to low- and middle-income countries for the purpose of promoting or improving health
Health financing transition: as income grows, health expenditure shifts from OOP to pooled sources

Consumption expenditure

• Sum of all the goods and services purchased and consumed by the household
  • A measure of the household’s standard of living
  • Preferred over income in settings where income is “lumpy” for many households, i.e. unevenly distributed across the year
• Includes both purchased items and the value of home-produced items: for example food
• Other included categories (non-exhaustive): Utilities, rent, taxes, transportation, entertainment, education, funerals/weddings
• Excludes investment in production of goods for sale/income: e.g. machinery or seeds for agriculture, merchandise for a shop, fabric for making clothes for sale
• Excludes transfers to other households, remittances
• Excludes savings
Financial hardship due to healthcare spending: When health spending surpasses a given threshold of household spending or income

\[
\text{CHE} = 1 \text{ if } \frac{\text{OOP health spending}}{\text{consumption expenditure}} > 0.10 \text{ or } 0.25
\]

\[
\text{CHE rate} = \frac{\sum_{i=1}^{N} \text{CHE}}{N}
\]

*income can replace consumption expenditure but consumption expenditure preferred
Catastrophic health expenditure (CHE)

Financial hardship due to healthcare spending:
When health spending surpasses a given threshold of household spending or income

\[ \text{CHE} = 1 \text{ if } \frac{\text{OOP health spending}}{\text{capacity-to-pay}} > .40 \]

capacity-to-pay (CTP) =
household spending – mean(45-55 percentile of food spending)

\[ \text{CHE rate} = \frac{\sum_{i=1}^{N} \text{CHE}}{N} \]

Food spend calculated separately by country, adjusted for household size
Alternative measure: Impoverishing health expenditure (IHE)

\[
\text{IHE} = 1 \text{ if} \\
\text{Consumption expenditure} > \text{Poverty line} \\
\& \\
\text{Consumption expenditure} - \text{OOP health spending} < \text{Poverty line}
\]

\[
\text{Poverty head count ratio} = \frac{\sum_{i=1}^{N} \text{IHE}}{N}
\]
Pre-/post OOP consumption expenditure

Source: Kwesiga et al. 2015, but first developed by Eddy van Doorslaer & Owen O'Donnell
Poverty lines

- **Absolute** – using purchasing power parity international dollars
  - 1.90 PPP per day
  - 3.10 PPP per day
- **Relative**: 50% of median consumption in each country
- **India-specific**: 1,059 rupees or 62 PPP per month (rural), 1,286 rupees or 75 PPP per month (urban)
Alternative measure: Poverty Gap

Poverty gap =

Poverty line − (Consumption expenditure − OOP health spending)

\[
\text{Poverty gap} = \sum_{i=1}^{N} \text{Poverty gap}, \quad \text{if Poverty gap}<0
\]

\[
N \quad \text{if Poverty gap}<0
\]
Poll

• Which financial risk protection metric do you prefer?
  • CHE 10%
  • CHE 25%
  • CHE 40% capacity-to-pay
  • IHE
  • Poverty gap
# Comparison of FRP measures

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<th>Pros</th>
<th>Cons</th>
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| CHE 10% or 25% | -Easy to compute (2 inputs)  
  -SDG target  
  -Policymakers familiar | -More sensitive to spending among wealthy |
| CHE 40% capacity to pay | -More sensitive to spending among the poor  
  -Policymakers familiar  
  -Conceptually appealing | -Must construct capacity-to-pay  
  -Adjust for household size  
  -Food spending not a good measure of subsistence needs in high income settings  
  -Observed food spending used in low income households |
| IHE | -Comparison with international standard  
  -Connected with development, appealing to non-health audiences | -Less commonly used  
  -Must construct poverty line |
| Poverty gap | -Captures depth of spending, not just crossing of threshold | -Less commonly used  
  -Difficult to explain?  
  -Must construct poverty line |
Adjustments

- **Inequality-adjusted** – weight poor households incurring CHE or IHE more than wealthy households
- **Need-adjusted** – conceptually about who needs care, but methods development needed
Data needs

- **Ideal:** household budget surveys
  - E.g. National Sample Survey in India
  - Collect information on spending on typically 25-50 items, need to have sufficient categories to ensure households remember
  - Different recall periods for different items, typically:
    - 7-14 days for food
    - 30 days for rent
    - 30 days for outpatient care and drugs
    - 1 year for hospitalizations and other rarer events (schooling costs, weddings, funerals, etc.)
  - Conducted throughout a calendar year to avoid seasonal effects
What if I don’t have a household budget survey? (1)

- **OOP without income or consumption expenditure**
  - Insurance claims, patient exit interviews, population health surveys
  - Can compare to average consumption expenditure or income from outside sources
  - Careful to consider, however, that the amount a household spends on health is linked to their standard of living
- Can compare across groups you have information about
  - Across disease areas, severity of disease, wealth quintile, age, sex, rural/urban, insurance enrollment, caste/tribe
- Compare before/after a reform to assess impact (quasi-experimental methods)
What if I don’t have a household budget survey? (2)

- Distress financing
  - Whether borrowed or sold assets to cover healthcare costs
  - More severe form of financial hardship, may still incur CHE or IHE if don’t have distress financing
- Can be ascertained from a single question
- Easily included in population health surveys or exit interviews
What if I don’t have a household budget survey? (3)

- Foregone care due to costs
  - In the last 12 months, have you put off healthcare due to costs?
  - Important measure of what we do not observe with CHE
  - Could have low rates of CHE but high foregone care due to costs
  - Recall bias and interpretation may vary depending on the group
  - Can be ascertained from a single question although multiple questions a better methodology
  - Easily included in population health surveys or exit interviews
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CHE 10%

FRP in India

- According to the 2017/2018 National Sample Survey, 16% of households incur CHE at the 10% threshold
- Varies across states
- 9% in other lower-middle income countries
- Drugs comprise 66% of out-of-pocket (OOP) spending in India
Percent change in CHE, India nationwide, 2004 to 2014

Source: Pandey et al. 2018
CHE by wealth quintile & disease area: India nationwide

Source: Haakenstad et al. under review
CHE & Equity: state of Odisha
Poll

• Why do you think CHE rates are lower among the tribal population than other groups in Odisha?
  • They are well protected from financial risks
  • They have less access to health care than other groups
  • They have less need for health care than other groups
  • They have higher consumption expenditure or income than other groups
CHE & type of illness: state of Odisha

CHE rates for outpatient care by disease or condition

Share of all CHE cases due to outpatient care by disease or condition
Insurance effectiveness

- **Research:** A number of existing rigorous studies find that insurance schemes reduce OOP but not CHE
- **Coverage:** Schemes tend to cover hospitalizations only
- **Awareness:** Just 14% of households reported having insurance despite 80% reportedly eligible according to the government
- **Use:** Just 6% of hospitalized patients reported using
- **Impact:** Little difference in CHE among users and non-users of insurance

CHE rates for hospitalizations by insurance status and sector of care: state of Odisha
What policies are typically used to improve FRP?

- Insurance
  - Funded by the state and/or national government: voluntary / mandatory, eligibility criteria?
- Community based health insurance (CBHI)
- Employer-sponsored health insurance
- Government provision of care
- Government subsidies
- Others?
- With the control knobs framework and related analysis, we can design other potentially effective policies
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The Control Knob Framework

A health system is a means to an end

The Control Knob Framework

The Policy Reform Cycle

- Evaluation
- Implementation
- Diagnosis
- Reform Design

Analysis

Financing
Payment
Organization
Regulation
Behavior

Efficiency
Quality
Access

Health Status
Customer Satisfaction
Risk Protection

Problem Definition (Health System Assessment)
Political Decision (Policy Development)
Considering drivers of poor FRP (high CHE)

• Access – incurring CHE requires using care – is CHE high because of overuse? Because only expensive care is available?
• Efficiency – does waste drive CHE? Too many drugs, diagnostics, procedures, etc?
• Quality – does poor quality drive CHE? Misdiagnosis?
• Equity – is CHE concentrated among the poor?
• How does health financing, provider payment mechanisms, the organization of the health system, regulation or persuasion affect these intermediate drivers of FRP?
1. **Inadequate Insurance Coverage**

**Population coverage too low:**
~85% popn qualify for BSKY, but 14% households reported having

**Insufficient benefit package:**
BSKY covers only secondary/tertiary care

2. **High OOPE in public + private sector**

Majority of OP care from private sector (54%), including ~15% to chemist shops. Even those who seek care from public sector buy medicines from pvt chemists

Majority IP care from public sector - supposed to be free, Niramaya for free essential drugs

1.1. **Why is population coverage low?**
- Implementation gaps
- Low awareness among the insured

1.2. **Why is benefit package thin?**
- Lack of funds
- BSKY design; How to empanel/pay OP care providers, private providers
  - Moral hazard, overuse

2.1. **Why is there OOPE in public?**

Poor supply of drugs

Low availability at primary levels:

2.2. **Why seek private care?**

- Prefer based on convenience, quality
- Public providers may refer patients to private chemists (financial interests, ownership, commissions, etc.)
Example from Odisha

- CHE is second-highest in Odisha across Indian states
- **WHY 1:** Why is CHE so high in Odisha?
Example from Odisha

- Look at the composition of out-of-pocket spending

Drugs are a major share of OOP & CHE

- WHY 2: Why is drug spending so high?

Source: Haakenstad et al. under review
Look at the quantity of drugs and where obtained

2.5 drugs obtained per outpatient visit

86% of outpatient visits use private sector for drugs, including >70% when care in public sector

**WHY 3:** Why is private chemist use so high?

Source: Haakenstad et al. under review
Example from Odisha

- Look at stocks of drugs in public facilities, where supposed to be free of charge

WHY 4: Why are drugs not being obtained when stocks of drugs are high at public facilities?
Example from Odisha

- Look at the types of drugs available at public facilities versus private chemist shops
- Not perfect substitutes: public facilities stock generics, 84% of private sector stocks branded & branded generics
- **WHY 5**: Why do patients prefer to purchase branded and branded generics?
  - Could the PERSUASION or PROVIDER PAYMENT control knobs be employed?
    - Campaign to inform and persuade patients that generics are of high quality
    - Incentivize providers to prescribe generics or otherwise ensure patients do not incur CHE due to drug costs
Discussion questions: 5 WHYS

1. Why is CHE not highest in all EAG states?
   • Lower consumption expenditure on average

2. Why is CHE higher in India than in other countries with similar income/GDP per capita?
   • 16% in India versus 9% in similar countries
Thank you

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