



*Demo on **Health**
Reform
Options
Simulation
Toolkit*

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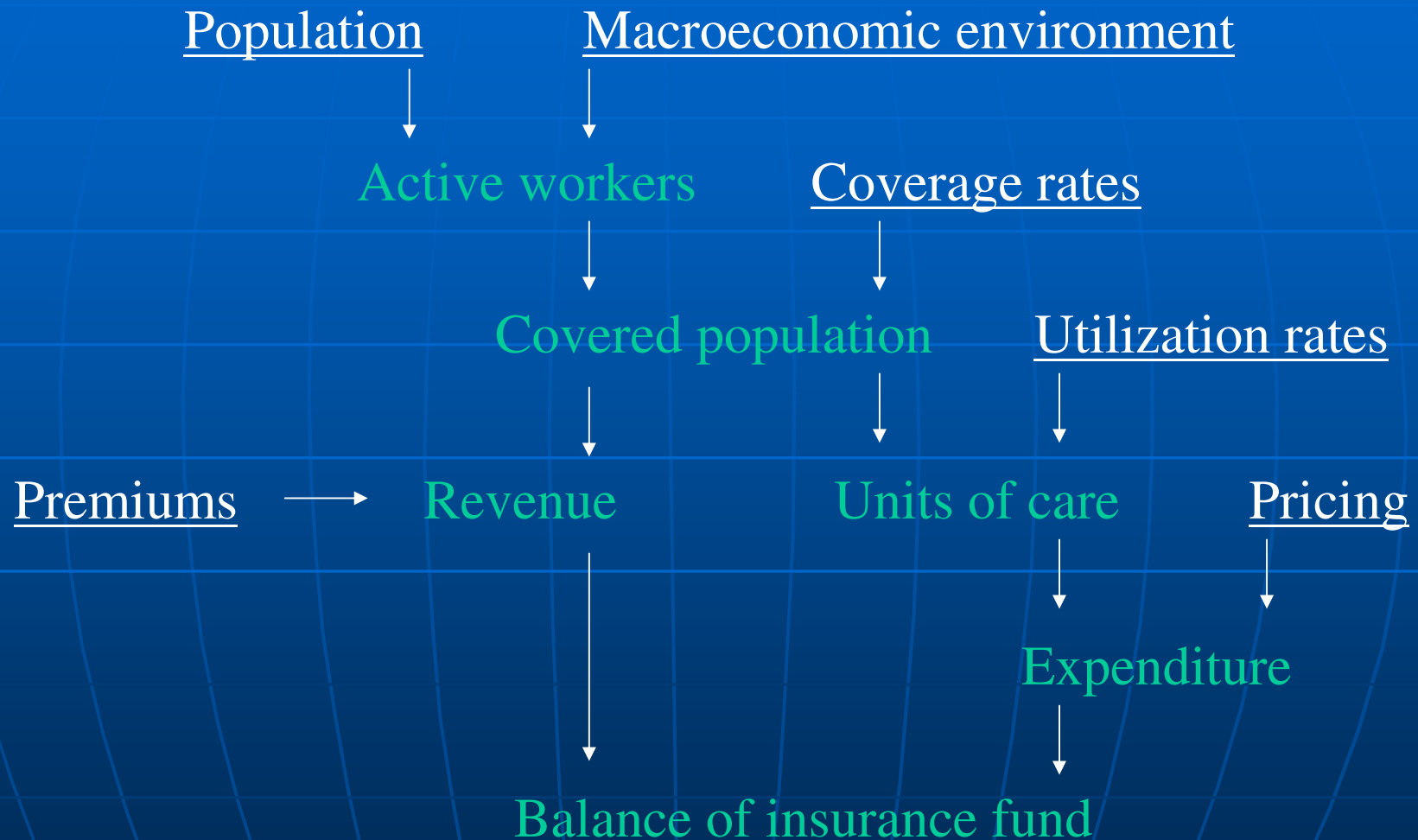


Why Is the Model Needed?

- ❑ To estimate future trends of the system
(coverage, sustainability, equity, adequacy of benefits)
- ❑ To provide consistent numerical framework for policy decisions
- ❑ To test the robustness of the system to shocks
- ❑ To provide a training tool and a platform to organize data and assumptions



General Calculation Scheme





Input Modules

Population

Age structure
Fertility
Mortality
Migration

Coverage

Employment rates
Earnings by age
Primary coverage
Retiree coverage
Dependant coverage
Family structure
Disability rates

Utilization

Rates by:
Age
Gender
Coverage status
Type of service

General

Macro assumptions
Income distribution
Coverage by income

Revenue

Contribution steps
Contribution rates
Collection rate
Government transfers
Interest rate on
investments
Other revenues
Future trends

Expenditure

Price per care by:
Type of service
Payment type
Coverage status
Utilization by
special categories
Other costs
Future trends



Output Modules

Population

Population pyramid
Life table
Life expectancy changes
Summary
Graphs

Coverage & Utilization

Coverage by employment status
Coverage by age
Utilization by age
Utilization by coverage status
Utilization by Income

Wages and Spending

Wage structure
Macroeconomic trends
Spending by age
Spending by coverage
Spending by Income

Financial Flows

Social Insurance
Civil Servant Insurance
Private Insurance
Community / Union Insurance
National Health Accounts &
Gov. Finance



Features of HROST

- ❑ Generic, formulas are separated from data and assumptions
- ❑ Flexible
- ❑ User friendly
- ❑ Outputs intermediate results
- ❑ Addresses all policy dimensions
- ❑ Allows to easily compare scenarios
- ❑ Living model with frequent updates



Data requirements for HROST (1)

Economy

1. For the five major income groups (the first group being minimum wage workers):
(i) percentage of total economically active population represented in the group (by gender) and (ii) coverage rate of each group by different insurance schemes (by gender). What is the percentage of actives in each group that are uninsured? What is expected coverage growth for each income group and each insurance scheme?
2. Income distribution of economically active population by age and gender.
3. Expected GDP growth, average wage growth, minimum wage growth, retiree income growth and inflation.
4. Private sector spending on medical research, medical education and health infrastructure as percent of GDP, current and expected.



Data requirements for HROST (2)

Social Insurance, Civil Servant Insurance, Private Insurance, And Community or Union Insurance Schemes

Coverage:

1. Number of economically active covered workers by age and gender.
2. Current and expected numbers of primary insured exempt from contributions (e.g. pensioners) by age and gender as percent of overall population in that age and gender group.
3. Covered dependents per primary insured (including active workers and pensioners) by age and gender of primary insured, current and expected.
4. Number of dependents, current and expected, by their age and gender, expressed as percentage of overall population in that age and gender group.
5. Disability rate among all insured population, current and expected.

Revenue:

6. Contribution brackets, their expected growth rate, and contribution rates against income within each bracket. Contribution rates (paid by the employees, the employers and the Government) may be reported separately for those with primary coverage (active workers), and for dependents. Are there known changes in contribution rates?
- 6a. If insurance scheme is financed on premium rather than contribution rate basis, what is the current premium and expected growth of premium in real terms?
7. Collection rate, current and projected, calculated as a ratio of actual contribution cash inflows to contribution revenue due in that year.
8. Initial insurance fund reserves, if any, and real interest rate, current and expected, earned on those reserves.
9. Other revenue and unconditional transfers from the government, current and expected, as percent of GDP.



Data requirements for HROST (3)

Expenditure:

10. Utilization rates of ambulatory, in-patient, rehabilitative, ancillary services, medical goods and informal services by age and gender, current and expected.
11. Utilization rates by type of service for disabled and those in the last year of life, current and expected.
12. Total price per care demanded by providers of ambulatory, in-patient, rehabilitative, ancillary services, medical goods and informal services. Out of this total price what portion is formally charged (remaining are fringe payments or bribes)? Out of formal charges, what portion is paid from out-of-pocket and what portion is subsidized by the government through vertical programs? How are these prices and their components expected to grow over time?
13. Administrative costs of insurance schemes and their expected growth expressed as percent of total expenditures.



Data requirements for HROST (4)

Uninsured

Population:

1. Number of economically active uninsured individuals by age and gender.
2. Overall uninsured population by age and gender, current and expected.
3. Disability rate among overall uninsured population, current and expected.

Expenditure:

4. Utilization rates of ambulatory, in-patient, rehabilitative, ancillary services, medical goods and informal services by age and gender of the uninsured, current and expected.
5. Utilization rates by type of service for uninsured disabled and those in the last year of life, current and expected.
6. Total price per care demanded by providers of ambulatory, in-patient, rehabilitative, ancillary services, medical goods and informal services for services provided to uninsured. Out of this total price what portion is formally charged (remaining is fringe payments or bribes)? Out of formal charges what portion is paid from out-of-pocket and what portion is subsidized through vertical programs? How are these prices and their components expected to grow over time?



Data requirements for HROST (5)

Government

1. Cost of public health programs, medical research, medical education and health infrastructure as percent of GDP, current and expected.
2. Health related administrative costs incurred by the government as percent of GDP, current and expected.
3. Donor aid, as percent of GDP, current and expected.



Demo of the HROST model