INA-CBG FOR SUSTAINABLE UNIVERSAL COVERAGE

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Kuala Lumpur
Outline

- Introduction
- Challenges in Achieving Universal Coverage
- Major issues in Social Health Insurance
- Why Provider Payment Is Important?
- Casemix: DRGs vs CBGs
- Advantages of using INA-CBGs for PP in Indonesia
- Conclusion
Introduction: Casemix System in Indonesia

- Casemix system is implemented in Indonesia under JAMKESMAS (Social Health Insurance Scheme for the Poor) since 2006.
- Used by around 1,350 public and private hospitals.
- Coverage around 75 million people.
- Since 2010- INA-CBG was implemented to replace INA-DRGs.
- Casemix System will be used to cover all other Social Insurance Scheme by 2014 under plan for universal coverage- 240 million people.
- National Health Insurance Agency (BPJS) will coordinate all SHI programmes in Indonesia.
Introduction: Universal Coverage

- Indonesia target to achieve universal coverage by 2014
- BPJS is established to organise health financing system towards universal coverage
- Efficiency in SHI is key issue in achieving and sustaining universal coverage
- Provider payment is important component of social health insurance scheme.
What is Universal Coverage?

- A situation where the whole population of a country has access to good quality services according to needs and preferences, regardless of income level, social status, or residency.

  - Anne Mills (2007)
SCOPE OF UNIVERSAL COVERAGE
Depth, Height and Breadth

Financial risk protection: magnitude of out of pocket and catastrophic health spending

Service coverage: Utilization rates

Population coverage: % population covered
Challenges in Achieving Universal Coverage

- Financing
- Health Human Resource
- Health Facilities
- Policy & Governance
- Technology
- Political Support
Obstacles to Universal Coverage

- Raised in health care cost
- Emerging and re-emerging diseases
- Increasing prevalence of chronic diseases
- Poor distribution of Health Human Resource
- Lack of sustainable health financing system
Why Health Financing is Important?

- Provide coverage from catastrophic expenditure
- Increase flow of resources in health sector
- Reduce Out of Pocket Payment
Figure: Causal pathway between pooled prepaid health financing, health coverage, and outcomes

Pooled prepaid health funds
- Prepaid public funds
- Prepaid private funds
- Insurance mechanisms

Health coverage
- Access to needed and effective services
- Financial protection

Health outcomes

Crowding out:
- public vs private funds
- Crowding out: domestic vs external aid funds
- Types of services covered
- Supply-side incentives (e.g., reimbursement arrangements)
- Governance issues

Actual utilisation:
effective vs ineffective services
<table>
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<th></th>
<th>Health spending (% of gross domestic product)</th>
<th>Pooled health spending (% of total health spending)</th>
<th>Tax-based health spending (% of total public spending)</th>
<th>Gross domestic product per person (US$)</th>
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<td>89%</td>
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<td><strong>Middle-income countries making rapid progress toward universal health coverage</strong></td>
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<td>92%</td>
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</table>

Calculations made with data from WHO’s Global Health Expenditure database.40

Table 3: Health financing for selected countries by income and progress toward universal health care, 2009
Evidence on Role of Health Financing

- Data from more than 120 countries
  - 10% increase in government health spending per head will reduce
    - 7.9 per 1,000 death of children below 5 years
    - 4-5% of maternal mortality
    - 1.3 per 1,000 adult deaths
  - 10% increase in OOP payment cause increase in 11.6 per 1,000 female deaths

Challenges in health financing schemes in developing countries

- Low coverage
  - Inadequate resources especially for social insurance
  - High Premium especially for private insurance

- High level of inefficiency
  - High administrative cost
  - Moral Hazards of Consumers
  - Moral Hazards of Providers

- Poor Provider Payment Mechanisms
  - Use of retrospective payment methods
    - Fee for service
    - Itemised billings
Ensuring Sustainability of Social Health Insurance

- **Administrative Cost**
  - Low administrative cost
    - Should not be more than 10% of operating cost

- **Control of moral hazards**
  - Effective and efficient ways of controlling moral hazards
    - Consumers: Co-payment
    - Providers: Utilisation Review, Medical Audit

- **Efficient provider payment mechanism**

- **Regular Review the Benefit Package**
  - Include new services
  - Exclude non-essential services

- **Accepted by Stakeholders**
Importance of Provider Payment Mechanism

- **Cost Containment Measures**
  - Enhance Efficiency

- **Influence Provision of Services**
  - Incentives or disincentives
    - Preventive vs Curative Services
    - Basic Health Services

- **Influence Quality of Care**
  - Technical Quality
  - Client Satisfaction

- **Viability of Health Financing Scheme**
  - Disbursement of funds
Payment Methods: Retrospective vs Prospective

◆ **Retrospective**
  - Fee-for-service
  - Payment per itemised bill
  - Payment per diem

  **Strengths**
  - Favoured by providers

  **Weaknesses**
  - Prone to supplier induced demand
  - High Administrative cost

◆ **Prospective**
  - Capitation payment
  - Global budget
  - Case-mix payment

  **Strengths**
  - Good cost containment
  - Low admin cost

  **Weaknesses**
  - Need high technical capacity to develop
  - Reduce Providers clinical freedom (need to legislate)
UNU-IIGH CAPACITY BUILDING PROGRAMME ON CASE-MIX

Disease & Procedure Codes → UNU-DRG-Grouper → Financial Data

Case-Mix Index

Cost-Weights

CUSTOMISED DRG GROUPER

Base Rate

CCM

Casemix Cost
What is Casemix System?

- A tool to classify varieties of patient conditions into groups according to resource consumed as approximated by LOS, episode cost, or cost of daily services
  - More generic term of patient classification system
  - Characteristics: Iso-resource and clinical characterstics
- Use in many forms in around 120 countries worldwide
Components of Casemix System

- Disease Classifications
- Costing

Casemix
Benefits of Casemix

Casemix

EFFICIENCY

QUALITY

INFORMATION
Casemix System in Developing Countries: The Obstacles

- Lack of capacity
  - Technical skills on Case-Mix System
- Lack of financial resources
- Limitations in health information system
  - Quality of disease coding
  - Limited availability of costing data
- Lack of political will
  - Policy makers were ill-advised on potential of case-mix system
  - Influence by Clinicians comfortable with Fee-For-Service Payment Methods
- Limited Access to Casemix Tool
  - Casemix Groupers are mainly proprietary owned
  - Difficult to be customised for local need
  - Most casemix system is developed only for Acute diseases
DRGs vs CBGs

- Diagnosis Related Groups
  - Developed based on **acute health conditions**
  - Uses mainly diagnosis and procedures in the classification system
  - **Principle of iso-resource based on LOS and Cost.**
  - Original version developed by Prof Robert Fetter and Jane Thompson in Yale University
  - First casemix that has been used as payment tool in the US Prospective Payment System (PPS) since 1983
DRGs vs CBGs

Case-Based Groups
- Modified form of DRGs
- Covering both acute and chronic conditions
- Goes beyond Diagnosis and Procedures as cost drivers
- Consists groups based on drugs, investigations, procedures
Why we need CBGs and Not DRGs?

- Package under DGRs is mainly based on diagnosis and procedure.
- Diagnosis and procedures are not the only cost drivers.
- Drugs, Ix and Prosthesis are important cost drivers.
- Top-up Payment is not allowed in DRGs causing financial risk to providers.
From DRGs to CBGs

**DRG’s**
- Diagnosis
- Procedure
- Acute Stay

**CBGs**
- Acute
- Subacute
- Chronic
- Unbundling
- Drugs
- Exp Procedures
- Prosthesis

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UNU Casemix Grouper

- An international grouper
- Priority to developing countries
- Packaged with capacity building programme
- Comes with accessory software
- Based on Open Source Concept
- Provided at low cost or free to poor countries

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UNU-CBG: The New Casemix Grouper

- Grouper developed by researchers from United Nations University
  - UNU-International Institute For Global Health (Kuala Lumpur)
  - UNU-International Institute For Software Technology (Macau)
- Research and Collaboration
  - ITCC- International Training Centre on Case-Mix and Clinical Coding
  - MOH of Developing Countries
  - Asia Pacific Network of FIC
  - WHO-FIC (ICD-10 and Procedure Classifications)
- Owned and Maintained by United Nations University
- United Nations University
  - United Nations Agency
  - Non-for Profit and No Commercial Interest
  - Priority to support developing countries to achieve MDGs
What is UNU-CBG Grouper?

**Universal Grouper**
- Cover all types of patients care
  - Acute (In-patient/Outpatient)
  - Sub-Acute (Moderately complex cases)
  - Chronic Case (Long Stay Cases)

**Dynamic Grouper**
- Total number of CBGs can be set according to need of the country
- Severity level is not static
- Depending on types of patient care
  - I to III
  - I to IV
  - I to IX
  - I to X
- Very refined classifications

**Advance Grouper**
- Can be used with future changes in diagnosis and procedure classifications (ICD-11 and ICHI classifications)
EIGHT COMPONENTS OF UNU-CASEMIX GROUPER (Plus Dental)
CASE-MIX MAIN GROUPS (CMGs)

- CMGs are the first level of classifications
- Labels in Alphabet (A to Z)
- Mostly equivalent to Chapters in ICD-10
- Correspond to Body Systems and Payment Package
- 32 CMGs in UNU Grouper
  - 22 Acute Care CMGs
  - 2 Ambulatory CMGs
  - 2 Subacute and Chronic CMGs
  - 5 Special CMGs
  - 1 Error CMGs
- Total CBGs/DRGs = 1,220 (Range: 314-1,350)
Case-Based Groups (CBGs)

- Second level of classification
- Organised in 5 alpha-numeric code
  - One letter and 4 numbers
- First Digit refers to CMG (Casemix Main Groups)
- Second Digit refer to Case-Type
- Third and Fourth Digit refer to specific DRG called CBG
- Fifth Digit refer to severity level and resource intensity level for specific package
- Consists of Medical/Surgical/Package Groups
UNU-IIGH Case-Mix Grouper 2.0: Classification System

- Most DRG system use only diagnosis & Procedures in the classifications
- UNU-IIGH CMG give wider options to use Diagnosis, Procedures, Drugs, Investigations and Prosthesis in the Classification
Advantage of Extending Classification beyond Dx and PX....

- Dx and Px are not the only cost drivers
  - Drugs, Ix and Prosthesis are important components determine cost
- Able to include series of ambulatory packages
- Cost weights will be more refined
- Move away of using very limited package determine only by severity level
  - Resource intensity is taken into consideration
- Tariff will reflect the actual resource use
- Tariff more likely to be accepted by providers
Conventional Casemix System

- Focus mainly on acute care
- Priority on inpatient care
- Episodes requiring extended hospital stays adequately covered
- Cost of sub-acute and chronic care not adequately covered
- Cost of expensive procedures, investigations, drugs, prostheses and ambulatory care package not adequately represented
The **New** Casemix System: UNU-CBG

- Sub-acute and chronic care are well defined
- Includes special groups such as:
  - Special Drugs
  - Special Investigation
  - Special Prosthesis
  - Special Procedures
  - Ambulatory Care Package
- With flexible levels of severity
Sub-acute & Non-Acute Care

- Care provided after acute illness
  - Principal medical diagnosis (modified for factors such as age and procedures) is not adequate in explaining the need for, or the cost of, the services
- Predominant goal
  - Enhancement of a patient’s quality of life
  - Improvement in his or her functional status.
- Examples of Services:
  - Rehabilitation (Physical & Mental)
  - palliative care
  - psychogeriatric care
UNU-IIGH Casemix System: SERVICES COVERED

- Hospital In-patient
- Day Care Surgery
- Specialist Clinic
- Emergency Room
- General Out-patient
- Rehabilitation
- Chemotherapy and Radiotherapy
- Mental Health Services and Procedures

- Chronic cases
- Long Staying patients
- Specific Package Groups
  - Package Out Patient
  - Prostheses
  - Drugs
  - Procedures
  - Investigations
Components of UNU Casemix System

UNU-UNU-UNU-UNU-
CCM
DATA PRO
UNU-CBG
National Cost Weights
CODE ASSIST
Softwares in Case-Mix System

- **Digital Coding Tool**
  - DataTool Pro - Assist to enhance productivity of Coders
  - UNU-Code Assist - Assist in Verifications of Casemix coding and grouping

- **Case-Mix Grouper**
  - UNU-CBG Grouper

- **Costing Tool**
  - CCM Version 2.0-UKM/UNU
  - Costing Template for Hospital Base-Rates
  - Costing Template for National Tariff
Countries working with UNU-IIGH/ITCC on Casemix

- **Asia**
  - Indonesia
  - Philippines
  - Mongolia
  - Vietnam
  - Malaysia

- **Middle East**
  - Yemen
  - United Arab Emirates
  - Saudi Arabia
  - I.R of Iran

- **South America**
  - Uruguay
  - Chile

- **Africa**
  - Ghana
  - Sudan
  - Tanzania

- **Europe**
  - Turkey
DRG-based payment systems
in low- and middle-income countries:
Implementation experiences and challenges

by
Inke Mathauer and Friedrich Wittenbecher

DISCUSSION PAPER
Number 1 - 2012
Department "Health Systems Financing" (HSF)
Cluster "Health Systems and Services" (HSS)
### 3.1. Countries with a nationwide established DRG-based payment system

#### Table 1: Health expenditure indicators for 2010

<table>
<thead>
<tr>
<th>Countries</th>
<th>Country income classification as of 2009</th>
<th>GDP p.c. in US$ at exchange rate</th>
<th>Total expenditure on health (THE) as % of GDP</th>
<th>Total expenditure on health/capita in US$ at exchange rate</th>
<th>General govt expenditure on health (GGHE) as % of THE</th>
<th>GGHE as % of general govt expenditure</th>
<th>Social security funds as % of GGHE</th>
<th>Out of pocket expenditure as % of THE</th>
<th>Inpatient care expenditure as % of THE</th>
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Source: WB 2011 and WHO 2012

Matheur and Wittenbecher; WHO, (2012)
Success Factors in Casemix Payment

- Mandatory applications to widest range of providers
- Purchaser Capacity
- Regulation on Balance Billing
- Involvement of private providers
- Piloting and Incremental Approach
- Expenditure ceilings
- Tools for Providers and Patient Acceptance

Adapted from: Matheur and Wittenbecher (2012)

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Module 1 Registration

The registration for Module 1: Introduction to Case-Mix for the third batch of students is now opened. This batch is due to begin class by the 6th of September 2010.

Registration Form

About UNU-IIGH

UNU-IIGH is a Research and Training Centre of United Nations University inaugurated by the UN Secretary General in April 2006 as an in-house community of scholars mandated to conduct research on issues that address the challenges of global health which are of concern to the United Nations and its Member States — particularly the developing countries. The institute's UNU-IIGH research and capacity building themes include: accessibility, efficiency and quality of service delivery of health care systems; newly emerging and re-emerging diseases; non-communicable diseases and control policy; information technology in health; climate change and health and impact of globalisation on health.

For Enquiries: Prof Dr Syed Aljunid

Site news

(No news has been posted yet)
UNU-IIGH Certificate Course in Casemix Management

- Module 1
  - Orientation and Introduction to Case-Mix
- Module 2
  - Coding of diagnosis and procedures
- Module 3
  - Installation and Maintenance of Case-mix Software
- Module 4
  - Case-Mix Costing
- Module 5
  - Development of Clinical Pathways
- Module 6
  - Coded Data Analysis
- Module 7
  - Costing Data Analysis
- Module 8
  - Analysis of Clinical Pathway data
- Module 9
  - Development of Case-Mix Index and Cost-Weights
- Module 10
  - Preparation for National Roll-out
Conclusion

- Universal coverage is the ultimate goal of health system in most countries now including Indonesia
- Achievement and sustainability of UC depends on resilient, robust and efficient health financing system
- Casemix system can help countries to achieve UC thorough enhancement in efficiency and quality of care
- Moving away from conventional DRG to CBG is the way forward to reduce financial risk of hospitals and providers to achieve UC
- UNU-CBG/INA-CBG is a special casemix system developed by taking into account the healthcare system of developing countries
Thank You

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