Health Care Reform in Korea: Key Challenges

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ROAD MAP

1. Financial Protection and the Extension of Benefit Coverage

2. Financial Sustainability and Provider Payment System

3. Pharmaceuticals

4. Long-term Care Insurance
Health Care System in Korea

1. Health Care Financing
- Universal coverage of population through social health insurance (SHI) since 1989
- High out-of-pocket payment, amounting to 35-40% of total health expenditure: rapid increase in the provision of uncovered services
- Social insurance for long-term care, introduced in July 2008

2. Health Care Delivery
- Private delivery (90% of hospitals are private)
- Strong profit orientation and very strong opposition to payment system reform

I. Financial Protection and the Extension of Benefit Coverage

1. Benefit Coverage in Korea
Policy Priority on extending population coverage in Korea

- Some Protection Mechanisms
  - Discounted copayment: elderly, patients with chronic conditions (e.g., renal dialysis)
  - 5% OOP pay for catastrophic conditions: e.g., cancer
  - Exemptions of copayment: the poor (Medical Aid program)
  - Ceiling on out-of-pocket payment for covered services: 3 different ceilings for 3 income groups (lower 50%, middle 50-80%, upper 80-100%)
## Health Expenditure in Korea

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>Total Health Expenditure (THE) as a percentage of GDP</td>
<td>5.1</td>
<td>5.4</td>
<td>5.4</td>
<td>5.7</td>
<td>6.1</td>
<td>6.3</td>
<td>6.5</td>
</tr>
<tr>
<td>Public Expenditure on Health as a percentage of THE</td>
<td>51.3</td>
<td>50.4</td>
<td>51.1</td>
<td>52.1</td>
<td>54.7</td>
<td>55.2</td>
<td>55.3</td>
</tr>
</tbody>
</table>

*Source: OECD Health Statistics, 2010.*

### % Public in Total Health Expenditure, 2008

- **Norway**: 80%
- **Iceland**: 80%
- **United Kingdom**: 80%
- **Czech Republic**: 79%
- **Sweden**: 80%
- **New Zealand**: 80%
- **France**: 85%
- **Estonia**: 81%
- **Italy**: 79%
- **Ireland**: 79%
- **Austria**: 79%
- **Germany**: 77%
- **Finland**: 79%
- **Belgium**: 79%
- **Spain**: 85%
- **Slovenia**: 85%
- **Poland**: 80%
- **Hungary**: 80%
- **Canada**: 80%
- **Slovak Republic**: 80%
- **Chile**: 80%
- **Switzerland**: 80%
- **Israel**: 60%
- **Korea**: 60%
- **Mexico**: 50%
- **United States**: 55%

*Source: OECD Health Data 2010*
2. Why OOP payment is still high in Korea (about 35%) in spite of universal coverage of population?

- Cost sharing for covered services in inpatient care is only 20%

  a. Provision of more and more of uninsured services (many of those services are not provided in other countries): rapidly increasing denominator (total H expenditure)
  
  b. Physician and patient attitude toward technology
     -> early adopters of technology
  
  c. Perverse financial incentive by regulated FFS
  
  d. Extra billing allows the provision of uninsured services bundled with insured services at the same episode of care/visit
3. Private Health Insurance (PHI)

Current regulation: PHI coverage of maximum 90% of the OOP payment under NHI (to minimized moral hazard)

More than half of population purchase PHI in Korea, and Taiwan (Kwon, Lee, and Ikegami, forthcoming, 2011)
- Over-insurance in the private insurance market, in general (e.g., very popular life insurance, which often provide coverage for health)
- People with higher socio-economic status tend to buy PHI

Recent study in Korea (Jeon and Kwon, 2010)
- Control selection bias by propensity score matching
- People with PHI show higher utilization of outpatient care, in volume and expenditure
- Little effect of PHI in the inpatient care

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II. Financial Sustainability and Provider Payment System

Concern on Financial Sustainability and Cost Containment
- Increasing expectation on quality
- Rapid aging
- Private providers
- FFS payment

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Fiscal Status of NHI

unit: 100 mil won
### Health Insurance Contribution Rate, Korea (% of wage income)

<table>
<thead>
<tr>
<th>Year</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>HI Cont. Rate (%)</td>
<td>4.21</td>
<td>4.31</td>
<td>4.48</td>
<td>4.77</td>
<td>5.08</td>
<td>5.08</td>
<td>5.33</td>
<td>5.64</td>
</tr>
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</table>

### Revenue for National Health Insurance, Korea

<table>
<thead>
<tr>
<th>Year</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>HI Contribution (%)</td>
<td>76</td>
<td>76</td>
<td>78</td>
<td>80</td>
<td>81</td>
<td>82</td>
<td>84</td>
<td>85</td>
<td>83</td>
<td>84</td>
</tr>
<tr>
<td>Government Subsidy (%)</td>
<td>23</td>
<td>22</td>
<td>20</td>
<td>19</td>
<td>18</td>
<td>17</td>
<td>15</td>
<td>14</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Others (%)</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Total (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
1. Fee for Service Payment and RBRV (Resource-Based Relative Value)

Fee = conversion factor * Relative Value

Negotiation between NHIC (Nat H Insurance Corporation) and provider organization over conversion factor

Setting of the conversion factor need to take into account the expenditure or volume (or based on whether actual expenditure exceeds the target expenditure)
- Volume Performance Standard should be introduced

2. DRG-based Prospective Payment

As of 2007 (for 7 disease categories, voluntary participation)

a. 69% of HC providers participates:
   - 78% of Physician clinics (used to be 60% in 2002)
   - 41% of Hospitals (49% in 2002)
   - 38% of General hospitals (45% in 2002)

b. DRG payment accounts for
   - 8.4% of inpatient cases
   - 6.0% of H insurance expenditure for inpatient care
   - Limited effect on the overall behavior of health providers
EVALUATIONS (HIRA, 2009: Choi and Kwon, 2009)

- Amount of service is lower for providers paid by DRG than those paid by FFS
  - Tests and medications; Length of stay

- Little difference between providers paid by DRG and those paid by FFS
  - in medically necessary services: contributes to little negative impact of DRG payment on outcomes
  - in re-admission: because the disease categories paid by DRG system are non-severe types

DRG effect on LOS is the greatest in the earlier years of participation and diminishes as participation continues

Overall, there was a substitution effect (substitution of unregulated inputs for regulated ones), but the total effect was positive (reduction in cost)

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Payment system reform for health care providers in Korea

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Since its introduction in 1977, the national health insurance programme in Korea has paid health care providers on a fee-for-service basis. Regulated fee-for-service payment has resulted in an increased volume and intensity of medical care. It has also distorted the input mix of treatment because physicians have substituted more profitable and uninsured (no coverage) medical services for those with lower margins, as is evidenced by the sharp increase in the caesarean delivery rate. This paper examines two recent supply-side reforms in Korea: Diagnosis Related Group (DRG) and Resource-based Relative Value (RBRV). Since 1997, through a pilot programme covering a selected group of diseases for voluntarily participating health care institutions, the DRG-based prospective payment system has proven to be effective in containing cost with little negative effect on quality. RBRV-based payment was implemented in 2001, but led to an almost uniform increase in fees for physician services without a mechanism to control the volume and expenditure. Challenges and future issues in the reform of the payment system in Korea include the expansion of benefit coverage, quality monitoring and improvement, strategic plans to overcome the strong opposition of providers and the introduction of global budgeting.

Keywords: health insurance, provider payment, DRG, RBRV, Korea

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III. Pharmaceuticals

1. Reimbursement to Medical Providers

Reimbursement of real cost of purchase
    (No margin on medicines)
    - No incentive for providers to purchase medicines in a cost-effective way
    - Beneficial to pharmaceutical manufacturers and distributors
    - Pharmaceutical manufacturers and distributors provide informal pay-back to hospitals/physicians

-> Finally changed in 2010: Now allow providers to keep a given portion of the difference between real cost of purchase and prevailing market price

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% Pharmaceutical Expenditure in THE, 2008

Source: OECD Health Data 2010
2. Pricing of Pharmaceuticals

Pricing Policy in the Past

a. Pricing of New Medicines
Average of manufacturing prices (65% of list price) in 7 countries (USA, UK, Germany, France, Italy, Swiss, Japan) plus VAT and distributors’ margin
-> External Reference Pricing

b. Pricing of non-new (copy) Medicines in Korea
1st generic medicine: 80% of the price of existing original medicine (price of the originator is down to 70% when generic enters)
2nd-5th: 80% of the price of the existing generic medicine
6th- : 80% of the price of 2nd-5th copy medicines

International Price Comparisons of Generics: Price Index (1) (Kim, Kwon, et al., 2010)

<table>
<thead>
<tr>
<th>Country</th>
<th>No M/P/S</th>
<th>USD Laspeyres</th>
<th>USD Paasche</th>
<th>USD Walsh</th>
<th>USD Fisher</th>
<th>USD-PPP Laspeyres</th>
<th>USD-PPP Paasche</th>
<th>USD-PPP Walsh</th>
<th>USD-PPP Fisher</th>
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</thead>
<tbody>
<tr>
<td>USA</td>
<td>62</td>
<td>0.539</td>
<td>0.418</td>
<td>0.446</td>
<td>0.475</td>
<td>0.381</td>
<td>0.295</td>
<td>0.315</td>
<td>0.335</td>
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<tr>
<td>Norway</td>
<td>46</td>
<td>0.540</td>
<td>0.304</td>
<td>0.366</td>
<td>0.405</td>
<td>0.233</td>
<td>0.131</td>
<td>0.158</td>
<td>0.175</td>
</tr>
<tr>
<td>Sweden</td>
<td>47</td>
<td>0.628</td>
<td>0.275</td>
<td>0.370</td>
<td>0.415</td>
<td>0.312</td>
<td>0.136</td>
<td>0.184</td>
<td>0.206</td>
</tr>
<tr>
<td>UK</td>
<td>62</td>
<td>0.760</td>
<td>0.301</td>
<td>0.415</td>
<td>0.479</td>
<td>0.437</td>
<td>0.173</td>
<td>0.239</td>
<td>0.275</td>
</tr>
<tr>
<td>Spain</td>
<td>65</td>
<td>0.768</td>
<td>0.435</td>
<td>0.628</td>
<td>0.578</td>
<td>0.486</td>
<td>0.275</td>
<td>0.397</td>
<td>0.366</td>
</tr>
<tr>
<td>Germany</td>
<td>67</td>
<td>0.784</td>
<td>0.496</td>
<td>0.603</td>
<td>0.624</td>
<td>0.439</td>
<td>0.277</td>
<td>0.338</td>
<td>0.349</td>
</tr>
<tr>
<td>Belgium</td>
<td>53</td>
<td>0.895</td>
<td>0.638</td>
<td>0.711</td>
<td>0.755</td>
<td>0.471</td>
<td>0.336</td>
<td>0.374</td>
<td>0.397</td>
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</table>
## International Price Comparisons of Generics: Price Index (2) (Kim, Kwon, et al., 2010)

<table>
<thead>
<tr>
<th>Country</th>
<th>No M/P/S</th>
<th>USD</th>
<th>USD-PPP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Laspeyre s</td>
<td>Paasch e</td>
</tr>
<tr>
<td>Italy</td>
<td>57</td>
<td>0.901</td>
<td>0.628</td>
</tr>
<tr>
<td>Netherlands</td>
<td>59</td>
<td>0.919</td>
<td>0.490</td>
</tr>
<tr>
<td>Australia</td>
<td>50</td>
<td>0.993</td>
<td>0.845</td>
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<tr>
<td>Austria</td>
<td>59</td>
<td>1.130</td>
<td>0.726</td>
</tr>
<tr>
<td>France</td>
<td>54</td>
<td>1.131</td>
<td>0.881</td>
</tr>
<tr>
<td>Swiss</td>
<td>44</td>
<td>1.205</td>
<td>1.098</td>
</tr>
<tr>
<td>Japan</td>
<td>33</td>
<td>1.477</td>
<td>1.086</td>
</tr>
</tbody>
</table>

### 3. Reform in Benefit Decision and Pricing

#### a. Economic Evaluation (EE)
Introduction of **positive listing** (included in the benefit package) based on cost effectiveness, starting in 2008

- HIRA (Health Insurance Review and Assessment) reviews the data submitted by pharmaceutical manufacturers

#### b. Pharmaceutical Pricing
Instead of formula-based pricing (average price in 7 countries)

- Introduce **price negotiation** between NHIC (National Health Insurance Corporation) and pharmaceutical manufacturers with **price-volume consideration**
IV. Population Aging

1. Structure of LT Care Insurance (LTCI)

1) Social Insurance for LT Care

Introduced July 2008

Insurer (National Health Insurance Corporation, NHIC) (e.g., sickness funds in Germany, local governments in Japan)
2) Population Coverage

Targeted coverage: 3-4% of the elderly
  -> tradeoff between LTC needs and financial sustainability

a. Long-term care for the elderly (+65), and
b. Age-related long-term care of the younger (<65 years)
  -> will be very few

Political compromise: Everybody should pay contribution,
  and everybody is eligible when he/she has LT care
  needs due to \textit{age-related} health problems

Mix of German and Japanese model
  - Germany: all types of disability regardless of age
  - Japan: long-term care of the elderly (+65) and age-
    related LT care for 40-64 years old

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2) Population Coverage (continued)

As of April 2010 (following statistics are from NHIC)

Service users: about 250,000 (4.8% of the elderly)

Those certified to be eligible for the benefits:
  about 310,000 (5.7% of the elderly)
  - 80 years and older (45%), 70-79 years old (37%),
    65-69 years old (10%), below 65 years old (8%)
  - about 11% (Germany), 17% (Japan)

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2) Population Coverage (continued)

<table>
<thead>
<tr>
<th></th>
<th>July 2008</th>
<th>July 2009</th>
<th>May 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nr. Applied (% of the Elderly)</td>
<td>295,715 (5.9%)</td>
<td>513,749 (9.8%)</td>
<td>676,966 (12.6%)</td>
</tr>
<tr>
<td>Nr. Certified to be Eligible (% of the Elderly)</td>
<td>146,643 (2.9%)</td>
<td>268,071 (5.2%)</td>
<td>308,126 (5.7%)</td>
</tr>
<tr>
<td>Nr. Used Services (% of Those Eligible)</td>
<td>78,370 (53.4)</td>
<td>184,434 (68.9)</td>
<td>244,669 (79.4)</td>
</tr>
</tbody>
</table>

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3) Assessment

3 levels of functional status (3-4% of the elderly):
Level 1 (very severe), Level 2 (severe), Level 3 (moderate)
Level 3 is eligible only for visiting/home-based care

As of May 2010
- Among those who are certified to be eligible:
  17% level 1 (most severe), 25% level 2, 58% level 3
4) Level of Benefits

Contribution rate:
- 4.05% of health insurance contribution (2008)
- -> 4.78% (2009) -> 6.55% (2010)

Financing mix
- Government subsidy: 20%
- Copayment: 20% (institution), 15% (home-based)
  -> exemption or discount for the poor
- Contribution: 60-65%

Meals, private rooms are not covered by LT care insurance

5) Type of Benefits

Service benefit in principle, cash benefit in exceptional cases (e.g., when no service providers in the region)

Payment to providers
- pay per hour: visiting care, visiting nursing
- pay per visit: visiting bath
- pay per day: institutional care, day/evening care

Ceiling on benefit coverage for non-institutional care: depending on the (three) levels of functional status
5) Type of Benefits (continued)

Role of cash benefits needs to be re-considered

a. Pros
- Preserving the role of family
- Consumer choice (competition among formal and informal care givers)
- Potential cost savings (level of cash benefits lower than service-in-kind)

b. Cons
- Potential abuse, low quality of care, gender perspective?
- Against the philosophy of socialization of care

2. Challenges

1) Excess Supply of LT care providers

Number of LTC workers certified:
  70,355 (June 2008) -> 935,607 (June 2010)
Number employed, about 200,000
(6 weeks of training only->Exam was recently introduced)

Size of LTC residential facilities:
  too small, diseconomy of scale, excess competition
  -> 70 persons + (13%), 30-70 persons (25%),
  below 30 persons (62%)
2) Financial Sustainability

Average service days per user of LTCI benefits (2009):
  Institution-based (239.5 days),
  Home-based (137.1 days)

Average monthly LTC expenditure per user paid by LTCI (2009):
  Institution-based (731,531 KRW),
  Home-based (367,387 KRW)  * 1 USD = about 12,000 KRW

LTC expenditure as a % of GDP:
  0.07 (2008) -> 0.19 (2009)

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2) Financial Sustainability (continued)

Financial Projections (Kwon, et al., 2011): PSSRU model
  a. LTC expenditure as a % of GDP
     0.23% (2020) -> 0.28% (2030) -> 0.4% (2040)
  b. Proportion of the elderly who use LTC insurance
     6.7% (2020) ->6.5% (2030) -> 7.6% (2040)

Bad news: rapid aging
Good news:
  - Ceiling on benefits
  - Compared with health care, less potential of supplier-induced demand, smaller role of expensive high technology

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The introduction of long-term care insurance in South Korea

Sooman Kwon

V. Directions for Future Reform

a. Health Care Financing

Contributions based on wage income:
- inequitable and inefficient (distortion in labor participation)

-> contributions should be collected not only on wages but also on other forms of income

Cost containment through payment system reform
- Prospective case-based payment (e.g., DRG)
- Global budgeting
V. Directions for Future Reform

b. Pharmaceuticals

- Budget cap on pharmaceutical expenditure: physicians and pharmaceutical industry share the responsibility when pharmaceutical expenditure exceeds the cap
- Mandatory generic prescription, financial incentives for physicians to prescribe less costly medicines (e.g., payment system reform), discounted copayments for consumers who choose generics (e.g., reference pricing).
- Reduce the price of generic medicines to decreased the price gap between branded drugs and generics -> facing strong oppositions by domestic manufacturers

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V. Directions for Future Reform

c. Long-term Care Insurance

- Balance between institutional care and home-based (community-based) care
- Coordination between LT care insurance and health insurance in terms of benefit coverage and provider reimbursement: health promotion for the elderly, reduce social admissions
- Coordination between LC care insurance and welfare services (provided by local governments)
THANK YOU!

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