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Healthcare Technology Diffusion - Actor-level Analysis on Economic Behavior-

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Key Points Left

1. Characteristics of Cost

1. Indirect Cost (Productivity Loss) [Jonsson B. 2002]
2. Extension to the Aged, or Other Subgroups [Dozet A et al. 2002]
3. Long-term Cost

2. Taxonomy of Technology

3. Economic Behavior of Each Actor

Taxonomy of Technology

1. Diagnostics

- Pharmaceuticals & Biotechnology
 - (e.g., genetic diagnosis) materials
- Equipment
 - (e.g, CT, MRI, PET Scan, etc) large investment
- Invasive Procedures
 - technical skills + materials/equipment (e.g., coronary angiography)

Taxonomy of Technology

2. Treatment

- Pharmaceuticals & Biotechnology
 - mainly materials (e.g., t-PA, immunization)
- Equipment
 - (radiotherapy, gamma knife, ESWL) L. invest.
- Invasive Procedures
 - technical skills + materials/equipment (e.g., stent, laparoscopic surgery)

Taxonomy of Technology

3. “Soft” Technology

Clinical Management

- Clinical Path
- Clinical Practice Guideline

Organizational Management

- TQM, Process Engineering
- IT for transaction, recording and analysis

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Effect and Cost of Technology

Effect

- for patient
- fixed (Efficacy|Effect size derived from RCT)

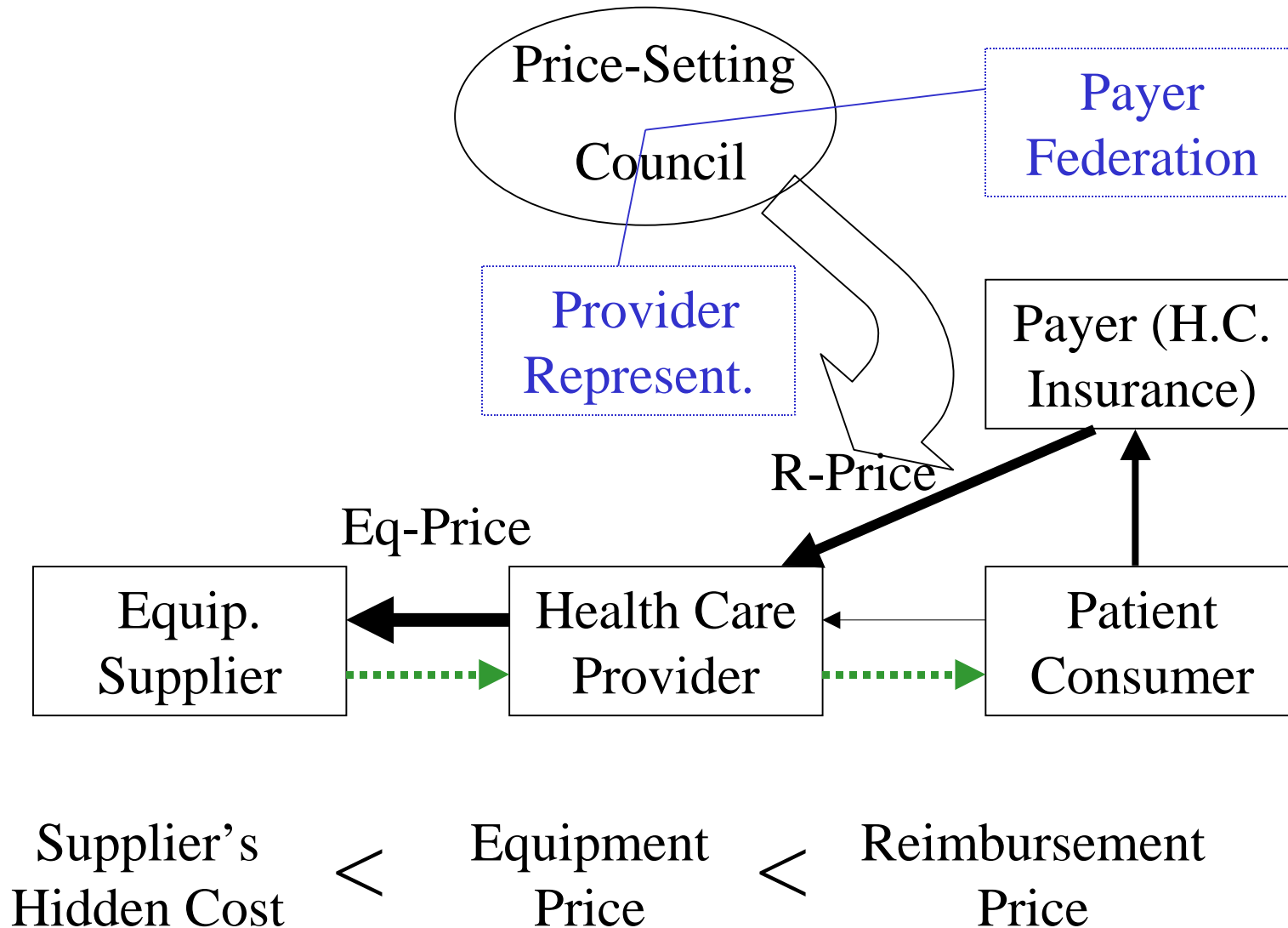
Cost

- for whom? --- "Social Cost" (societal perspective)
- flexible (price for a buyer)
- Nobody Acts for "Social Cost" (Potentially Gov. does)
- One Acts from their own perspective

Actor-level Analysis on Behavior

- The Healthcare Technology Market is made up of Several Economic Actors who buy/sell & pay/gain.
- Each Actor has its own Cost & Effect Profile on which the behavior decision is based on.
- Reimbursement Price in Health Insurance is the key factor which sets the Rule for Diffusion. [National Uniform Price List In Japan]

Relationship among Actors in Health Technology Diffusion



Loss-Gain Analysis for Each Actor

Case of High-Tech Equipment

	Equip. Supplier	Provider Organization	Provider Professionals	Patient	Payer
Cost	R&D, M&D	Equip. Price +	0	R-Price X copayment [w/ ceiling]	R-Price -copayment
Income	Equip. Price	R-Price +Competitive Edge	Salaried +Professional Imperative	0 [Hi-Tech Demand]	0
<i>note</i>	<i>Cost < Income</i>	<i>Cost < Income</i>			
Profit	+	+{ROI>0} or 0/-	0	- but, limited	-