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The Economics of Long Term Care

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Outline

1. Introduction and motivation
2. A stylized LTC episode
3. The decision makers involved in an LTC episode
4. Perspectives on LTC insurance
5. Summary and conclusion

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1. Introduction and motivation I

- Health care expenditure (HCE) has been rising fast in industrial countries
- But long-term care (LTC) expenditure has been rising even faster
  - ➢ In Germany, 0.4 percent of the wage bill was earmarked for LTC insurance in 1996
  - ➢ Now, this rate stands at 1.7 percent
  - ➢ In the United States, LTC has reached 10% of HCE, i.e. some 1.4% of GDP
- This (growing) importance of LTC may motivate analysis

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1. Introduction and motivation II

- In addition: LTC poses a theoretical challenge
  - ➢ Contrary to „normal“ health care, disclosure of the condition is a problem
  - ➢ LTC has two aspects,
    (1) physical limitations
    (2) inability to make decisions (Alzheimer) ↔ consistent ranking of alternatives!

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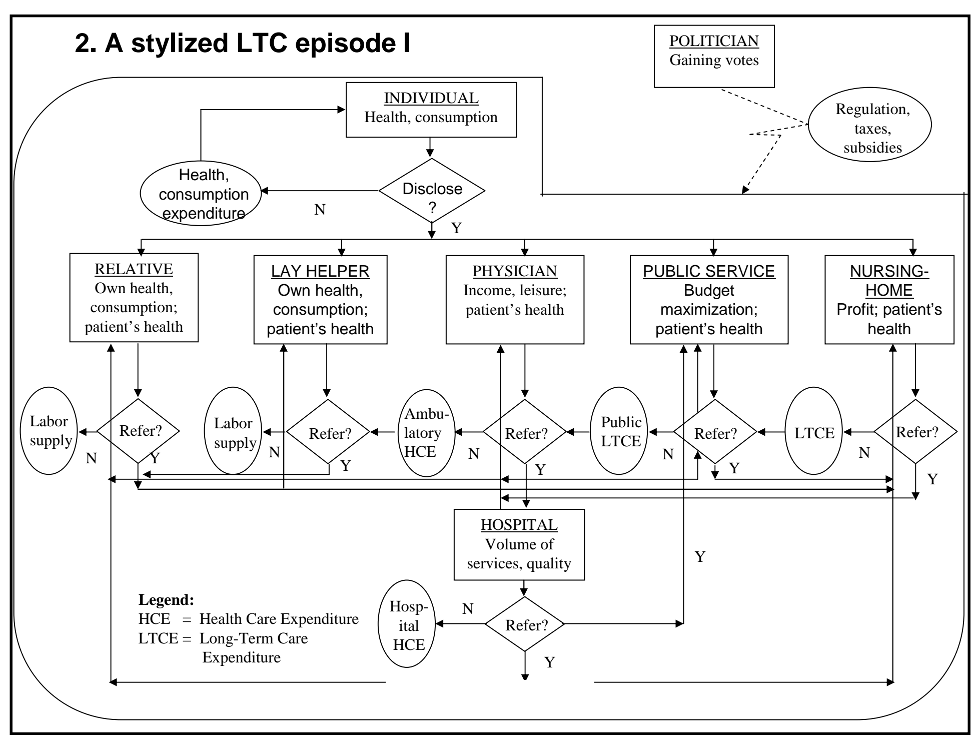
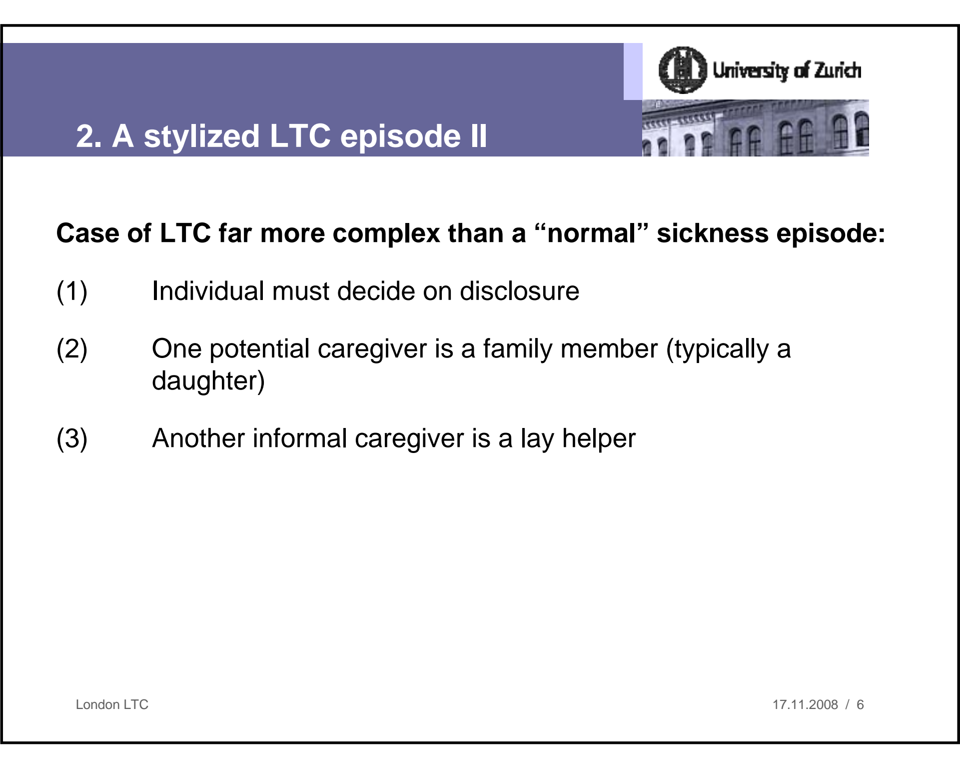

2. A stylized LTC episode I
POLITICIAN
Gaining votes
Regulation, taxes, subsidies
INDIVIDUAL
Health, consumption
Health, consumption expenditure
Disclose ?
N
Y
RELATIVE
Own health, consumption; patient's health
LAY HELPER
Own health, consumption; patient's health
PHYSICIAN
Income, leisure; patient's health
PUBLIC SERVICE
Budget maximization; patient's health
NURSING-HOME
Profit; patient's health
Labor supply
Refer?
Labor supply
Refer?
Ambu-latory HCE
Refer?
Public LTCE
Refer?
LTCE
Refer?
HOSPITAL
Volume of services, quality
Hosp-ital HCE
Refer?
Legend:
HCE = Health Care Expenditure
LTCE = Long-Term Care Expenditure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2. A stylized LTC episode II
Case of LTC far more complex than a "normal" sickness episode:
(1) Individual must decide on disclosure
(2) One potential caregiver is a family member (typically a daughter)
(3) Another informal caregiver is a lay helper
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2. A stylized LTC episode III

Case of LTC far more complex than a “normal” sickness episode (cont’d):

(4) The first-line provider of formal LTC services is a physician

(5) The physician may refer the „patient“ to a hospital

(6) Public service institutions also provide formal LTC services

(7) The main provider of formal LTC services is the nursing home

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3. The decision makers involved in an LTC episode I

3.1 The individual as potential demander of LTC

- Norton (2000), Handbook of Health Economics: „The theory of demand for LTC is straightforward. The most important factor is health status, ..., and the out-of-pocket price relative to the price of close substitutes“
- Counter-claim: Demand for LTC is far more complex!

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3. The decision makers involved in an LTC episode II

3.1 The individual as potential demander of LTC (cont'd)

- **Definition:** LTC is a problem of loss of non-market productivity and/or of accountability
- ➢ LTC is not a medical problem
- Loss of accountability calls for „choice" of agent
- Family members (possibly family physicians) are best able to interpret scrambled statements of preference
- However, even family members are imperfect agents of „patients" → Disclosure of status risky!

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3. The decision makers involved in an LTC episode III

3.2 Relatives and friends as providers of LTC services

- LTC insurance likely to induce substitution of informal LTC by formal LTC (**moral hazard** on the part of caregiving children)
- Bequests can be used by parents to control child behavior
- Zweifel and Strüwe (1996a) show that bequests and LTC insurance provide conflicting incentives
- ➢ When the introduction of compulsory LTC insurance was debated in Germany, "beneficiaries" were opposed!

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3. The decision makers involved in an LTC episode IV

3.3 Physicians as providers of LTC services

- **Crucial**: decision to refer a case
- Modeled as a critical severity level c in Zweifel (1981, 1988)
- If income from practice, leisure time, and patient's health are the objectives, several tradeoffs emerge

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3. The decision makers involved in an LTC episode V

3.3 Physicians as providers of LTC services (cont'd)

Tradeoffs

- **Increase critical symptom level *c***: Hurts the ethical objective as long as patient health would benefit from ambulatory care; reduces leisure time because member of patients increases; enhances income
- **Increase implicit wage rate *q***: Hurts the ethical objective; enhances leisure because demand for first contact depends on net price on qr, where r rate of coinsurance; enhances income since price elasticity of demand is low
- **Increase time spent per case *t***: Enhances ethical objective and income but hurts leisure

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3. The decision makers involved in an LTC episode VI

3.3 Physicians as providers of LTC services (cont'd)

Prediction 1: Since their contribution to patient health is low in the case of an LTC "patient", the critical symptom level *c* is adjusted downward → referral more likely

Prediction 2: If rate of coinsurance drops because LTC is covered, the implicit wage rat *q* increases, critical symptom level *c* drops but time spent on case *t* increases

- These predictions point to a strong **moral hazard effect** affecting LTC insurers
- To the extent that predicted adjustments occur across all patients, health insurers are affected as well

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4. Perspectives on LTC insurance I

- In view of the moral hazard suspected on the part of children, LTC insurance may not be popular
- Another factor undermining demand for LTC insurance is the presence of a public safety net (Pauly, 1990)
- More specifically: What is the willingness to pay (WTP) for (compulsory) LTC insurance?
- Evidence from market experiments performed with some 1,000 Swiss in 2003

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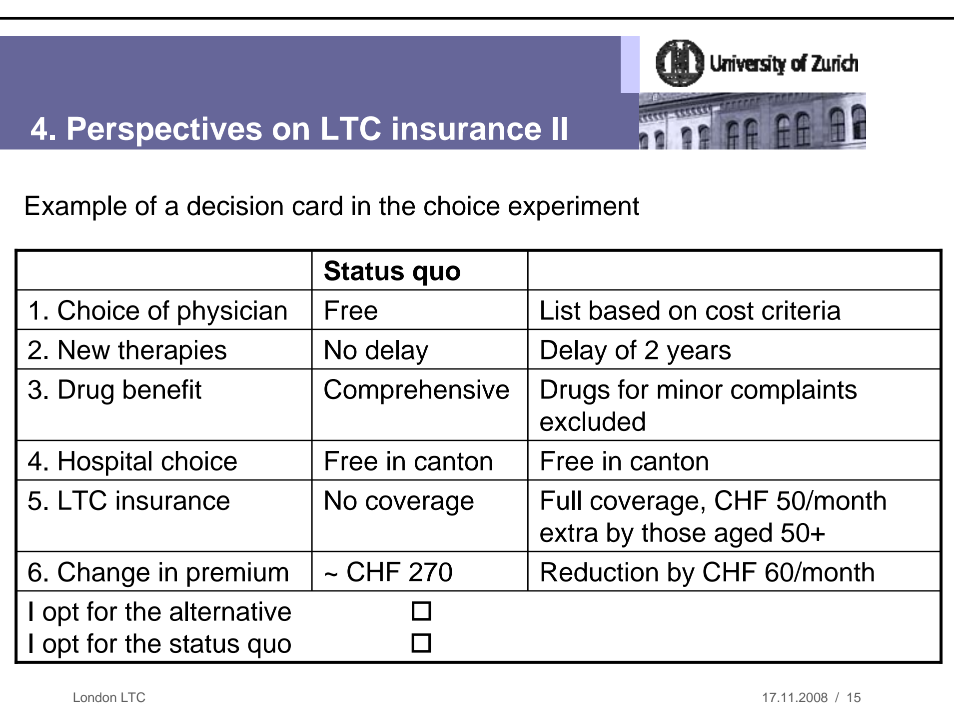

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4. Perspectives on LTC insurance II

Example of a decision card in the choice experiment

	Status quo	
1. Choice of physician	Free	List based on cost criteria
2. New therapies	No delay	Delay of 2 years
3. Drug benefit	Comprehensive	Drugs for minor complaints excluded
4. Hospital choice	Free in canton	Free in canton
5. LTC insurance	No coverage	Full coverage, CHF 50/month extra by those aged 50+
6. Change in premium	~ CHF 270	Reduction by CHF 60/month
I opt for the alternative	☐	
I opt for the status quo	☐	

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4. Perspectives on LTC insurance III

Willingness-to-pay values, CHF/mo. (Switzerland, 2003)

	WTP	**Std. err.**
Physicians selected on cost criteria	-103	13.2
Physicians selected on quality criteria	-53	8.8
Physicians selected on cost and quality	-42	7.8
Access to new therapies delayed 2 years	-65	7.9
Reimbursement of generics only	-3	5.5
Reimbursement of drugs for minor complaints	+6	5.3
No small local hospitals	-37	5.7
LTC insurance, CHF 50/month (50+)	-25	5.1

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Willingness-to-pay values, Switzerland (2003)

Amounts in CHF/month				
Socio-economic character-istics	**Physicians selected on cost criteria (1)**	**Access to new therapies and drugs delayed by 2 yrs (2)**	**No small local hospitals (3)**	**LTC insurance (4)**
Total sample	-103 (13.2)	-65 (7.9)	-37 (5.7)	-25 (5.0)
Gender				
Female	-117 (24)	-68 (13.3)	-48 (10.8)	-23 (n.a.)
Male	-93 (15.5)	-63 (9.9)	-29 (6.5)	-27 (n.a.)

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4. Perspectives on LTC insurance V

Willingness-to-pay values, Switzerland (2003)

Amounts in CHF/month				
Socio-economic character-istics	**Physicians selected on cost criteria (1)**	**Access to new therapies and drugs delayed by 2 years (2)**	**No small local hospitals (3)**	**LTC insurance (4)**
Total sample	-103 (13.2)	-65 (7.9)	-37 (5.7)	-25 (5.0)
Age				
25-39 *) 25-49	-81 (11.7)	-45 (6.7)	-33 (5.8)	-19*) (n.a.)
40-64 *) 50+	-136 (35)	-101 (25)	-46 (13.7)	-45*) (n.a.)
65+	-153 (86)	-83 (45.6)	-36 (26.3)	

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5. Summary and conclusion I

- Demand and supply of LTC services is more complex than commonly acknowledged
- One reason is the initial node of figure 1, where the potential LTC case decides about **disclosure**
- Family members are far from perfect agents but still may have a high "critical severity level" beyond which they seek to refer the LTC parent to another provider
- Physicians as agents have two more decision variables, viz. the implicit wage rate and time spent per case
- One prediction is that for LTC cases, physicians' critical severity level is **lower** than for regular patients

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5. Summary and conclusion II

- Physicians' referral decisions are crucial for LTC expenditure because LTC "patients" may end up in **hospital**
- Covering LTC is predicted to trigger a downward adjustment in the critical symptom level, hence **more referrals**
- Experimental evidence suggests there may be no willingness to pay for (comopulsory) LTC insurance
- Whether mandatory LTC insurance is dominated e.g. by a **voucher solution** is a matter of future research

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