

Performance of Chinese Hospitals: Listening To The People

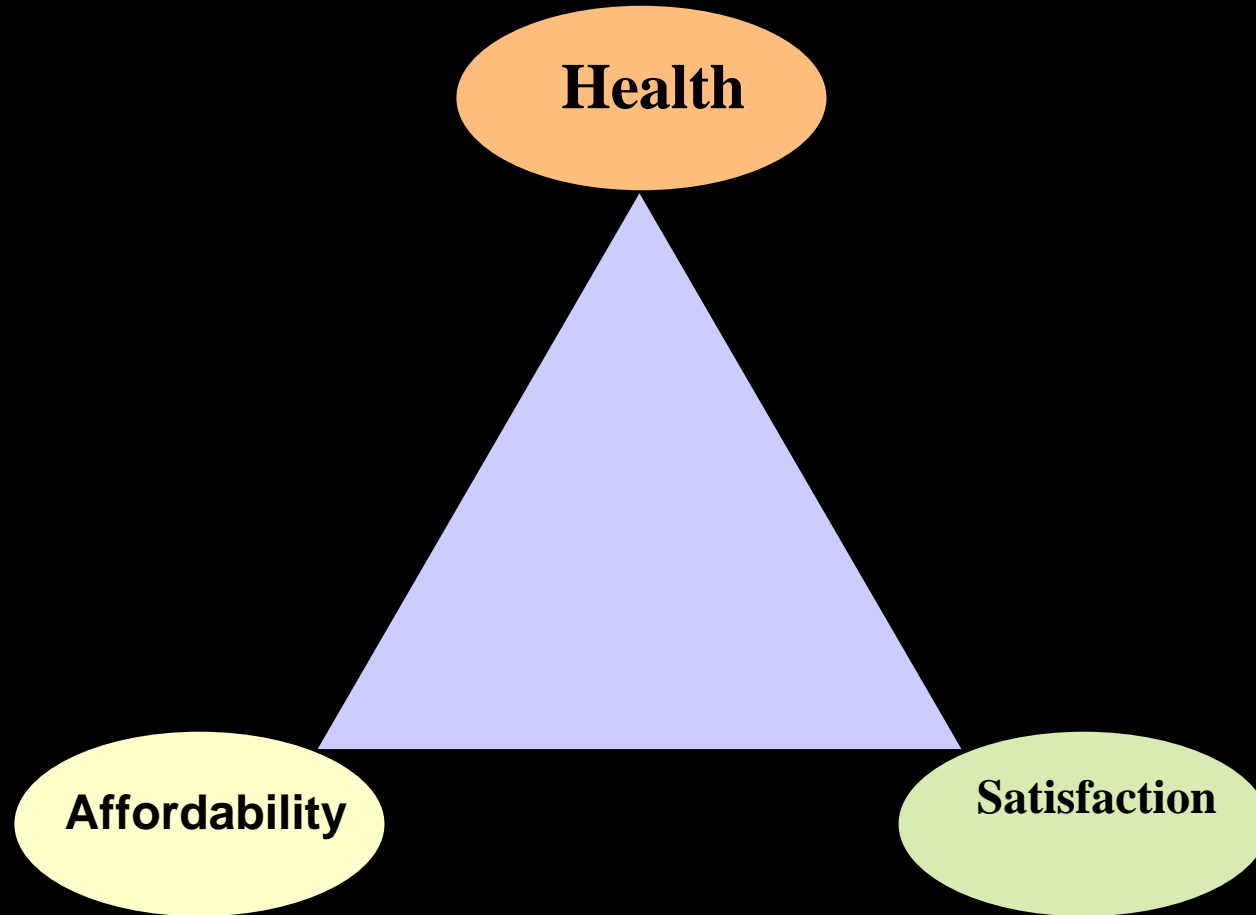
Yuanli Liu, PHD
Director of China Initiative
Harvard School of Public Health

Hong Kong, May 5, 2008

Outline

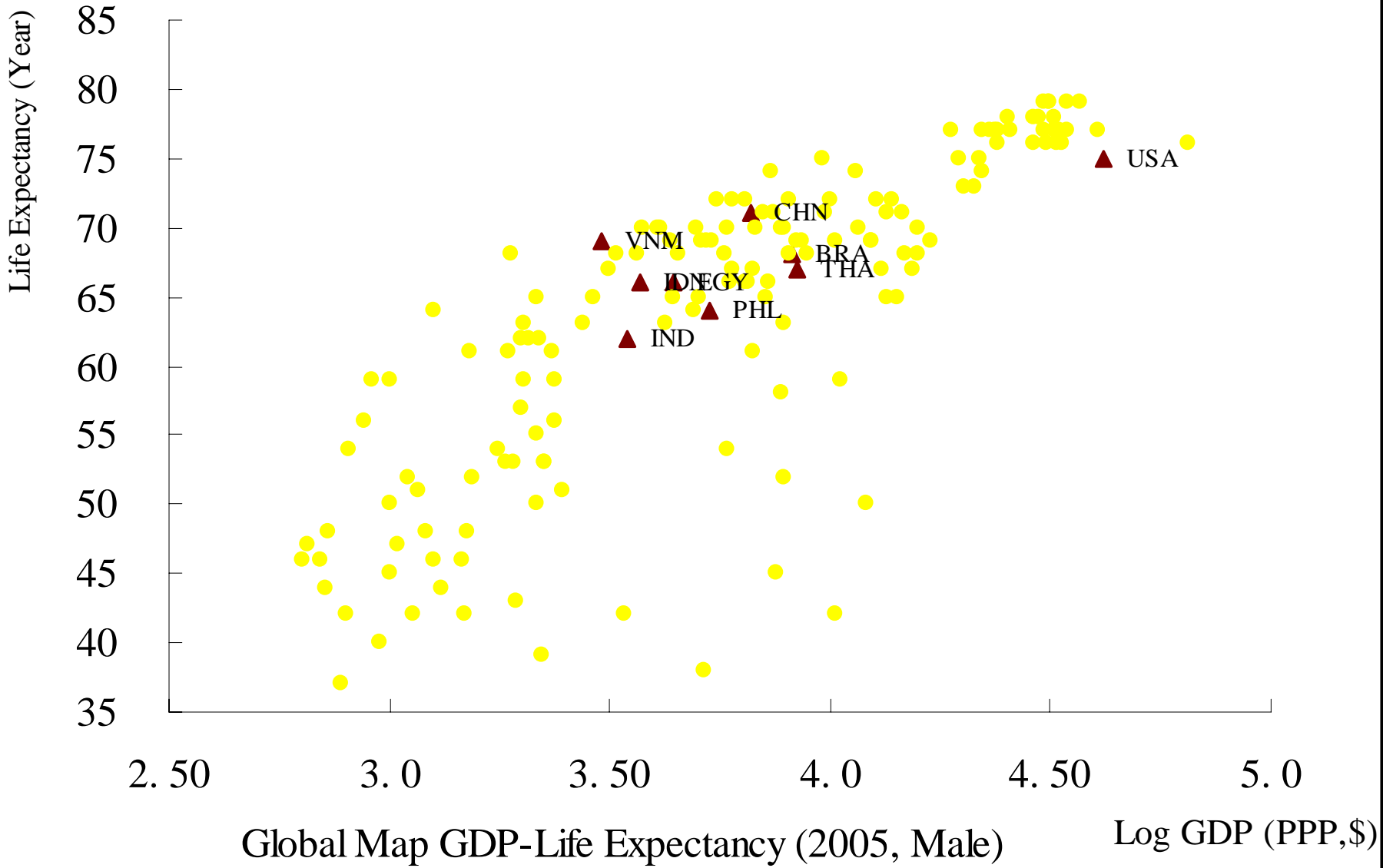
- China's overall health system performance
- Hospital sector in China: supply & demand
- Inpatient satisfaction: 1998 vs 2003
- Major factors affecting inpatient satisfaction
- Conclusion

Major Goals of Health Systems



Health Status in China

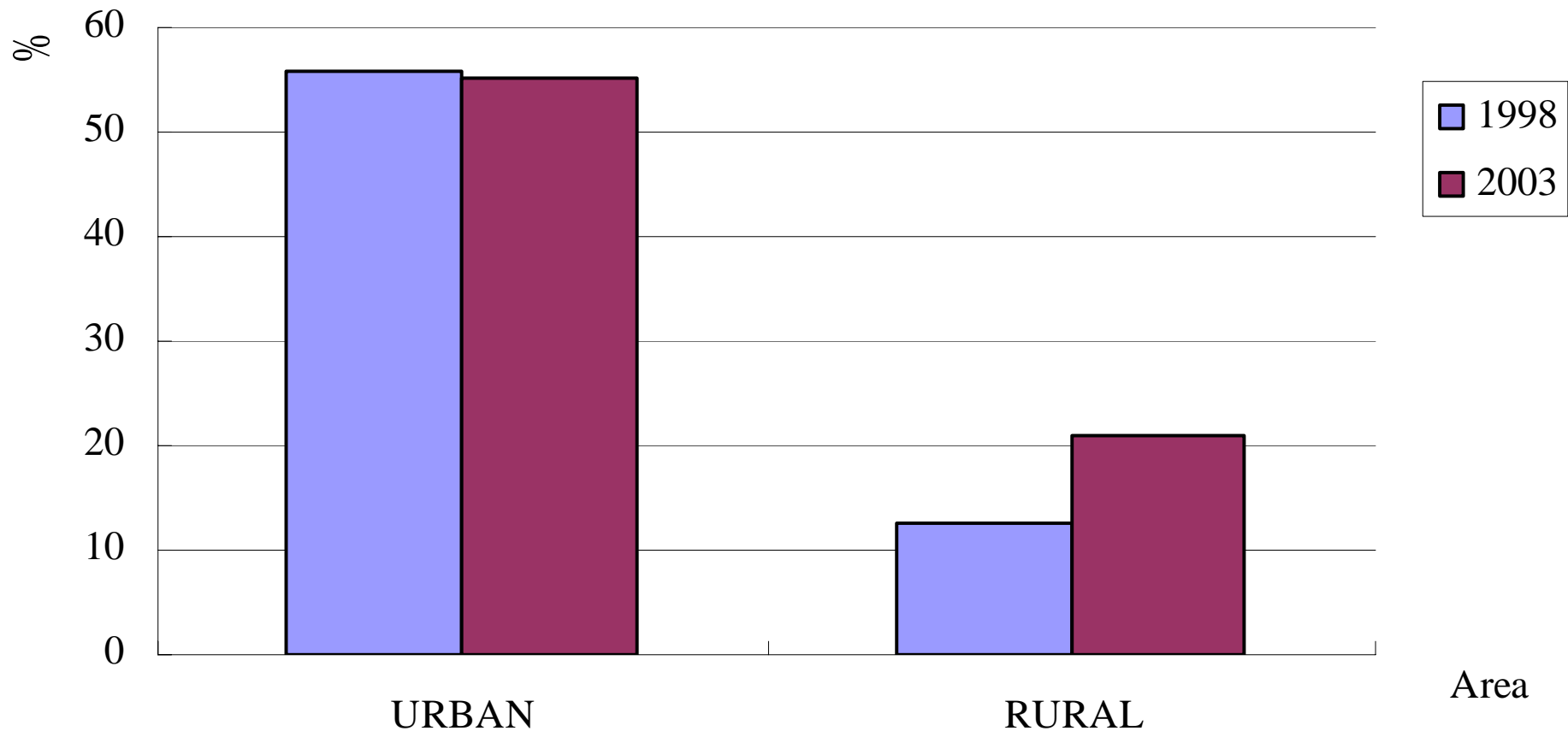
- Continuous improvement
- Improvement rate slowed down
- Increasing inequalities
- Increasing burden of chronic diseases
- China is not an outlier given its income



Rank diseases by DALYs (WHO, 2002)

Infectious, maternal, perinatal (37,083 DALYs)	Non-communicable (133,056 DALYs)
Perinatal (11,279 DALYs)	Neuropsychiatric conditions (34,952 DALYs)
Respiratory (6,113 DALYs)	Injuries (30,134 DALYs)
Diarrhoeal (5,055 DALYs)	Cardiovascular (25,233 DALYs)
TB (4,350 DALYs)	Malignant neoplasms (19,455 DALYs)
Nutritional deficiencies (2,553 DALYs)	Sense organ diseases (14,312 DALYs)

Insurance coverage in 1998, 2003



Changes in catastrophic expenditures

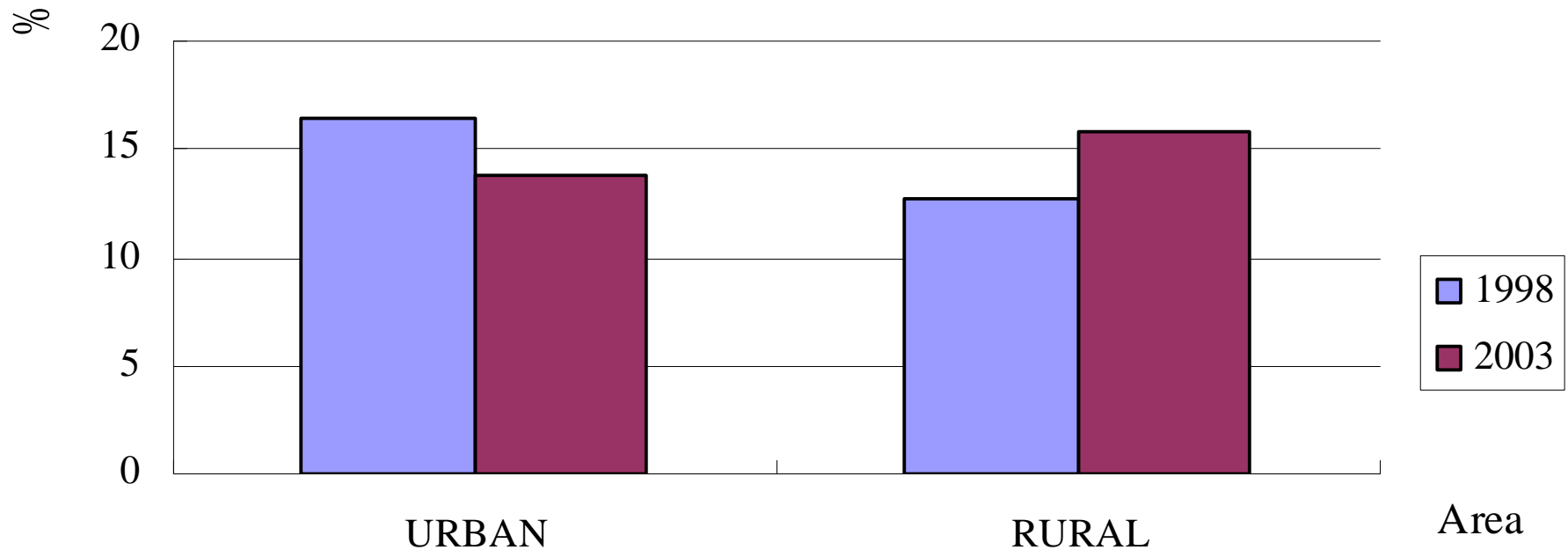


Figure: Incidence of catastrophic medical spending

Changes in foregone healthcare

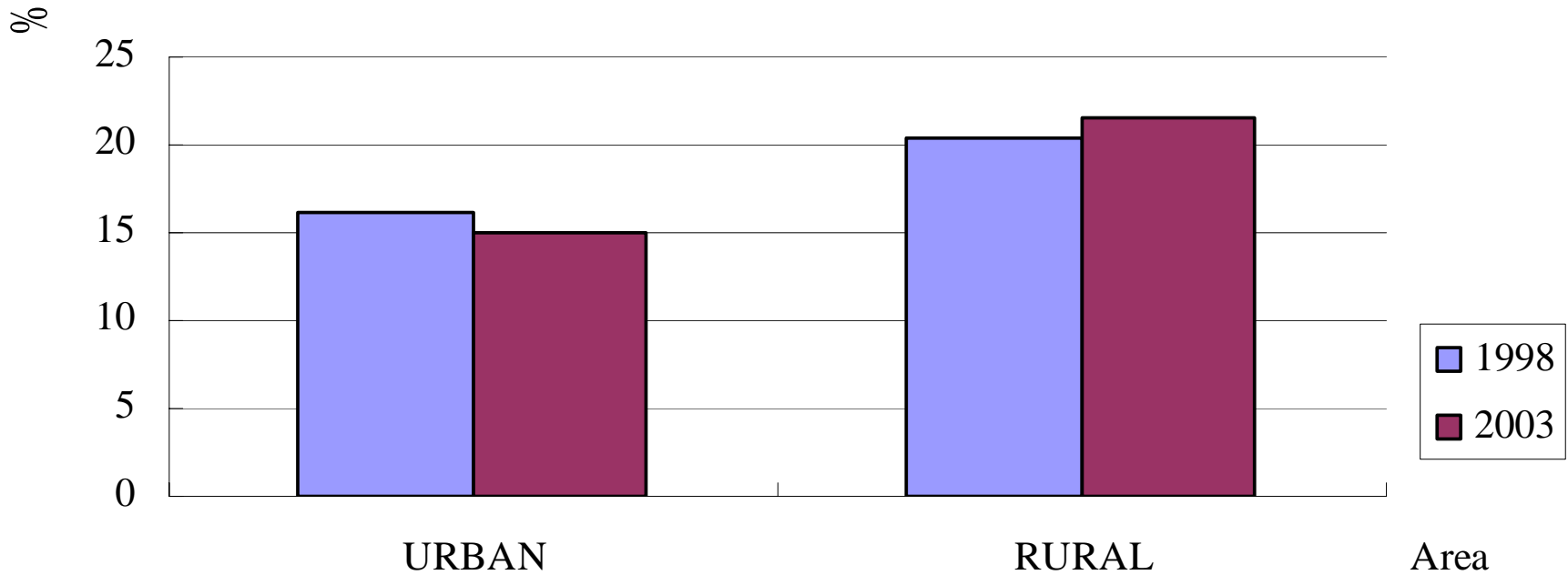


Figure: Incidence of foregone medical care due to cost concerns

How Many Chinese Cannot Afford HC?

- Taking the results on financial catastrophe and foregone medical care together, about 438 million Chinese were estimated to have experienced affordability problems in 2003.

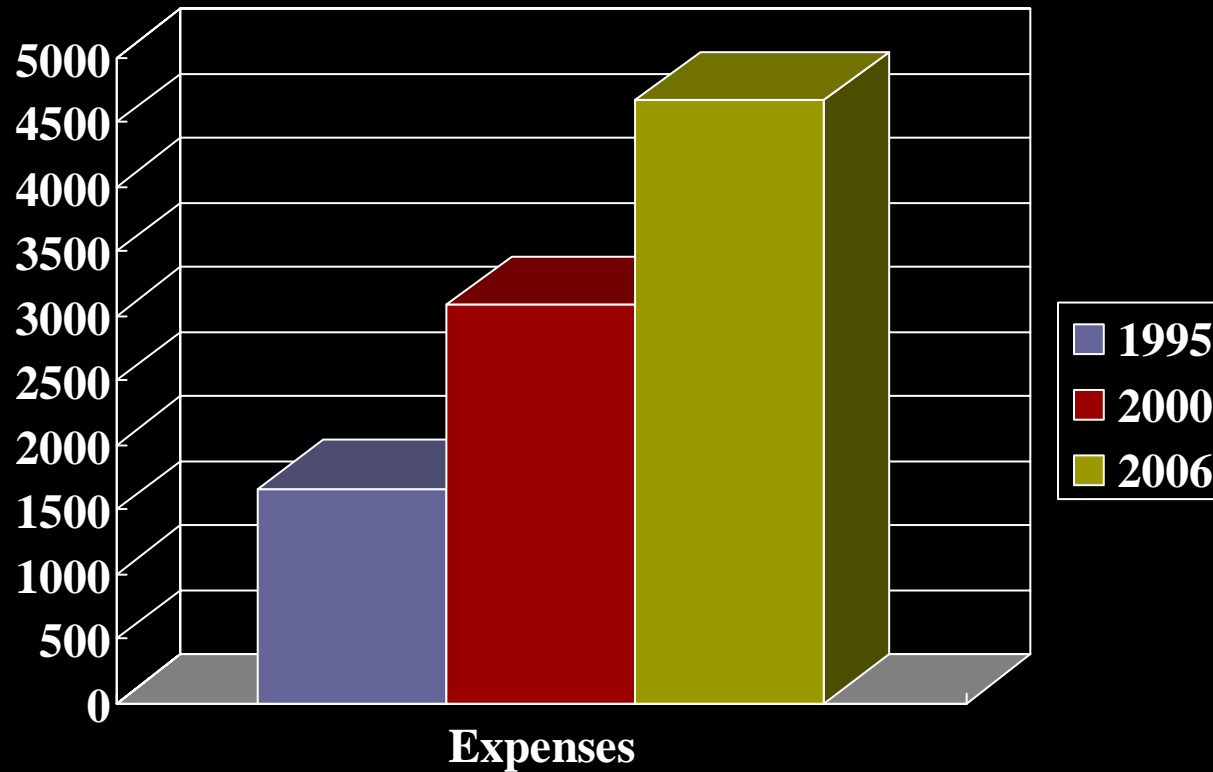
Hospital Supply in China

Type	1980	1990	2000	2006
Total	9,902	14,377	16,318	19,246
General	7,859	10,424	11,872	13,120
Specialty	694	1,362	1,543	3,022
TCM	678	2,080	2,591	2,665

Hospital Admissions in China (in millions)

Type	1990	2000	2006
County and above	51.4	52.97	55.62
Township	19.58	17.13	18.58

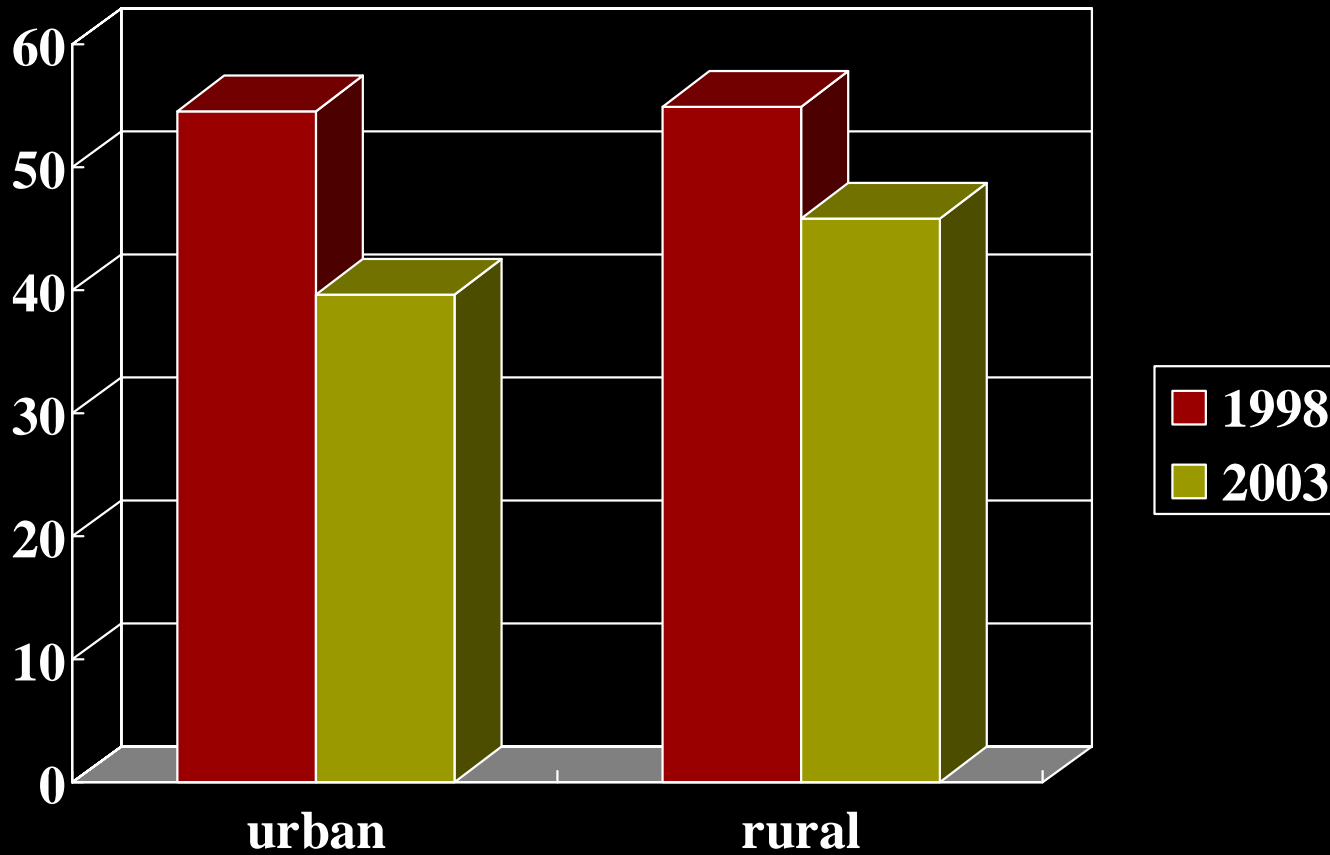
Average Expenses Per Discharge



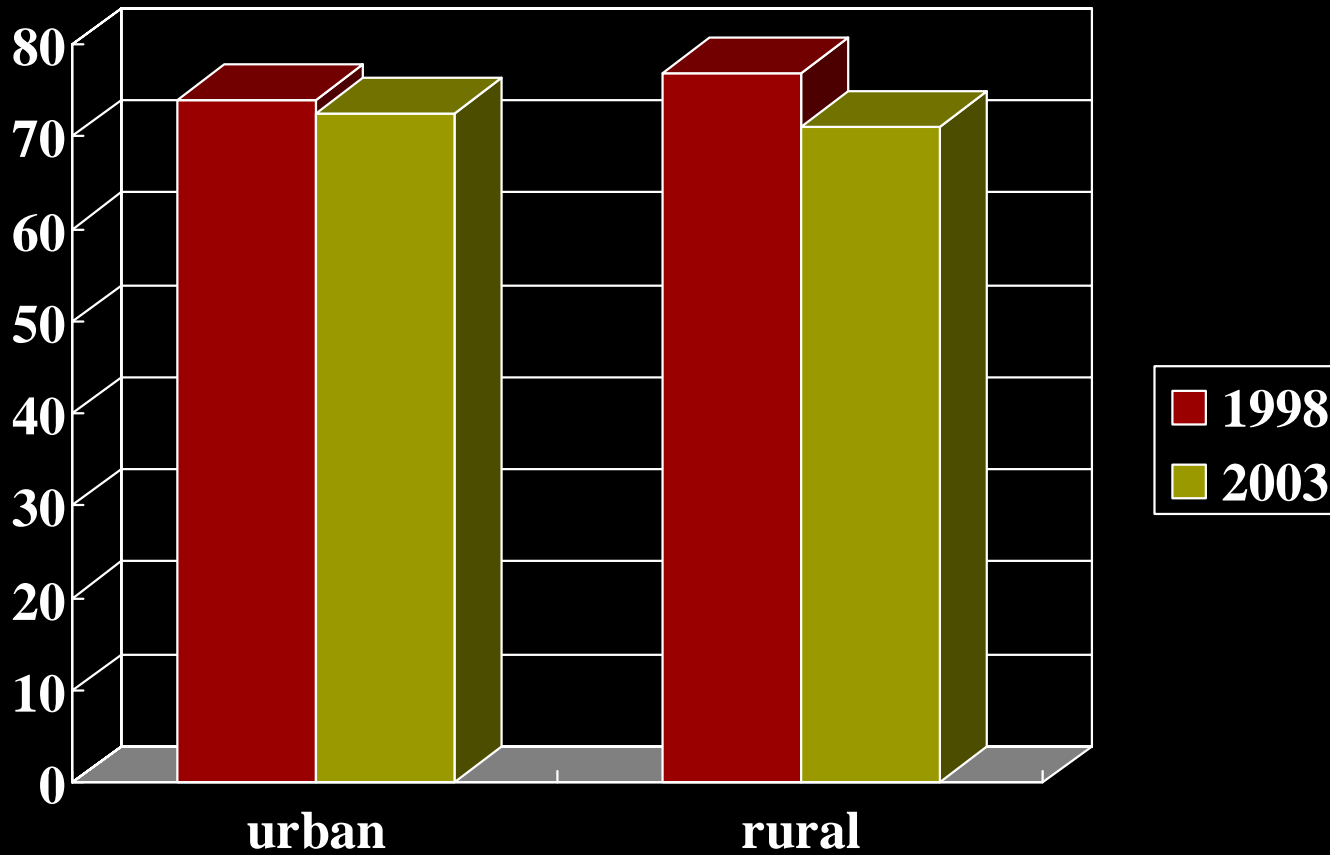
Our major data source

- China Health Services Survey (93, 98, 03)
 - * 5-yearly national survey by the MOH
 - * The 98 survey: 3 satisfaction questions
 - * The 03 survey: 9 satisfaction questions

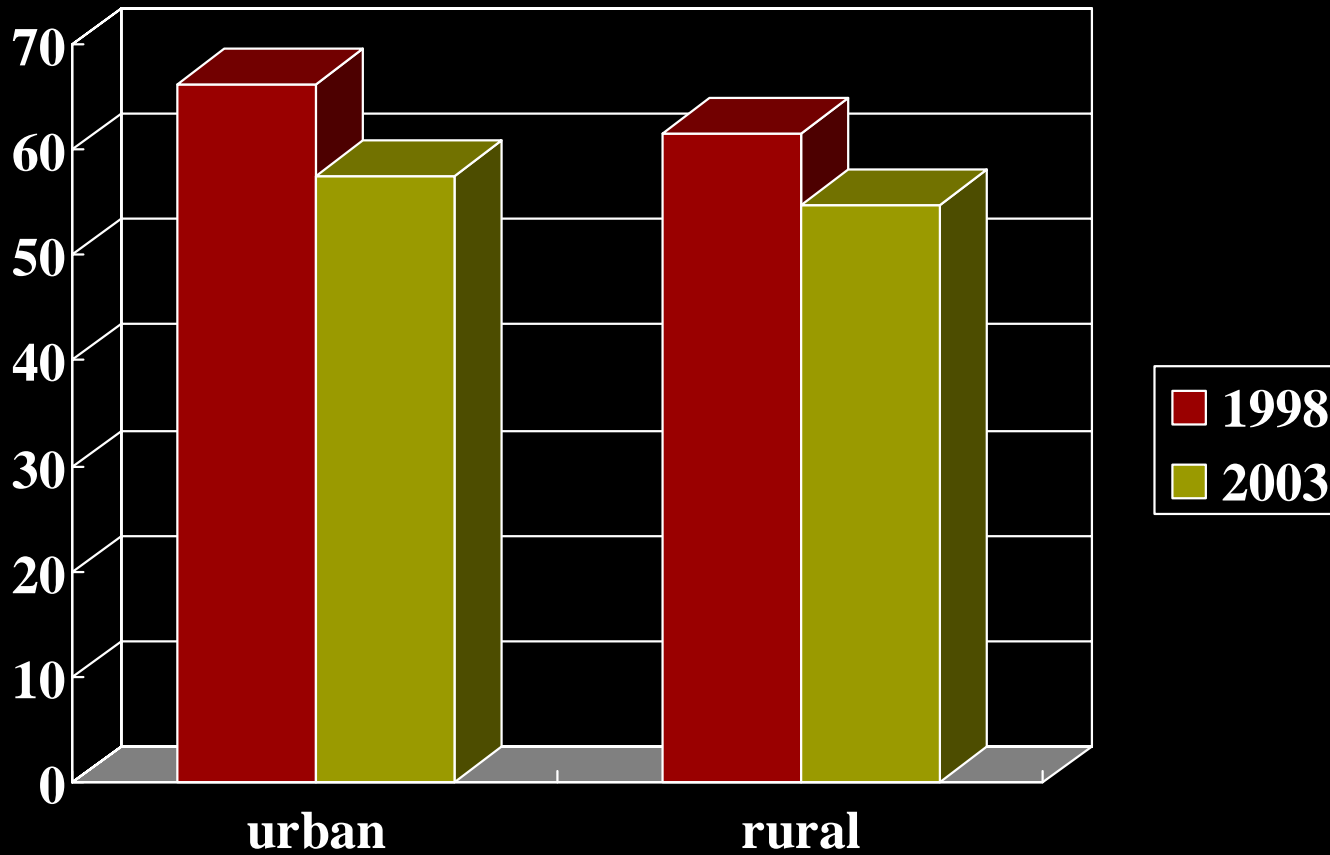
Overall Inpatient Satisfaction (%)



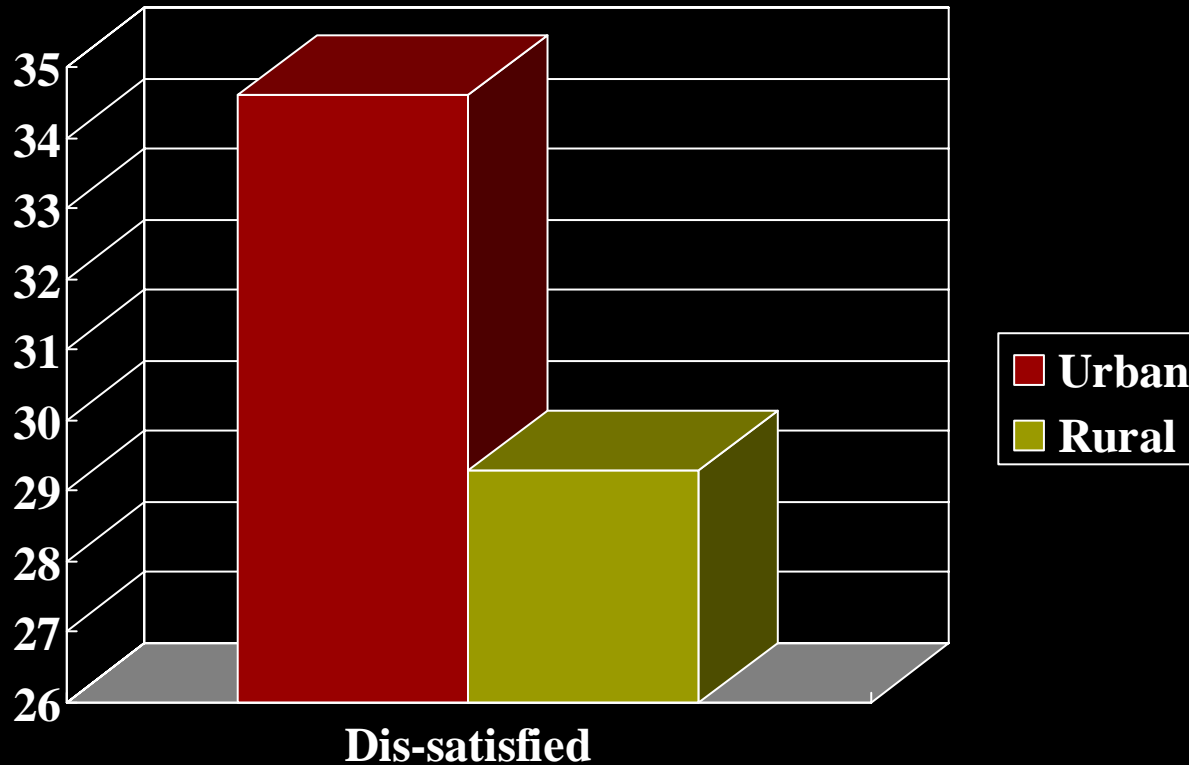
Satisfaction with Attentiveness (%)



Satisfaction with Environment(%)



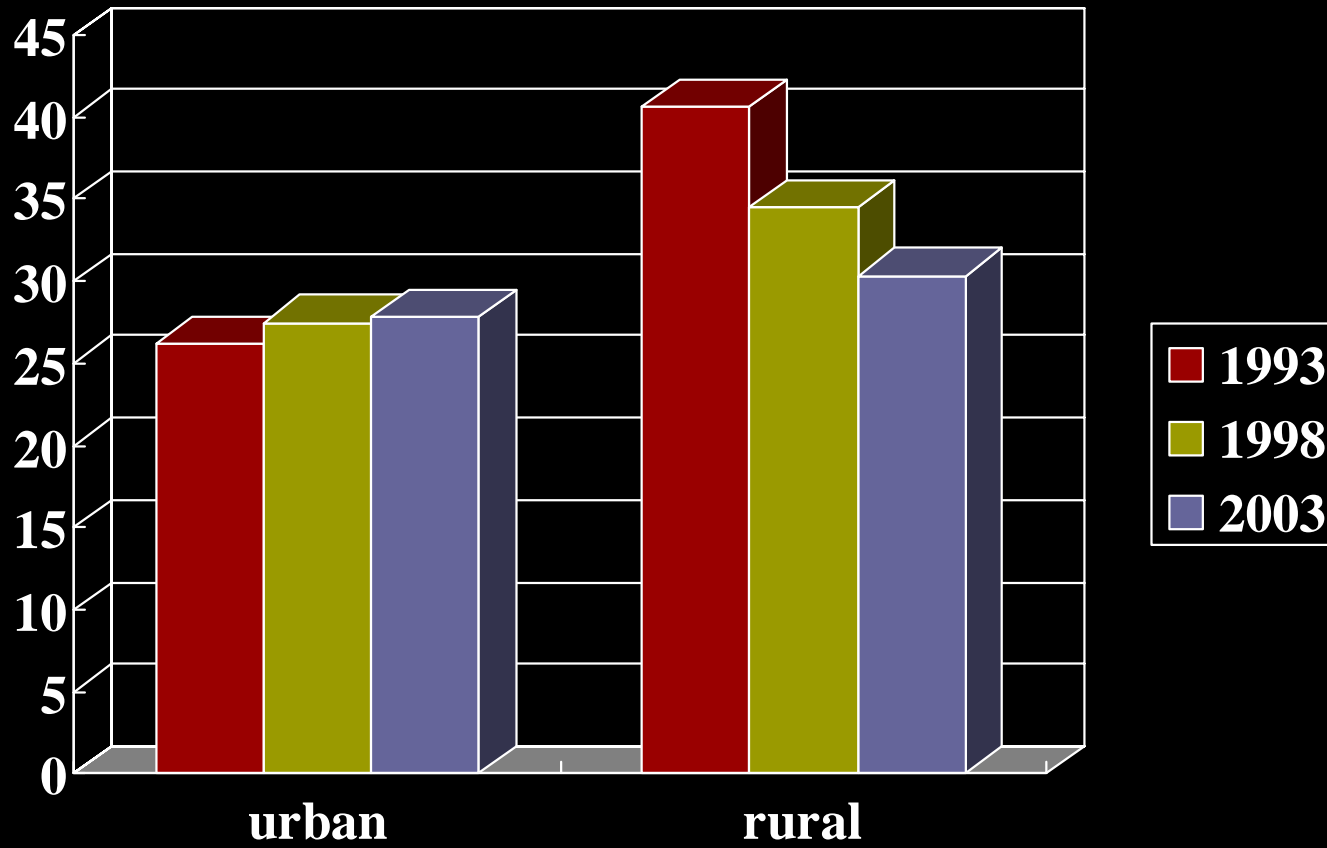
2003: Least Satisfied With Price (%)



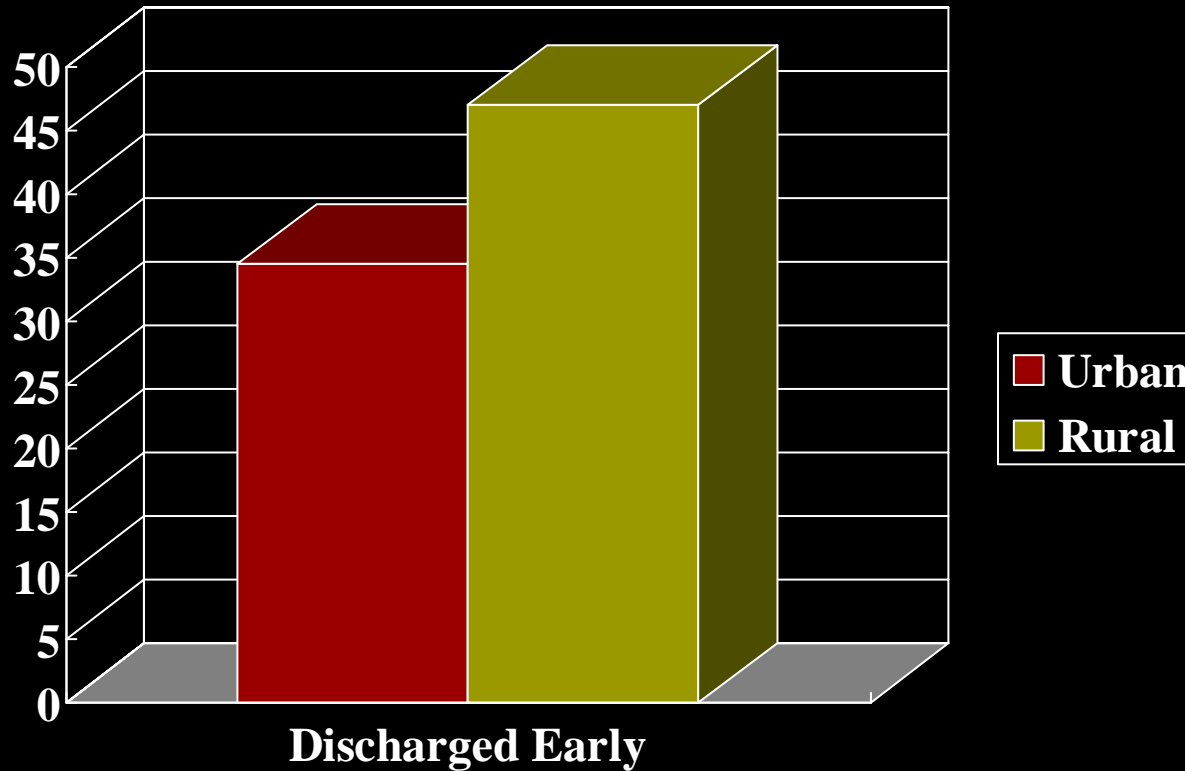
Inequality in inpatient use rate (03)

Region	Income Quintile 1	Income Quintile 3	Income quintile 5
Urban	61.28	78.82	86.89
Rural	62.88	69.22	84.21

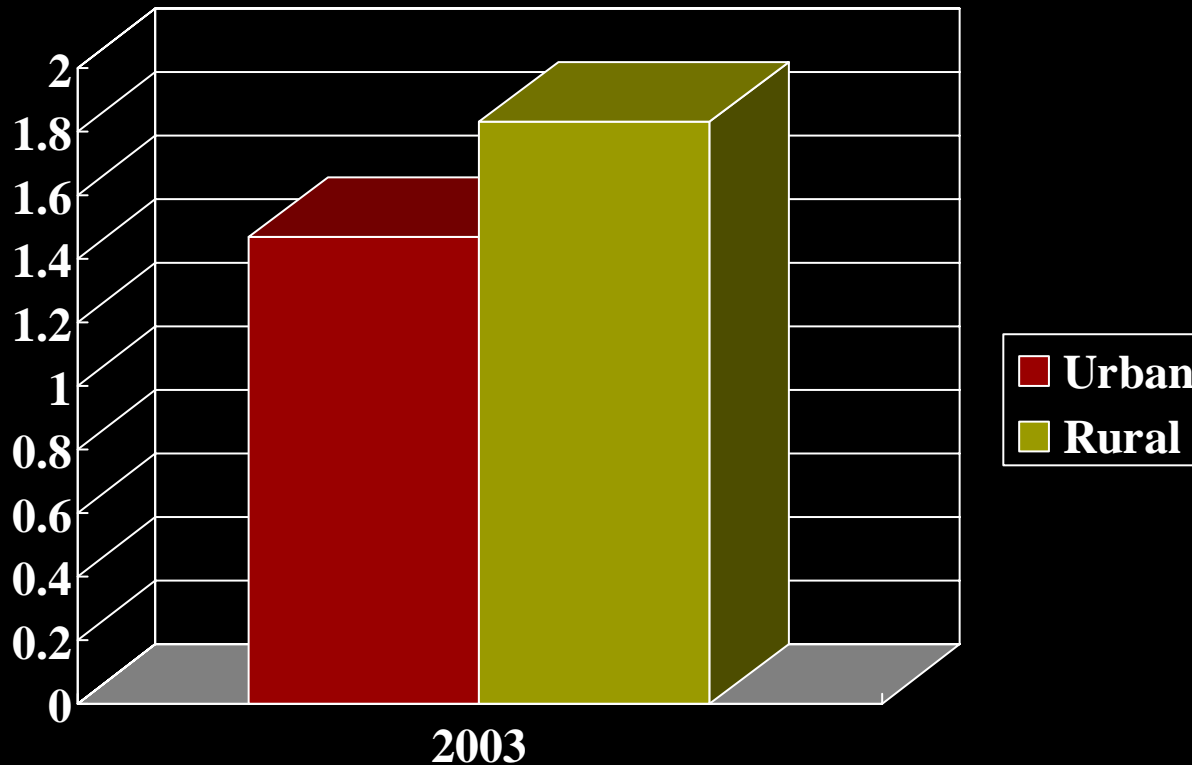
% of Patients That Refused Admission



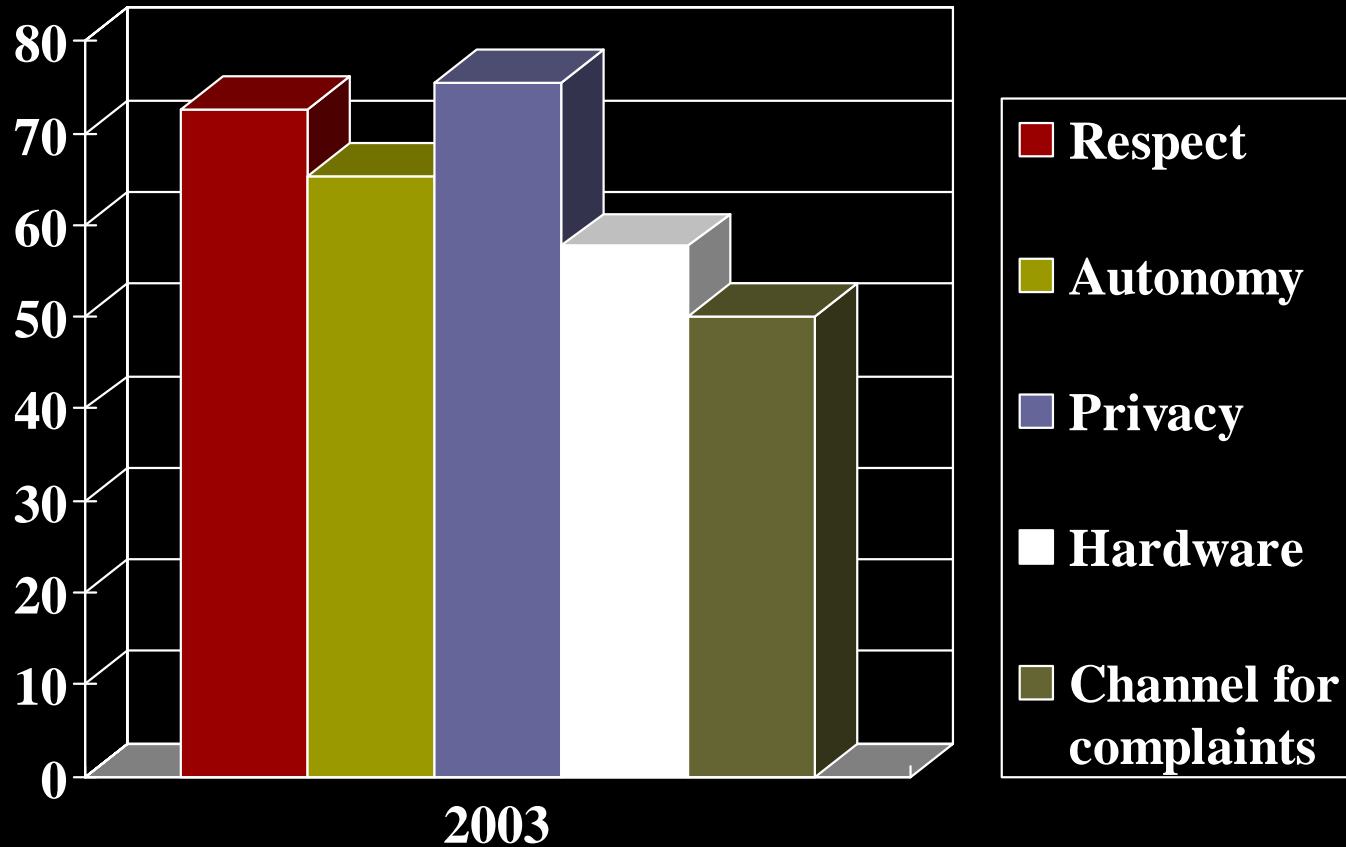
% of Inpatients That Discharged Early



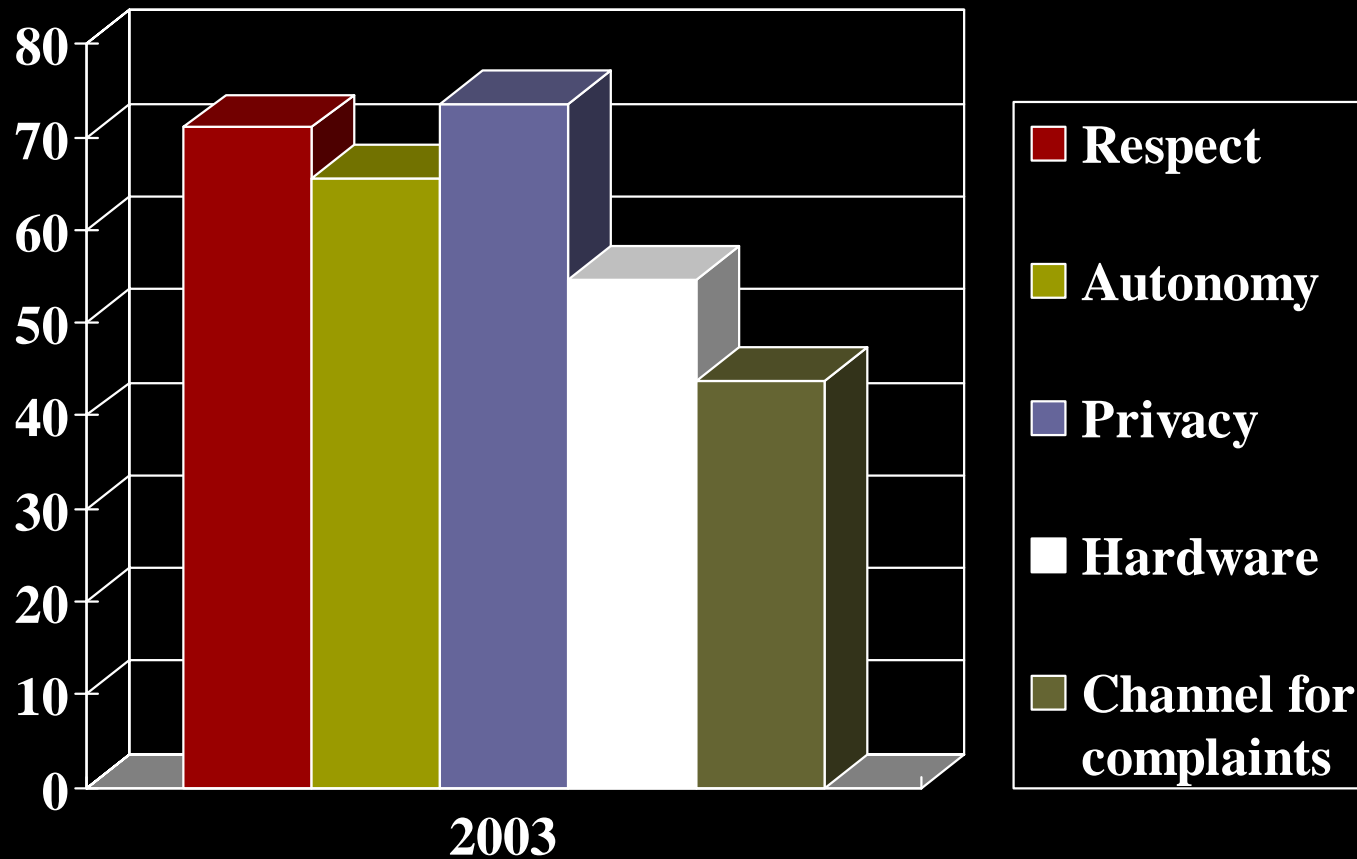
Incidence Rate of Forgone Admission or Early Hospital Discharge Due to Inability To Pay (%)



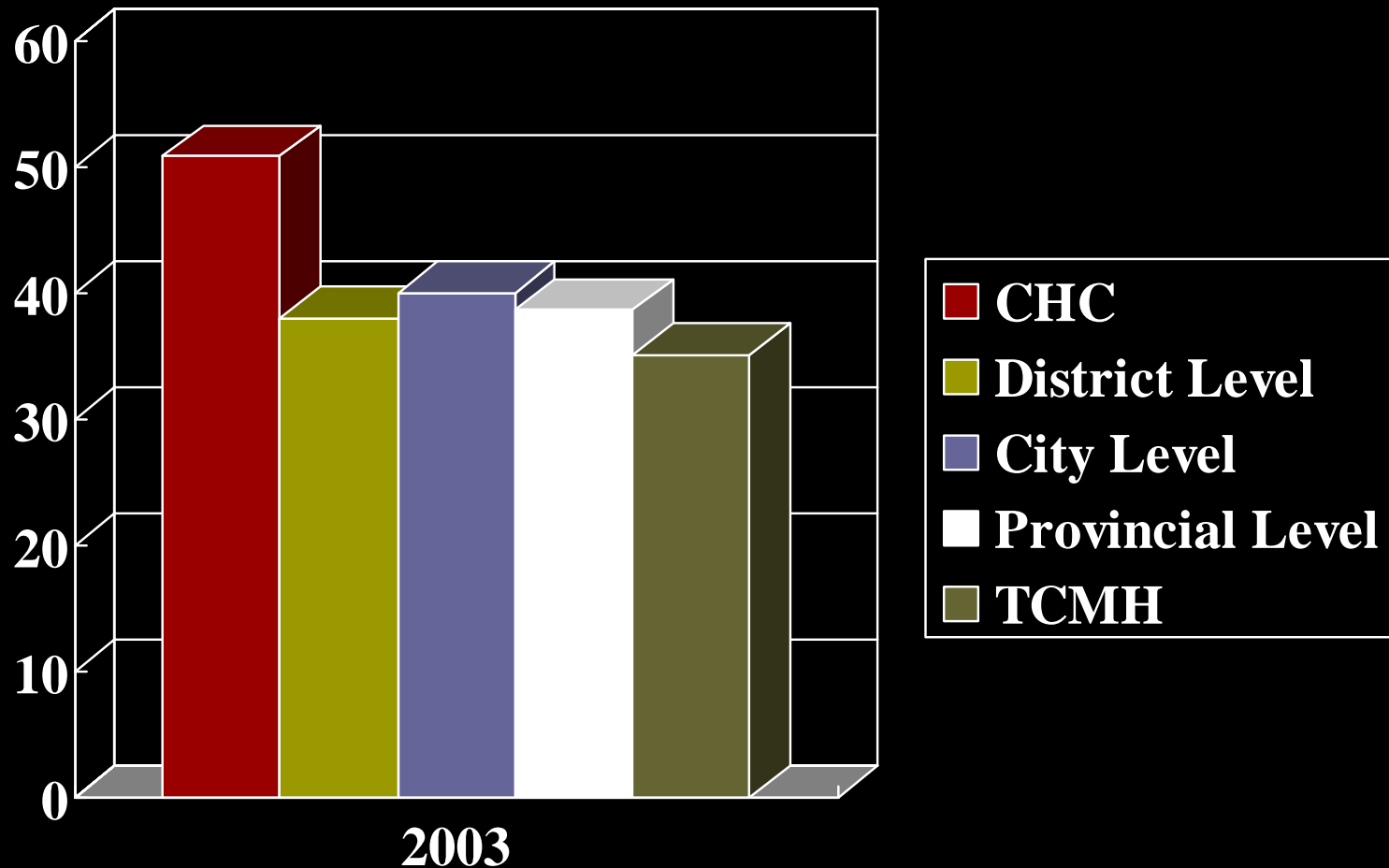
Urban Inpatient Satisfaction by Item



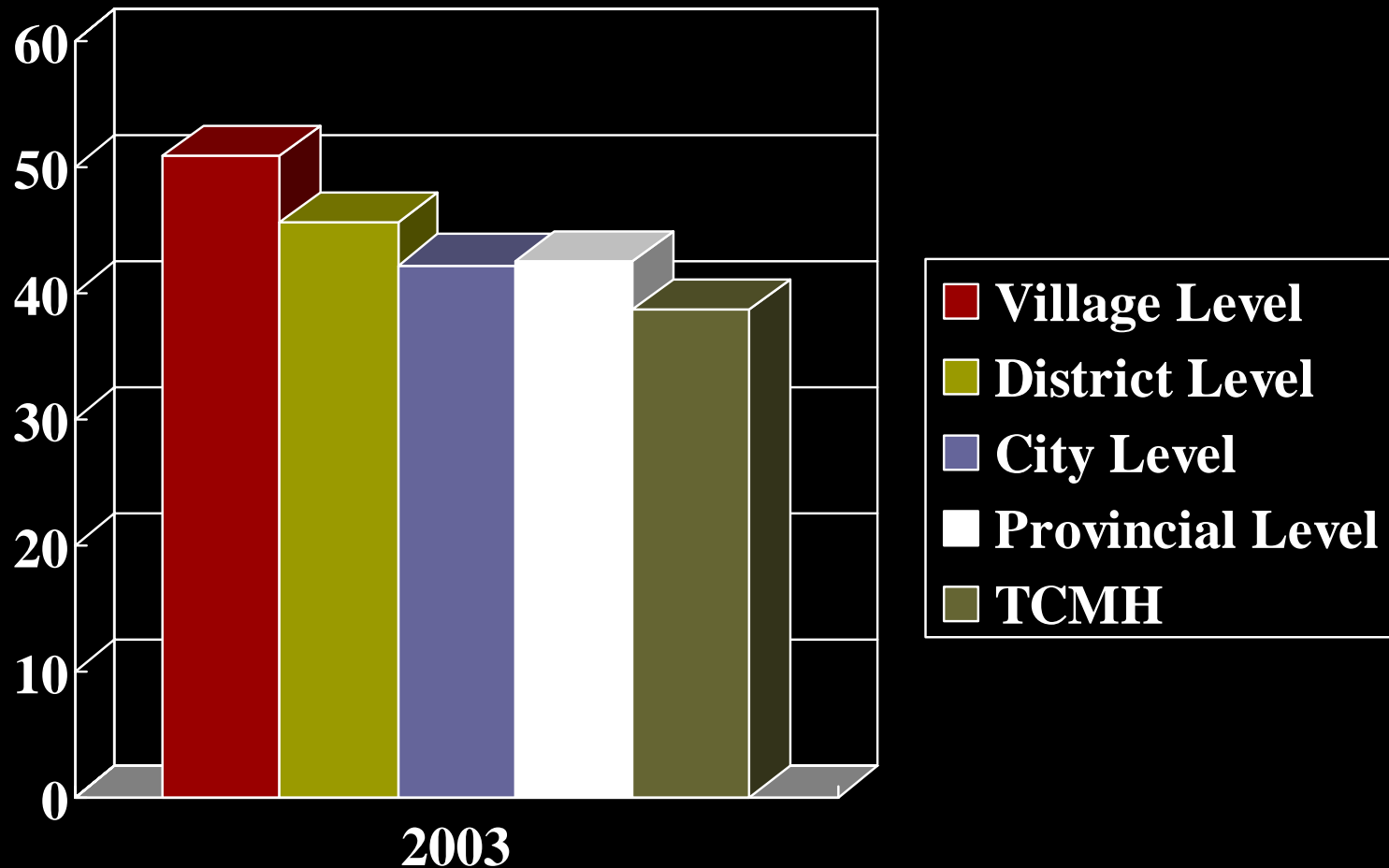
Rural Inpatient Satisfaction by Item



Urban Overall Satisfaction Rate by Provider (%)



Rural Overall Satisfaction Rate by Provider (%)



Our sample for regression analysis

- Urban sample size: 1,493
- Rural sample size: 3,293
- Definition of dependent variables:
 - Overall satisfaction (=1, if no dis-satisfaction)
 - Satisfaction score (unweighted sum of 9 items)
 - Responsiveness (=1, if rated “good” or “very good”)

Statistically Significant Predictors

- Income (+)
- Age (-)
- Insurance (+)
- Chronic diseases (-)
- Surgery (+)
- # of patients sharing a room (-)

Conclusion

- Despite of increasing hospital supply, affordability problem seemed to have worsened
- Affordability problem also explains decreasing inpatient satisfaction level
- Beside increasing insurance coverage, improving ward conditions, and better care for elderly and chronic patients can also help increase satisfaction
- More systematic and exit survey studies are needed