

Health challenges in the Asian cities

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The lure of the city

- Pull factors – work, education, health care, electricity, water, social environment, social services
- Push factors – drought, flood, crop failures, water scarcity, landlessness, conflict over land and resources, war



Noncommunicable diseases – the health challenge of the future

Key risk factors and resulting diseases are very high - and rising- in cities of India, China and other Asian countries

- Focus on two issues:
 - Obesity and lifestyle changes => diabetes in India
 - Smoking => lung cancer, COPD, cardiovascular disease, and stroke in China

Diabetes in India

- Obesity: rates of obesity have been increasing rapidly
 - Lifestyle changes, fast food, lack of exercise
- Genetic predisposition and lifestyle changes have combined to make a rapid increase in type 2 diabetes
 - Diabetes at earlier ages and at lower BMI than in other populations
- Urbanization increases the exposure to dietary risk factors
- Cost of care and lost productivity falls primarily on the household, not the government

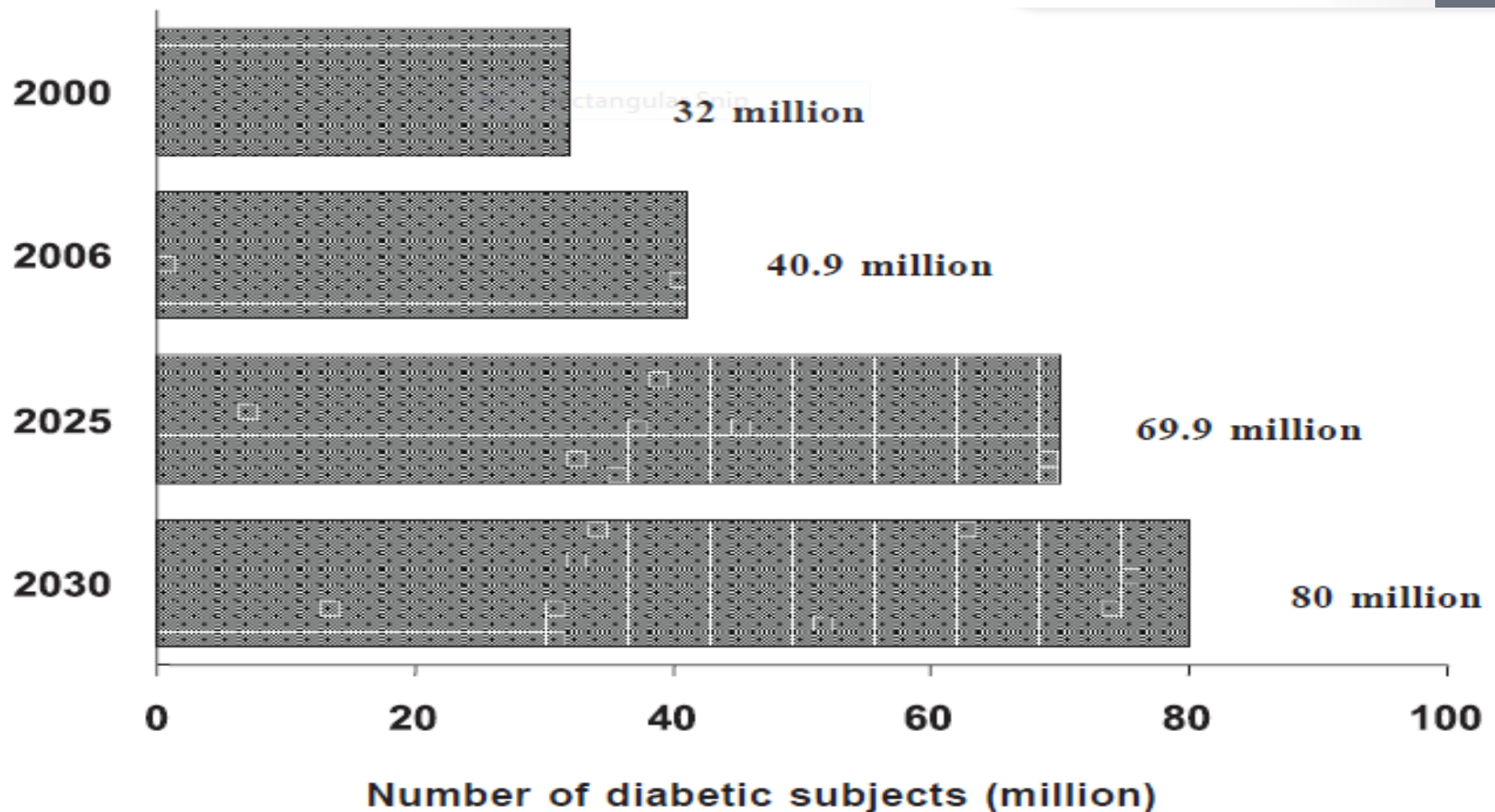
Low cost street food



India Fast Foods



Projected Rise of diabetes in India



Source: Mohan et al, Ind J Med Res 125, March 2007, pp 217-230

Impact of hospitalization in India, by income group

(out of pocket payment, OPP)

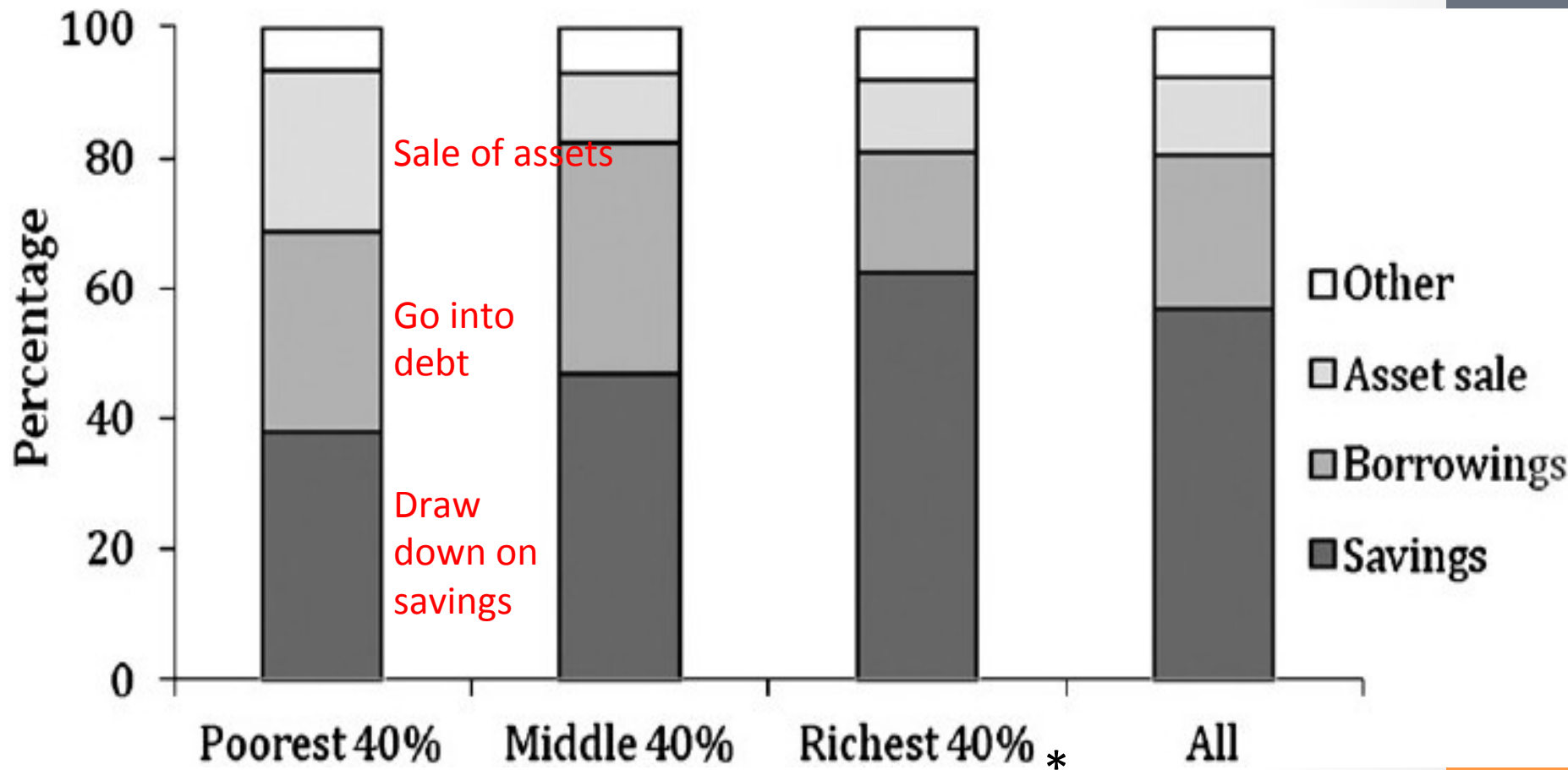
	Lowest 40%	Middle 40%	Upper 20%	All
Mean OPP payment per hospitalization	4,152	5,106	6,959	5,925 [*]
OPP share of annual household expenditure (%)	25	19	15	17 [*]
Sample size	63	210	270	543

Source: Rao et al, Indian J Med Res. 2011 January; 133(1): 57–63. Data refer to hospitalization for cardiovascular disease.

Costs of inpatient care are bankrupting families

- In India, out of pocket expenditures for hospital care for diabetes, from 15% to 25% of **annual** household expenditure
 - (Rao et al, Ind J Med Res 133(1); 2011)

How did households finance these expenditures?



Source: Rao et al, Indian J Med Res. 2011 January; 133(1): 57–63.

* Source says 40% but this may be an error; 20% is shown in other tables.

Smoking in china



Smoking in China

- Smoking: about 63% of Chinese men smoke cigarettes (7% of women but increasing)
- Government tobacco company is one of the largest employers (10 million) – in some settings people are actually encouraged to smoke
- Tobacco brings 8% of government revenue
- Almost no anti-tobacco activities – the majority of Chinese do not know that smoking is harmful

Chinese county encourages smoking

 **PRI's** The World

June 02, 2009 · 11:30 AM CDT

HUMANNEEDS

Stories on the road to health and wealth for all.

At the hospital where a Spanish nurse got Ebola, workers say their training was poor

October 07, 2014

Precautions against Ebola are simple, but hard to guarantee every single time

October 03, 2014

Liberia's top doctor quarantines herself to set an example in her Ebola-ridden country

October 02, 2014

Ebola forges a bond between a young boy and the psychologist who helped him

October 02, 2014

Here's one reason Nigeria has halted the spread of Ebola

October 01, 2014



(image - CC: The Gonger / Flickr)

LISA MULLINS: Authorities in one part of China aren't just saying, "Thank you for smoking." They're ordering people to light up.



<http://www.pri.org/stories/2009-06-02/chinese-county-encourages-smoking>

Dongguan county

- In 2009, Dongguan County decided that its tax revenue from cigarettes has been going down, so it said that every work unit, every factory, every office has to consume cigarettes.
- Each office had a quota of about 400 cartons of cigarettes per office, and about 120 cartons of cigarettes per school per year.
- At a school, local officials came by, looked in the ashtray and in the trash cans, and they found three cigarette butts that were not a local brand.
 - They went to the school authorities and said, "This is against the regulations" and imposed a stiff fine

Chinese stroke survivors costs

- Among 3-month survivors of stroke, average hospital and medication costs were 16 525 Chinese Yuan (US \$2,361)
- out-of-pocket costs were 14 478 Chinese Yuan (US \$2,068)
- Overall, 71% of patients experienced catastrophic out-of-pocket expenditure.
- Workers without health insurance were 7 times more likely to experience catastrophic payments than workers with insurance
 - Source: Heeley et al, Stroke.2009; 40: 2149-2156

Tobacco spending further impoverishes Bangladeshi families

- In Bangladesh, the poorest (HH income <\$24/month) are twice as likely to smoke as the wealthiest (HH income >\$118/month)
- Male smokers spend more than **twice** as much on cigarettes as on clothing, housing, health and education **combined**
- The typical poor smoker could add over 500 calories to the diet of one or two children with his daily tobacco expenditure
- 10.5 million malnourished people could have an adequate diet if money on tobacco were spent on food instead
- The lives of 350 children could be saved each day
 - Source: Efroymsen et al, *Tobacco Control* 10, no. 3 (2001): 212-217

Conclusions

- Noncommunicable diseases are increasing rapidly in Asia, particularly
 - Type 2 diabetes,
 - cardiovascular and cerebrovascular diseases (stroke), COPD, and
 - cancers, particularly lung cancer and breast cancer
- These diseases place a huge burden on families
 - costs of care, premature death of breadwinner
- Smoking in particular is a major cause of morbidity and mortality
- Increased demand for health care will strain budgets and drain resources from other purposes
- Will have an impact on economic growth



extras

- <http://www.youtube.com/watch?v=qAMtPktEcZk> diabetes in India (2:24 AlJazeera)
- Obesity: rates of obesity have been increasing in both countries
 - <http://www.youtube.com/watch?v=qAMtPktEcZk> diabetes in India (2:24 AlJazeera)
 - <http://www.youtube.com/watch?v=f-R0r48smf0&feature=related> Diabetes in China (5 min)
- The Response: banning indoor smoking... but...
 - But enforcement is lax -- approximately 8% of government tax revenue comes from cigarettes
 - <http://www.youtube.com/watch?v=9YMEymmS6xo&feature=related>
 - <http://www.youtube.com/watch?v=khf21yQV5xs&feature=relmfu> (1 min)
- <http://www.youtube.com/watch?v=0wG6NN1Yhlg> China's smoking problem – lung cancer and COPD

Costs of hospitalization for diabetes bankrupt Indian families

Indicator	Poorest 40%	Middle 40%	Richest 20%	All
CVD				
Mean OPP payment per hospitalization	5,568	9,203	17,431	12,317 [*]
OPP share of total annual household expenditure (%)	25	27	31	30 [*]
Sample	393	906	1,152	2,451
Diabetes				
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Rao et al, Ind J Med Res 2011, 133(1); 57-63.

Expenditures on hospitalization for diabetes

Indicator	Poorest 40%	Middle 40%	Richest 20%	All
Mean OPP payment per hospitalization	5,568	9,203	17,431	12,317 [*] —
OPP share of total annual household expenditure (%)	25	27	31	30 [*] —
Sample	393	906	1,152	2,451

Expenditures on hospitalization for Cardiovascular disease

Indicator	Poorest 40%	Middle 40%	Richest 20%	All
Mean OPP payment per hospitalization	5,568	9,203	17,431	12,317 [*] —
OPP share of total annual household expenditure (%)	25	27	31	30 [*] —
Sample	393	906	1,152	2,451

Costs of outpatient care for diabetes in Karachi, Pakistan

- Cost of outpatient care for diabetes was estimated to be Pakistani rupees 11,580 (US\$ 197).
- Medicines accounted for the largest share of direct cost (46%), followed by laboratory investigations (32%).
- Increased age, the number of complications and longer duration of the disease significantly increase the burden of cost on society
- The poorest segment of society is spending 18% of total family income on diabetes care.
 - Source: Khowaja et al, BMC Health Serv Res, 2007. **7**(1): p. 189.