



China HealthCare Briefing

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July 2010

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Macro Economic Trends

- Over the past 3 decades China is going through rapid industrialization process and rural reforms.
- The economy is in a transition stage from a planned economy to a more market oriented one. with some sectors more advanced than others
- The economy is going through privatization phase
- Large migration of rural population to urban areas
- The South and Coastal regions are more developed than inland China
- Income in urban areas rising fast, creating of growing Chinese middle class
- Fast demographic changes due to increased life expectancy and reduced birthrate.
- Previous growth engines of Investment and Export are slowing.
- The government wishes Private Consumption to be the next growth engine
- Insufficient coverage of Social security system (Health, pension, unemployment)



Recent Progress

- The Chinese Government sees medical care as a key factor for stability
- In April 2009, as a result of the economic crisis, the government announced a new Medical Reform Plan.
- The medical Reform Plan aims:
 - Urban population: move away from overreliance on large magnet hospitals towards smaller, more utilitarian clinics (Community Care Centers)
 - Rural Population: reliance on lower level “Grass root” medical providers.
- China’s leading hospitals “foster” county level hospitals
- The plan allocates 850 billion RMB (US\$123 billion) to improve health care through 2011.
- The reform brought over 1.2 billion Chinese under basic medical insurance:
 - 833 million (94%) of rural residents
 - 400 million urban residents and workers
 - Coverage is linked to the average income of the region



Recent Progress

- In August 2009, the essential medicine plan was launched capping the prices of most essential drugs. The implementation of the plan reduced medicine costs by 30%.
- A large emphasize is put on building healthcare infrastructure in urban and rural areas. In 2009-2010 the government authorized fund for the construction of:
 - 5689 hospital , including 2000 county level hospitals(45% already operational)
 - Over 2400 new and the restructuring of 3700 Community health Center
 - Over 10000 rural healthcare institutes and 70,000 village clinics
 - Training of over 980,000 grassroots medical staff



Healthcare System Size

Population **1,314,480,000**

Urban 577,060,000 (43.9%)

Rural 737,420,000 (56.1%)

Total expenditure on public health (2005) 866 Billion Rmb

Government 155.25 Billion Rmb (17.9%)

Social Expenditure 258.64 Billion Rmb (29.9%)

Private Expenditure 452.10 Billion Rmb (52.2%)

Total Number of health institutes : **308,969**

Total employed in the HC institutes: **5,619,515**

Certified Physicians 1,994,854

Certified Nurses 1,426,339

Total number of patients visits **2.447 Billion**

Total number of Inpatients **79.06 Million**



Composition of China Healthcare Expenses

Figure 7: Composition of China's healthcare expenses (1978-2003)

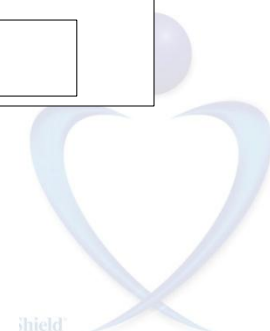
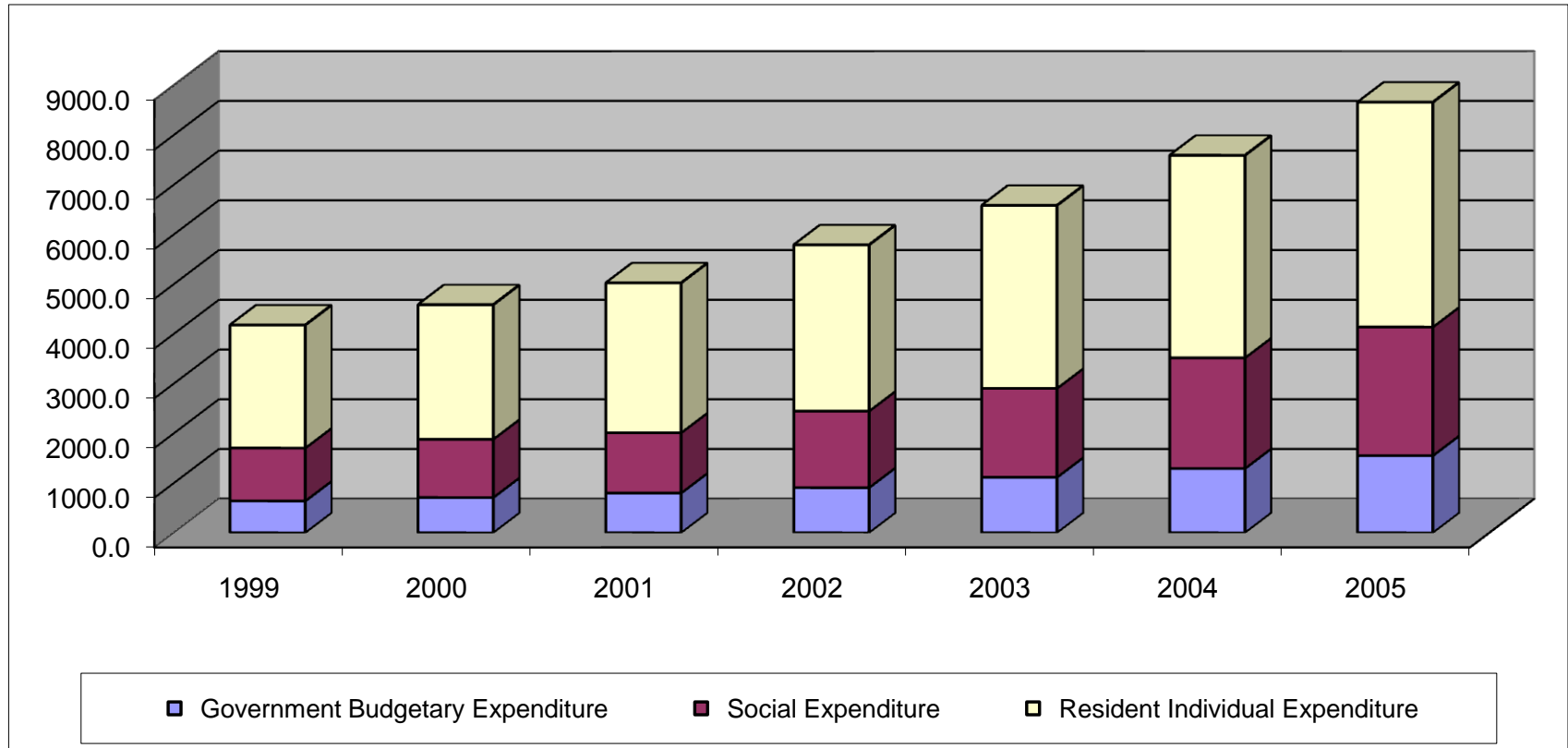


Source: Ministry of Health

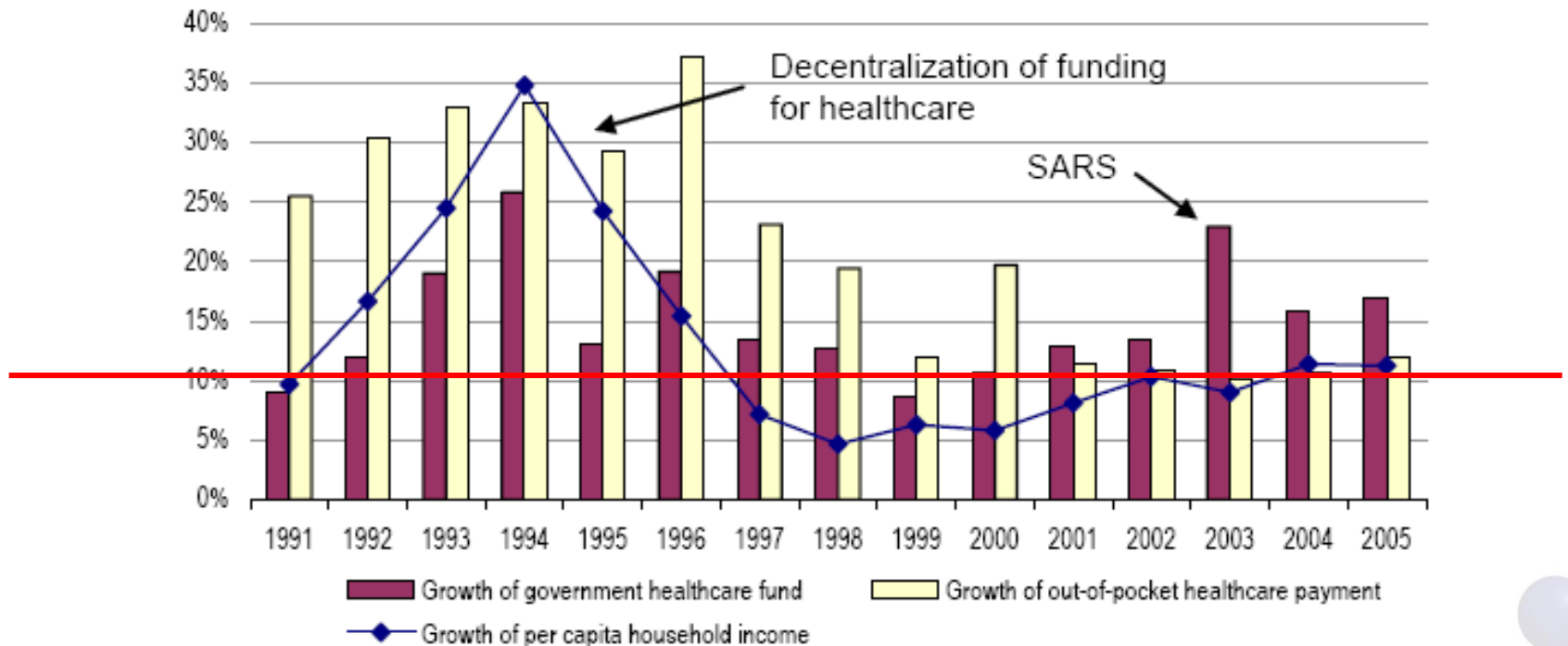
Private payments as a percentage of total healthcare expenses rose significantly from 20% in 1978 to 56% in 2003.



Expenditure on Public Health



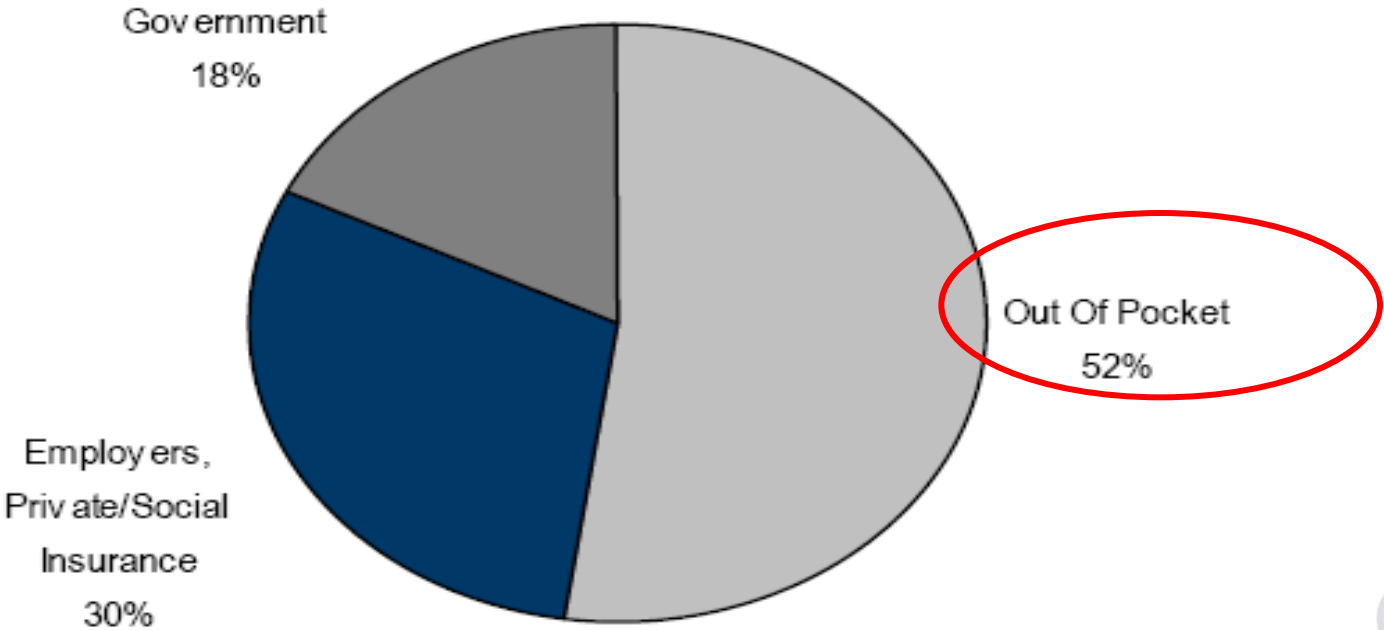
HC expenses compared to household income



During 1990's, growth of Patient expenditure exceeded that of the Government
Following the SARS outbreak, the Government is increasing funding

Healthcare Financing (2006)

Figure 19: Healthcare financing (2006A)

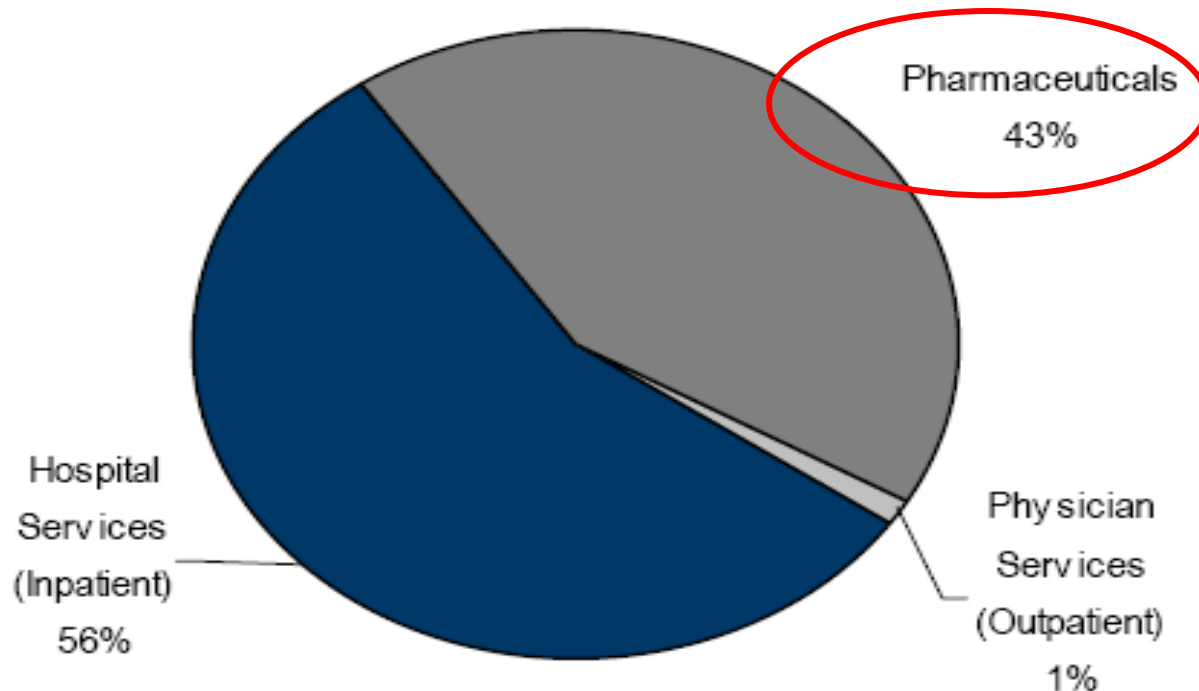


Source: Ministry of Health



Composition of China's Healthcare Expenses

Figure 20: Composition of China's healthcare expenses



Source: Company data, Credit Suisse estimates

The Reforms

- Due to growing criticism of Chinese people, the government is pushing for more radical reforms
 - Establish a medical social security system
 - Reduce expenses to patient
 - Control the total medical costs
 - Better manage financial resources in the healthcare system
- Capping of medical costs and introducing a basic medical social security system are among the main tools of the reform.
- The expected future reforms would be more extensive, as changes the government introduced during the past decade didn't bring the expected results.
- Following the SARS epidemic, the government is increasing its funding to the Healthcare system. It is expected that this trend will continue as part of the current reform.



Need for Reforms

- According to the *Year 2007 China Society Blue Paper*, the top concern among Chinese is the healthcare system and the sky-rocketing medical expenses of the past decade.
- Total out-of-pocket medical payments in China grew at **over 20% CAGR** between 1993 and 2003 and have exceeded affordability level.
- Due to increasing medical costs many patients have stopped going to hospitals.
- According to MOH, 48.9% of Chinese avoid hospitals when sick, of those who should be inpatients, 29.6% choose to be outpatients.
- The government try to contain the costs via price cuts on medicines and medical services.
- Public complaints and the long term burden from an ageing population have the government committed to implementing reforms at the present time



Need for Reforms

- The Chinese Government is playing an important role in the process of Medical System Reform, similar to the economic reform, urbanization, infrastructure development, labor and financial markets
- In September 2006, the government formed a healthcare reform committee that includes eleven ministries, led by the National Development and Reform Commission (NDRC) and the Ministry of Health (MOH).
- Healthcare reform were one of the main topics during the annual sessions of the National People's Congress and the Chinese People's Political Consultative Conference in March 2007.

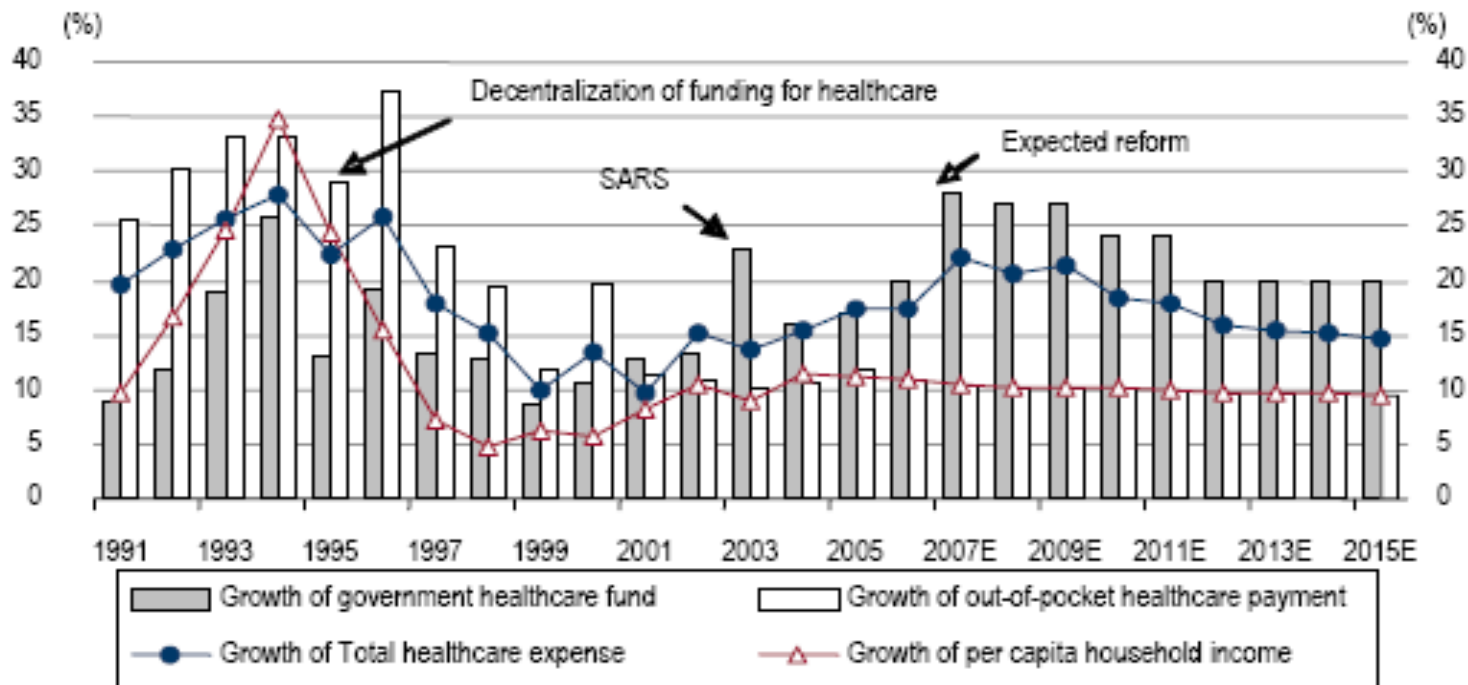


Relevant bodies in the Healthcare reform

Authority	Website	Function Description
National Development and Reform committee	http://en.ndrc.gov.cn/	management agency under the Chinese State Council, with broad administrative and planning control over the Chinese economy
Ministry of Health (MOH)	www.moh.gov.cn	Disease control, health statistics, medical administration, rural health insurance, urban health, maternal and child health, emergency response
Ministry of Labor & Social Security	www.molss.gov.cn	Urban health insurance and occupational health
Ministry of Science and Technology	www.most.gov.cn	Health research
Ministry of Civil Affairs	www.mca.gov.cn	Rural health security and community health
State Food & Drug Administration	www.sfda.gov.cn	Safety regulation and licensing of food, drugs, and biologics. Recently was integrated into MoH as sub ministry
Administration for Quality Supervision, Inspection and Quarantine	www.aqsiq.gov.cn	Health inspection, quarantine and food safety
Administration for Work Safety	www.chinasafety.gov	Occupational health

China's Expected Healthcare Expenses (1991-2015E)

Figure 1: China's healthcare expenses (1991-2015E): driven by growth in household income in the past; likely by government spending in the future



Source: MOH, National Statistics Bureau, Credit Suisse estimates

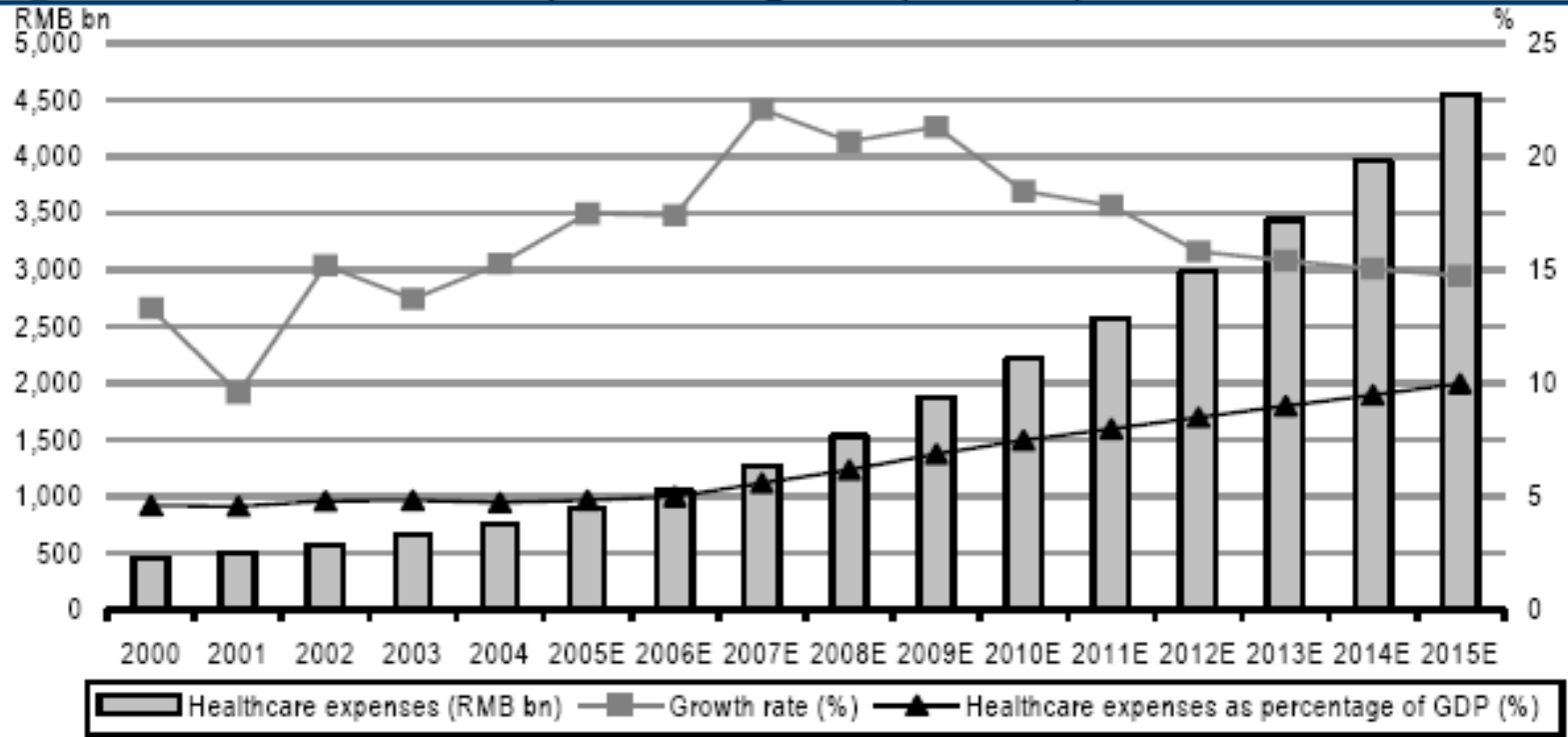
Shift of growth from household income to government spending
 China's Healthcare expenses are expected to grow at CAGR of 20.6% 2008-10, before slowing to 15.5% from 2010-15

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China's Healthcare Expenses and Growth (2000-15E)

Figure 2: China's healthcare expenses and growth (2000-15E)



Source: Ministry of Health, Credit Suisse estimates

Healthcare expenses are expected to reach 10% GDP in 2015 compared to 4.8% today





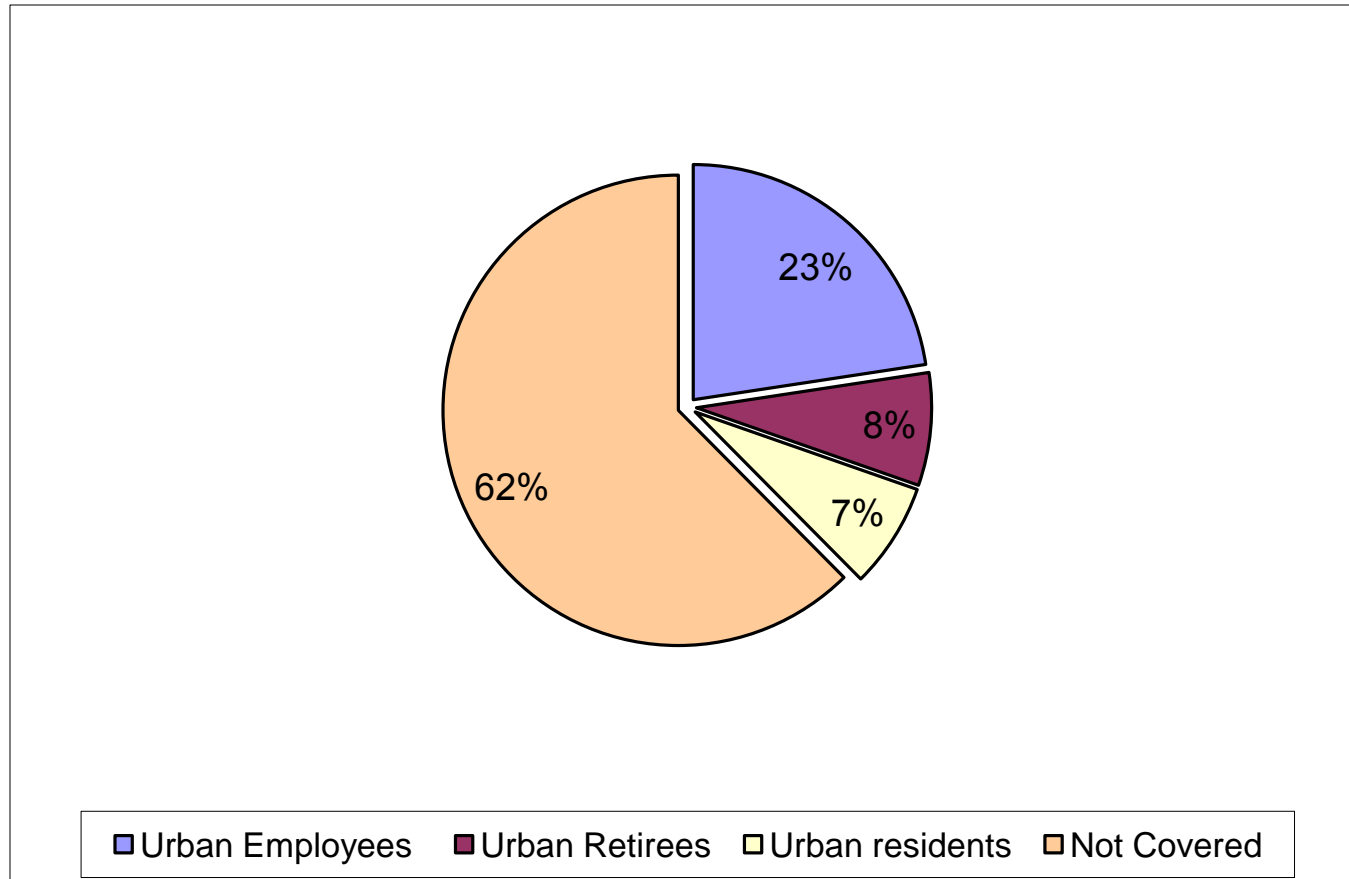
Chinese Medical Social Insurance Systems

Basic Medical Insurance System in urban areas

- 1998 State Council launched the new Urban Employee Basic Medical Insurance System. (BMI), designed to cover all employees working in urban cities and sub-urban townships. implementation of the system began in January 1999.
- As of 2007, over 254 million are covered by BMI, of which 231 million are urban residents.
- Retirees are not required to pay employee premiums.
- Unemployed residence receiving unemployment payments, are covered by the BMI
- In 2007, the government initiated a pilot in 220 cities to cover **all** urban residents in these cities (including those not in the work force)
- Rural workers working in urban areas are also entitled to be covered by BMI. In 2007, 31.3 million such workers were covered.
- Civil servants enjoy medical assistance benefits in addition to urban employee basic medical insurance.
- Local social security agencies responsible for premium collections, management and payments.
- Administrative expenses are covered by the local governments.



Coverage of Urban residents by BMI (2007)



Over 400 million urban residents are covered by the BMI

31 million Rural workers working in urban areas are also covered



Basic Medical Insurance System in urban areas

- Employers and their employees jointly contribute the premiums (employer 6% and employee 2% of the monthly salary)
- BMI funds consist of planned funds and individual account fund.

Individual fund:

- All employee payment and a share of the employer payments
- Used for out patient visits

Planned fund

- The remaining part of the employer payments
 - Used for inpatients treatments
 - Annual deductibles are 10% of the employee annual salary.
 - The system pays medical expenditures above the deductible amount, up to a limit of 3-4 times average annual salary.
 - Medical expenditures above this ceiling are not covered
- Deductible and ceiling amounts, and co-payment percentage are determined by the local government and are different among provinces.
 - The BMI provides reimbursement for approved pharmaceuticals and services
 - Following payment, reimbursement is done direct with government authorities or through agents.

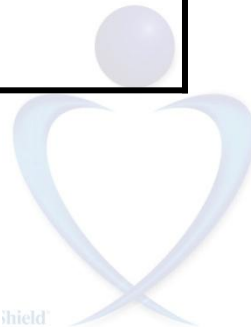


BMI premiums collected, paid and accumulated (2007)

Overview on BMI for Urban employees in 2007	Number ()	Balance of the funds
<i>Income to planned funds</i>	133.2 billion	By the end of 2007, The accumulative total balance is 244.1 billion . Balance of planned funds is 155.8 billion , Balance of individual account is 88.3 billion . ◦
<i>Income to Individual account</i>	88.2 billion	
Total income to the funds	221.4 billion	
<i>Expenditure from planned funds</i>	86.9 billion	
<i>Expenditure from individual account</i>	68.3 billion	
BMI funds total expenditure	155.2 billion	

Source: Ministry of Human Resource and Social Security of PRC

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Rural co-operative medical system

- In 2003 the new cooperative medical care system for rural areas was introduced.
- The system covers over 91.5% (670 million) of rural population
- Total funds exceeded 42.8 Billion Rmb (2007)
- It's a voluntary system with the aim to provide rural residents with basic coverage.
- The system is funded by allocations from the central government, subsidies from local governments and fees by the farmers.
- Participants pays 20Rmb while central and provincial government pay 40 Rmb each (initially was 10 Rmb each party)
- The system reimburses the farmers based on cost incurred with an emphasize is on expensive care
- The Maximum reimbursement in most regions is bellow 10,000 Rmb
- Due to the fast expansion, weak management and limited funds, the scope of coverage is expected to be reduced.



Commercial Healthcare Insurance

- Commercial healthcare insurance is expanding rapidly since the late 1990's
- Premiums for the Jan-Nov 2008 amounted to 54.9, exceeding the 38.4 million annual premiums for 2007.
- Increasing in urban population together with rising incomes and limited coverage by the BMI are the main source of growth .
- Products are seen as a supplement to the BMI
- There are two main products offered:
 - Group plans, mainly purchased by employers to expand the medical coverage of employees. Main focus of these products is increase in reimbursement of the BMI
 - Individual plans, mainly purchased by the insurer. Focusing on critical illness and are sold as extension to health insurance. Paying a fixed amount incase the insured falls ill.
- There is great differences by price and coverage of these products.
- Commercial Healthcare insurance is more common in the eastern part of China



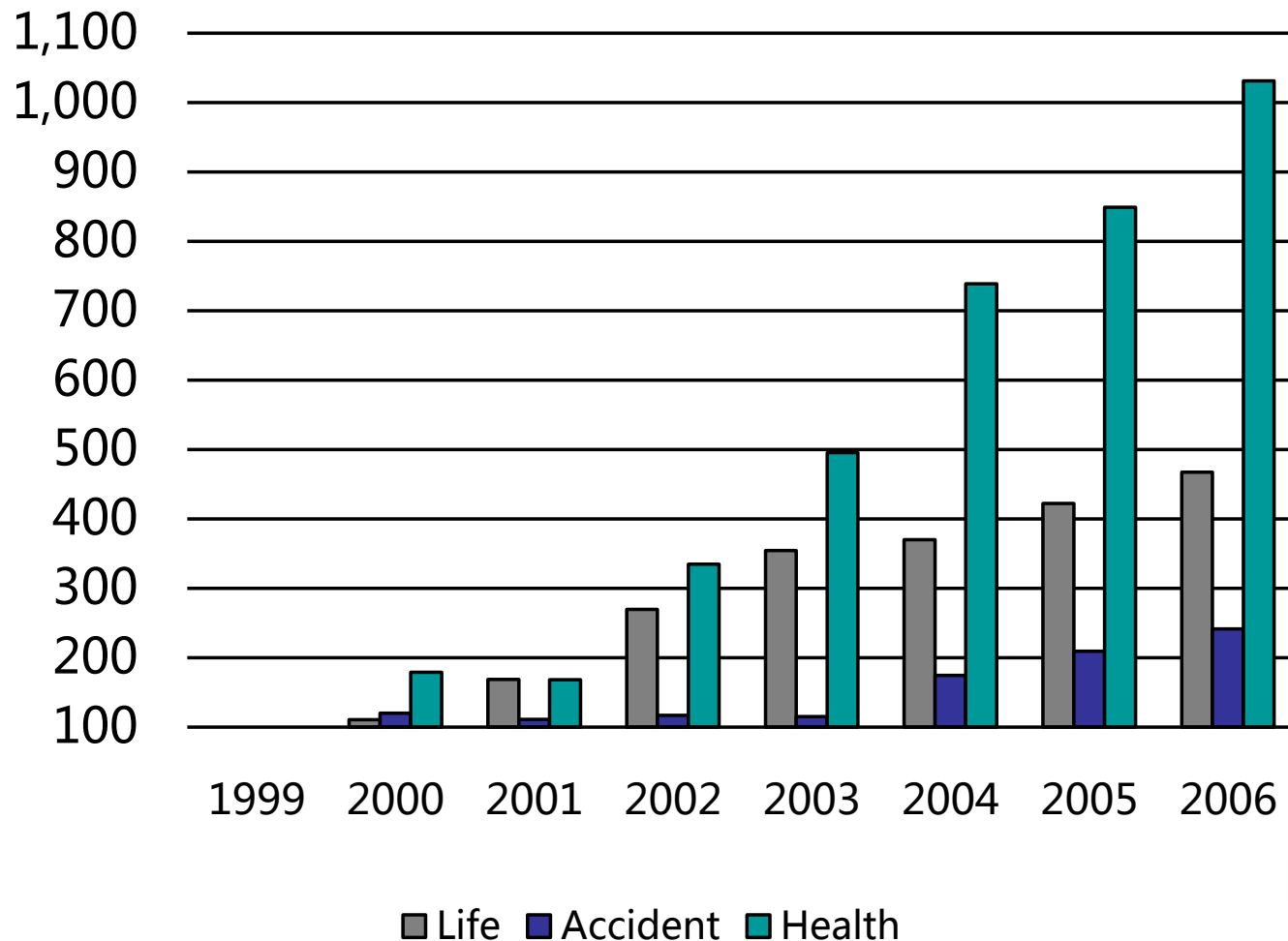
Commercial Healthcare Insurance

- China has 4 professional health insurers
 - PICC Health Insurance
 - Ping An Health Insurance
 - Kunlun Health insurance
 - Reward Health Insurance
- An average medical insurance policy costs 1600 Rmb/year providing 400,000 Rmb coverage for outpatient and hospitalization with a 100 Rmb deductible (based on healthy 25-35 years)
- Some Life Insurers provides health related products, mainly as add-ons or extensions
- Difficulties facing commercial healthcare insurance sector:
 - Lack of transparency and widespread corruption make risk assessment and underwriting difficult.
 - Lack of specialized health insurance players.
 - Lack professionals, experience, risk management techniques



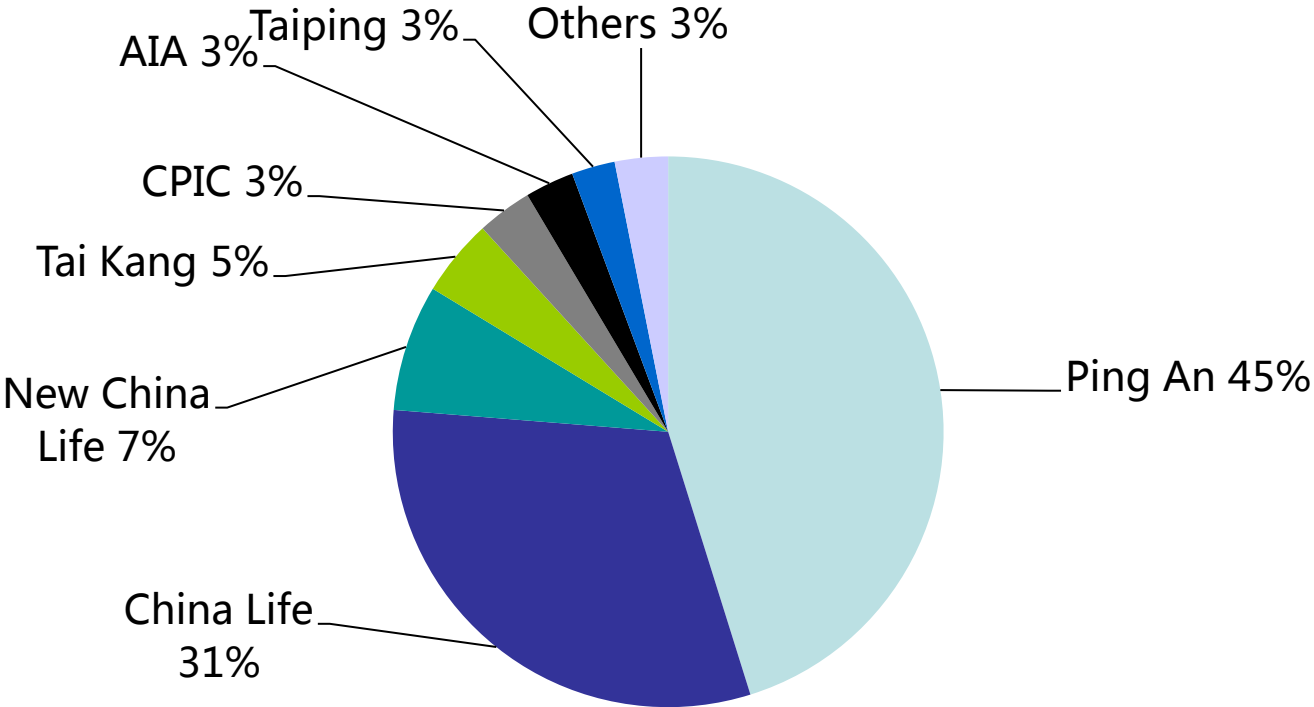
Growth of Commercial Health Insurance

1999=100 Growth of L&H insurance business



Commercial Health Insurers

Market share of health business 2005





Controlling Pharmaceutical Prices

Capping pharmaceutical prices

- Hospital dependency on pharmaceutical to fund their operation brought to corrupt practices by management and physicians.
- Pharmaceutical companies have agents in hospitals promoting the use of their products through kick-back to physicians, thus increasing the subscription of drugs.
- The system got out of control in the late 1990's when 60-70% of hospital revenues derived from the sale of drugs.
- Lowering pharmaceutical related expenses has become a key target in healthcare reforms.
- To cap pharmaceutical prices and reduce over subscribing the government introduced the following measures:
 - Price cuts of retail price of pharmaceutical - implementing 14 price cuts over the past 8 years.
 - Reduce hospital profits to a maximum of 15% mark-up
 - Separate the dual role of hospitals as subscribing and dispensing of pharmaceuticals.



Capping pharmaceutical prices

- One of the suggestions for dividing the hospital dual role of subsidizing and dispensing of pharmaceuticals is that hospitals pharmacies would be managed by a governmental agency that would later distribute the income among hospitals for daily operation
- Today pharmaceuticals account for 50 % of medical expenses in China
- Sales volume of the medical devices V.S pharmaceuticals are 1:3 in China (compared to 1:1.19 in developed countries)



Drugs and treatment covered by BMI

- The drug list for the BMI is a tool to cap pharmaceutical prices as well as reduce treatment cost to patient
- The list is based on clinical need, safety and efficacy, reasonable pricing, ease of use, and the desire to maintain a balance between Western and TCM products.
- Two levels of drug reimbursement:
 - National bulletin –
 - developed by the Ministry of Labor and Social Security (MOLSS) with other central government agencies.
 - Revised every two years
 - Provincial level bulletin.
 - Developed by local provincial government
 - Based on the national level, no variance for category A drugs, max variance of 15% for category B.
 - Modified periodically



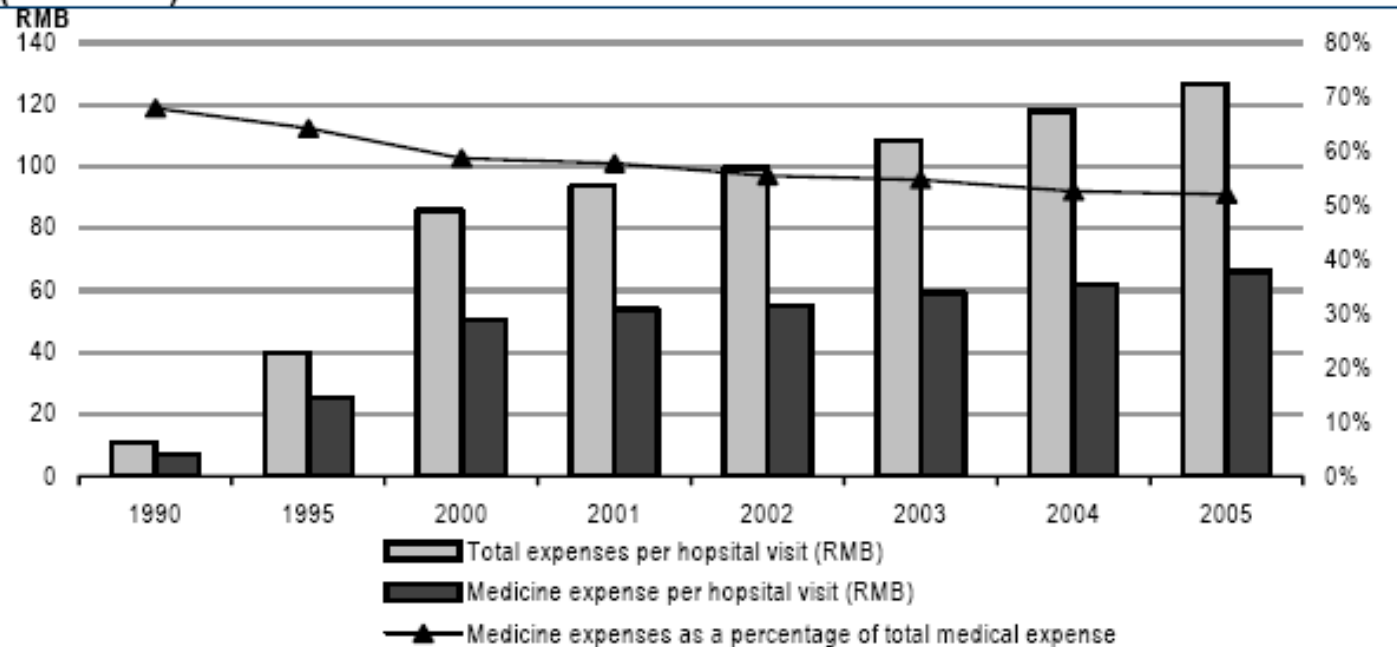
Drugs and treatment covered by BMI

- The national list covers over 800 Traditional Chinese Medicines (TCM) and over a 1000 western medicines (including patented drugs)
- Drugs covered by the BMI, are reimburse (usually around 70%), other are paid by the patient (or through additional coverage)



Medicine Costs as % of Outpatient Visit Cost

Figure 3: Medicine costs as a percentage of total cost per hospital visit for outpatients (1990-2005)



Source: Ministry of Health

medicine costs as a percentage of total medical expenses decline, although they are still growing in absolute terms

Case Study: Implantable Devices

- Intervention surgery, and its relating products, are a fast-growing segment
- According to a research by the NDRC relating to implantable devices (2005) the average markups within distribution channels were 323% for pacemakers, 228% for stents, and 349% for artificial hip joints. .
- the device passed through 3-5 hands from the port/factory to the patient, with the majority of the markup being added by the hospital distributors.
- These distributors nourish relations with the hospital management to allow the sales of their product , as well as doctors who advise the patient on the type and brand.
- Distributors are normally small in size to avoid the attention of public scrutiny
- Hospitals, management and physicians enjoy incentives from the sales, including a % of the selling price.
- The result is hospital and physicians prefer to keep the price high.
- Due to high public pressure, the NDRC tried to regulate the distribution and limit the markups to 25% (from Ex-factory/import price)
- The effect of such a reform on hospitals, physicians, distributors and manufacturers were too high.
- The end result was a 25-30% price cuts which is mainly implemented in Beijing.



Conclusion

- The reduction of government funding to the healthcare system brought hospitals and physicians to rely on cooperation with commercial bodies for a great part of their revenue/income
- At this stage, the government is unable to provide alternative resources to change this current practice
- Instead of eliminating this practice of kickbacks, the government accepts it and is trying to implement regulations to avoid misuse.
- The regulations focus on items which represent a large part of medical costs, such as pharmaceuticals and implantable devices
- These regulations mainly focus on limiting the price markup
- The regulations are more strictly enforced in Beijing compared to the rest of the country.





Privatization of Hospitals

Privatization of Hospitals

- In order to better manage its resources, the Chinese government aims to privatize 60% of hospitals.
- The government hopes that through privatization it would manage to stabilize the balance of the changing healthcare system.
- Over the past 5 years, the government started privatizing medium size hospitals in urban areas.
- The privatized hospitals do not receive government funding, though they receive some tax incentives
- The government retain some shares in the institute for future influence
- Some of these privatized hospitals are focusing on providing higher end service to mid-class Chinese





China Healthcare System

Medical institutes

Hospitals as the First Point of Care

- Due to its historical reasons, Chinese medical system relies greatly on hospitals.
- The system is lacking the buffering position of the family doctor thus locals turns directly to hospitals for all their medical needs.
- Larger hospitals are favored and thus more crowded than smaller ones. (mainly due to better physicians and better facilities)
- Smaller hospitals have less patients, and thus less money to invest in physicians and equipment.
- This behavior have created a vicious circle that leads to even more concentrated medical resources in large hospital, with patients complaining about long waiting queues and low service level.
- About 80% of on the medical resources in urban areas are in large hospitals
- As a monitoring process, based on Chinese law, employers in urban areas needs to provide their employees with annual medical check-ups.
- These check-ups are conducted in private check-up centers or centers associated with hospitals.



Community Care Centers (CCC)

- To cope with the pressure facing large hospitals, and in order to better manage its medical resources, the government is encouraging the establishment of Community Care Centers (CCC) in urban areas.
- CCC are relatively smaller medical institutes (usually level 1 or 2) providing basic medical care and health prevention services.
- According to the MoH, there are over 3,400 Community healthcare centers and 12,000 Community clinics. However, the current community medical service system is still insufficient to meet demands of the Chinese people.
- At the end of 2006, the Chinese government announced a guideline for the development of the healthcare industry during the 11th five-year plan (2006 . 2010). It clearly stated that more government funding will be given to community hospitals.
- As part of the new healthcare reforms, the government wishes to implement incentives to direct patients, especially those with minor disease to CCC. These incentives will include larger reimbursement for these institutes.
- Some of the hospitals operating under the CCC license focus on providing high level medical care to China's growing middle class as private institutes or foreign entities.



Chinese hospitals

- Chinese hospitals are classified into three class (1,2,3) and 3 sub class (A,B,C)
- Hospitals are graded based on their size, medical services, research and teaching facilities.
- Level 3A hospitals are the highest level with over 500 beds, top-end medical equipment (mainly imports) and are usually involved in research and teaching.
- Hospitals are also classified into Profit and Non-Profit.
- Non-profit hospitals are the majority (over 90% of institutes and 95% of patients treatment).
- Majority of Non-Profit hospitals are owned by the government and have additional objectives beside providing basic medical care.
- Non-profit hospitals receive support from the government, based on ownership and government preferences (subsidies and other fiscal support, preferred taxation polices, pricing structures and others) and usually follow government guidelines and set medical prices.
- For profit institutes have full control of services offered and their prices.



Number of hospitals in China by Grade (2005)

Figure 73: Number of hospitals in China by Grade (2005)

	Hospitals	General hospitals	TCM hospitals	TCM-WM hospitals	Ethnic minorities' hospitals	Specialised hospitals
Third level (largest)	948	833	152	15	2	144
Class A	594	388	103	11	1	91
Class B	314	225	46	4	1	38
Class C	38	20	3			15
Second level	5,158	3,557	1,145	38	42	374
Class A	2,744	1,838	686	23	18	179
Class B	2,277	1,828	438	12	19	181
Class C	135	83	21	1	5	14
First level	2,714	2,371	105	21	13	199
Class A	2,042	1,843	82	12	7	115
Class B	509	418	24	8	5	55
Class C	163	110	19	3	1	29
Others (smallest)	9,887	8,421	1,218	122	138	1,965
Total	18,703	12,982	2,620	194	195	2,682

Source: Ministry of Health

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Visits and Inpatient in Medical Institutes (2006)

Medical Institutions	Visits			Inpatients		
	Total	Non- profit	Profit	Total	Non- profit	Profit
Total	2447	2354	88	79.06	76.73	2.13
Hospital	1471	1405	64	55.62	53.50	2.06
General Hospital	1112	1067	44	44.80	43.36	1.41
Hospital Specialized in Traditional Chinese Medicine	229	225	4	6.34	6.23	0.11
Specialized Hospital	108	94	14	3.92	3.44	0.48
Sanitarium	2	2		0.31	0.30	0.01
Health Service Center for Community	83	82		0.44	0.43	0.01
Township Hospital	725	721	2	18.58	18.43	0.03
Rural Township Hospital	701	696	2	18.36	18.21	0.03
Outpatient Department	44	23	21	0.09	0.06	0.03
MCH Center	105	105		3.83	3.83	
Specialized Disease Prevention & Treatment Institute	17	17		0.20	0.18	0.00

Numbers in Millions

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Affiliations and specification of hospitals

Healthcare providers are classified by their medical specialties and affiliations:

- **General hospitals:**
 - Full service hospitals (with specialized departments), the backbone of the system.
 - Each province, city or county usually has at least one general hospital.
 - National level ones (mainly 3A) have the best equipment and physicians
- **Military hospitals:**
 - The PLA (Peoples Liberation Army) army has its own medical care system and hospitals.
 - The majority of these hospitals are open to the public.
 - Some of these hospitals have specialized wards for high level officials.
- **Specialized hospitals:**
 - Focus on medical specialties (Cardiovascular, cancer treatment, pediatric, etc.)



Affiliations and specification of hospitals

- **Teaching hospitals:**
 - affiliated to medical colleges and universities.
 - Some are also General hospitals.
- **Enterprise affiliated employee hospitals:**
 - affiliated and run by large state-owned enterprises
 - Usually open to the public.
- **Traditional Chinese medicine (TCM) related hospitals:**
 - Treat patients based on TCM
 - Some hospital combining TCM with western medicine.



Private hospitals in China

China has 3 types of private hospitals:

- **Privatized general hospitals.**
 - Since Nov 2003 the ministry of health started privatizing medium size hospitals.
 - Most of the hospitals used to be enterprise affiliated or local government owned
 - The government often retains shares in these privatized institutes keeping some influence over their operations.
- **Specialty hospitals.**
 - Normally developed from private clinics and private specialty medical institutions (affiliated to government-owned hospitals)
 - Recently some private start-ups that specializing on a narrow sector of medical services.



Private hospitals in China

- **Foreign-owned hospitals.**
 - Originally formed, in co-operation with large government-owned hospitals
 - Initially Provided medical services to foreigners living in China.
 - Currently expanding their target market to high net-worth Chinese
- Initially the Government didn't fully support the trend, though recently it is officially encouraged (mainly specialized hospitals)
- These hospitals are seen as a way to provide middle class population better and more customized medical services, creating a more vibrant medical care.
- In the past 2 years, the government encouraged private hospitals by providing some tax exemption and ability to take part in the national reimbursement system.
- Additional incentives to encourage their development. are expected.
- Regulations for private hospitals are still not well defined, and implementation varies between provinces.



Medical Personnel

- China has 1.5 physicians and 1.03 nurses for every 1,000 people
- Eastern Coastal cities have significantly higher number of medical personnel compared to inner cities and rural regions
- Rural regions have less than 40% medical personnel compared to urban
- Physicians are well respected, but due to their lower incomes their social economic status is not well above average
- Physicians working in hospitals earn average salary (Tier I cities around 4000 Rmb/month)
- Physicians who are more experienced or have a higher professional level receive higher basic salary



Medical Personnel

- Like hospitals, physicians rely on additional sources of revenue for their income:
 - subscription of pharmaceutical,
 - Promotion of Medical Devices (including implantable ones)
 - Promotion of services
 - “Red Envelops” with Cash from patients.
 - Providing “Private Care” (mainly leading surgeons from leading hospitals in other regions)
- The government is not satisfied with these corrupt practices.
- Recent MoH regulations, try to eliminate the practice of “Red Envelops” by provoking the license of physicians caught receiving them.
- This practice could not be eliminated as long as hospitals are unable to provide sufficient basic salary.



Medical Personnel


- China has over 130 medical schools, top ones located in provincial capitals.
- The basic medical training for a physician consists of 5 years (though some medical schools offer 3 year plans). High-end hospitals (3A would only recruit graduated of 7 year plans (MD or PhD).
- Following graduation, the graduate works as an assistant physician in a hospital for 3 years (1 year for 7 year studies) and then takes the national exams.
- In the past, physicians were hired on life-long contracts with out the ability to quit or be laid off.
- Today both physicians and hospital have more freedom with physicians changing positions for better pay, better environment and development opportunities.
- It is not uncommon to see physicians working in Pharmaceutical sales or dealers of medical devices.
- Nurses training last 3-5 years
- Nurses salaries are bellow that of physicians.



Employees in Healthcare Institutions

(1 000 persons)

Type of Personnel	2006
Total	5620.0
Medical Technical Personnel	4624.0
Other Technical Personnel	236
Managerial Personnel	324
Logistics Workers	436
Medical Technical Personnel	4624.0
Certified (Assistant) Doctors	1995
Certified Doctor	1611
Registered Nurse	1426.0
Pharmacist	354.0
Laboratory Technician	219
Others	631
Number of Medical Technical Personnel Per 10 000 Population	0
	360
	0



China Healthcare System

Additional characteristics

Rural and Urban Healthcare

- Due to the uneven economic development in China, the distribution of healthcare resources is highly uneven.
- Urban areas (mainly eastern coast) enjoy higher concentration of healthcare resources compared to rural (and inner) regions.
- In 2003, the number of doctors per 1,000 persons in rural areas was 47% of that in urban areas
- The government provides social services (Healthcare, education, insurance, pension) as well as limits internal migration based on residency cards (Hukou)
- There is a great difference in medical reimbursement between Urban and Rural regions.
- Currently 80% of healthcare resources are focusing on eastern coast urban population.
- Even though income ratio between urban and rural areas are 3:1, there are great differences in expenditure on medical (4:1) and drugs (7:1)



Demographic Changes – Aging population

- Due to improved living conditions the Chinese life expectancy increased from 35 years in the 1940's to 71.8 in 2002.
- During the same period of time, Chinese population more than doubled from 550 million to over 1.27 billion.
- In 1978, China adopted the One-Child policy, trying to cap population growth.
- The increase in life expectancy together with the one-child policy are bringing to a fast aging process of Chinese Society.
- according to UN forecasts, elderly (over 60) will exceed 25% of total population by 2030.
- The aging population is expected to increase the burden on the Healthcare system, while having less working class people to support it.
- Unlike western developed Countries, China is facing issues related to aging society while still being in its developing stage.
- The government has a very narrow window of opportunity to form the system that would manage its elders in the coming decades.



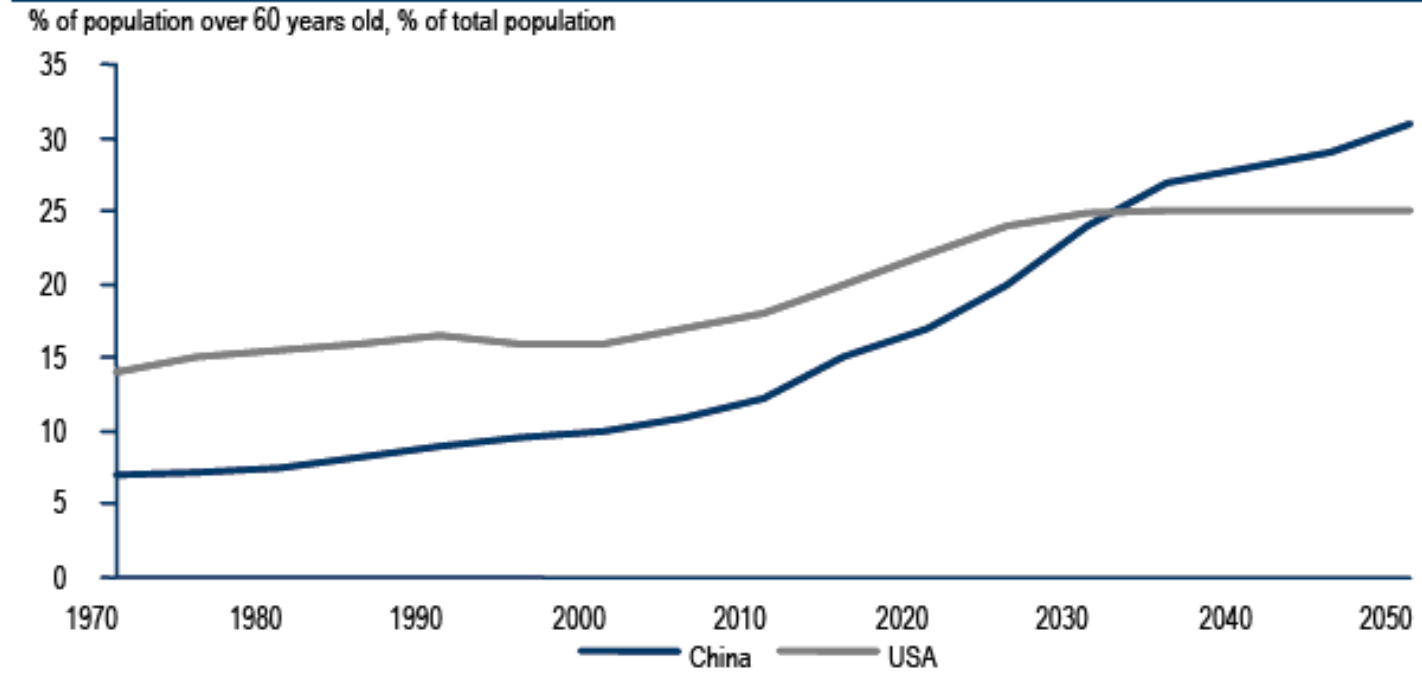
Demographic Changes

- As part of China's fast development, since the early 90's over 300 million rural citizens have been absorbed in urban areas.
- Beside these, China has millions of rural citizens coming to urban centers for short-medium term jobs (mainly in manufacturing, construction)
- It is expected that in the coming 20 years additional 300 million rural residents would move to cities.
- China doesn't have enough resources to integrate its vast rural population while developing a social system
- The internal migration together with urbanization, birth control, exposure to western working habits are damaging the Chinese traditional family structure of "3 Generation under one roof".
- The result is that unlike the past, many elders are living alone and away from their children.
- Working middle aged feel obliged to their elder parents and would go to great length to support them.



China's Population is aging Fast

Figure 9: China's ageing population will be a more serious issue than that in the US



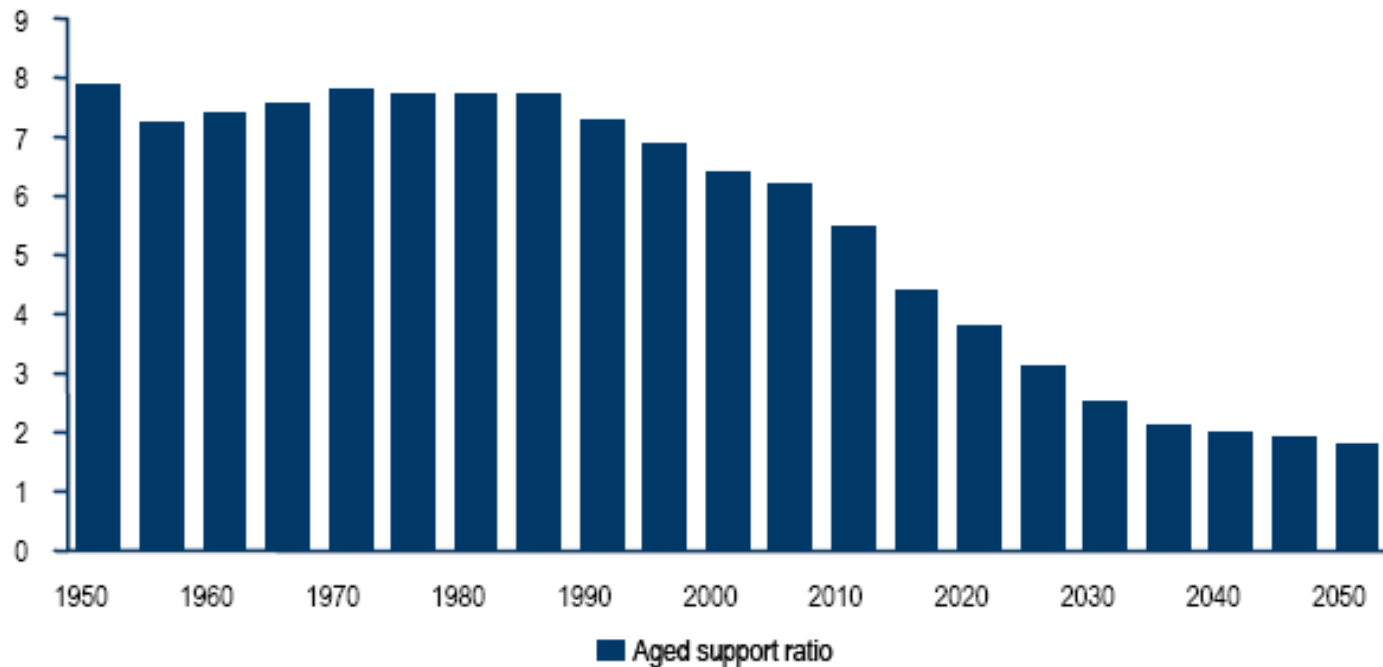
Source: The United Nations, Credit Suisse estimates

% of elders over 60 from the total population



Aging Population Heavy on Working Class

Figure 10: Ageing population demands acceleration in China's healthcare reform



Note: Aged support ratio = ratio of working-age Chinese (aged 15-59) to elderly Chinese (aged 60 & over)
Source: The United Nations, Credit Suisse research

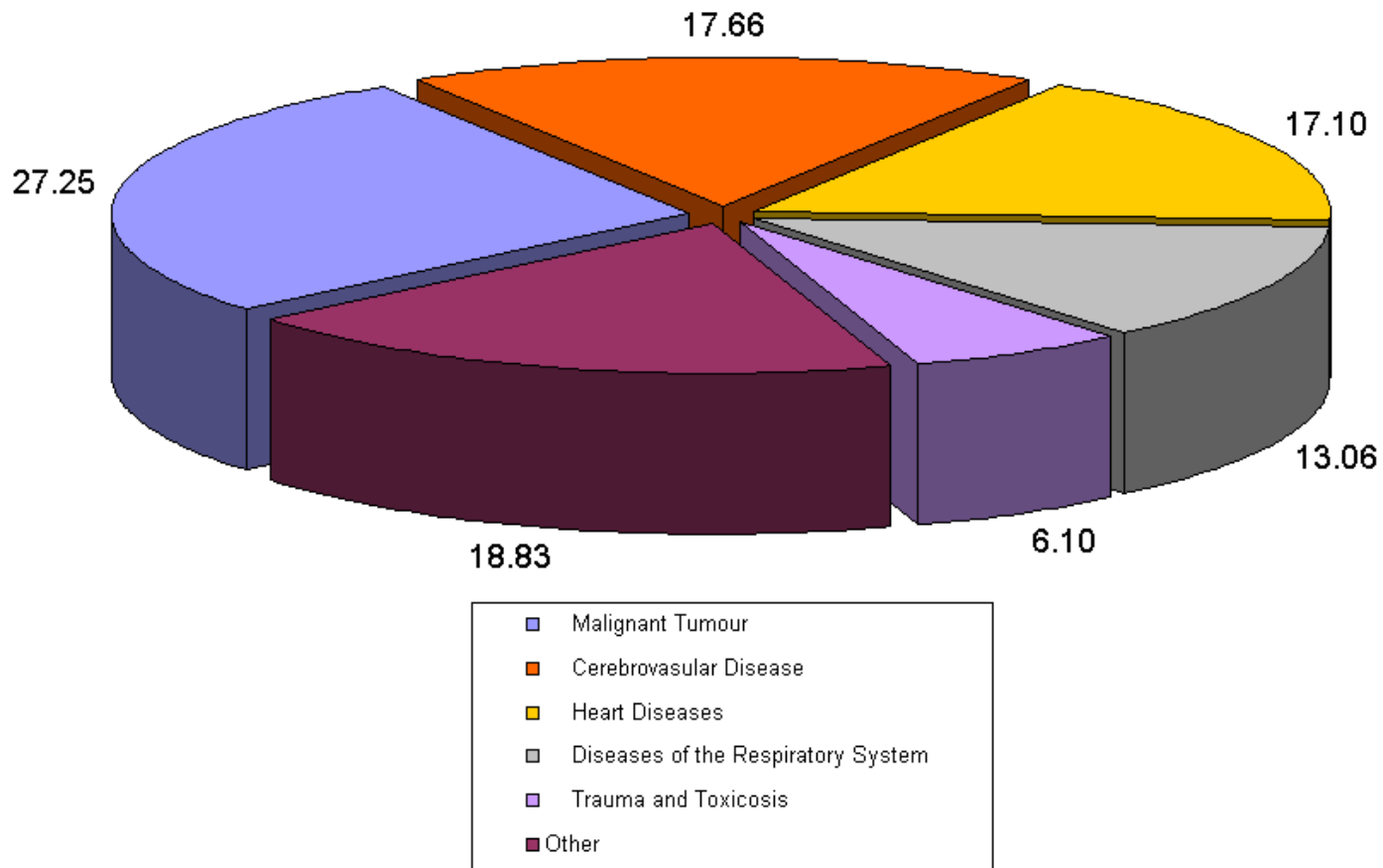


Main Causes of Death

- Due to increased medical costs patients will visit hospital mainly in acute situations.
- The improved sanitary conditions together with the improved living standards reduced mortality from infectious/communicable disease.
- Today the main causes of death are non-communicable disease. The main three causes of death are: malignant tumor, cerebrovascular disease and heart condition.
- In urban population, due to high pollution levels there is a high prevalence of respiratory diseases as well as cancer.
- Changing in dietary habits and physical activity levels have increased obesity among younger generations dramatically.
- In a study conducted in 2002, the age-standardized mortality rate for cardiovascular diseases was over 2.9%

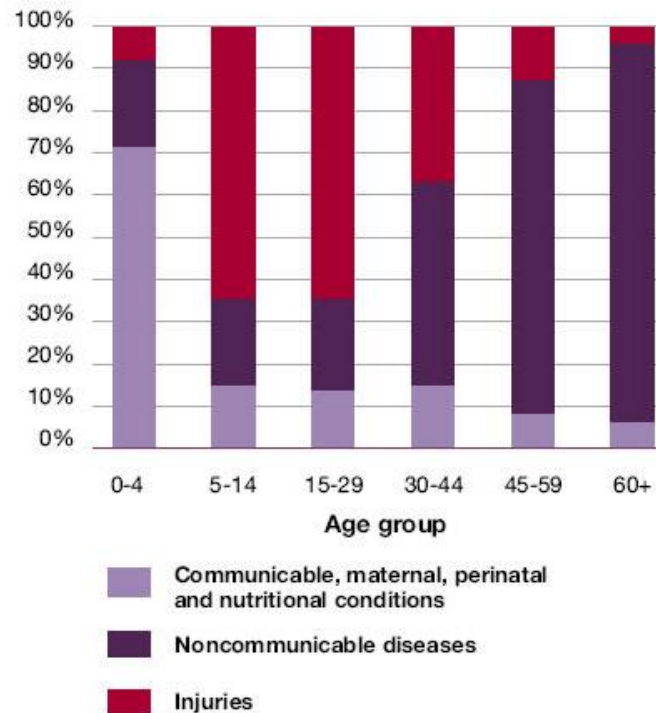


Main Causes of Death (2006)



Main Causes of Death (2002)

Cause of death, China 2002



Source: WHO Global Burden of Disease Project, Version 3, 2002





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