



Emerging Public Health Issues and Threats

Improving Health Security – Invest in Health

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Presentation Summary

1. A rapidly changing world: challenges & opportunities in Health
2. Threats of infectious diseases
3. Threats of chronic diseases
4. Environmental health and climate change
5. Health system challenges and opportunities
 - Food and drug safety and quality
 - Access and poverty
 - Global health initiatives
6. Invest in Health
 - Prevention remains the best
 - Early detection, response, treatment and be prepared
 - Ensure Universal access to Health



Rapidly Changing World Challenges and Opportunities in Health

- ❑ Industrialization & motorization:
 - Driving economic growth, but also threatening health (air quality, polluted waters, road traffic injuries, occupational diseases and deaths)
- ❑ Globalization and urbanization:
 - Introducing unhealthy & sedentary lifestyles, and fast food
 - Increasing connectivity and spread of emerging diseases (SARS and AI)
 - Creating large migrant populations – access to public services
- ❑ Demographic changes – ageing (together with one child policy - China)
- ❑ Health and the market:
 - Access & innovation to goodies (drugs & vaccine) and bad-ies (cigarettes, alcohol, unhealthy food, overuse drugs);
 - Cost as barrier to access – incl. AI vaccine
 - Market requires certainty – health security is important



Threats of Infectious Diseases

Lessons Learning

- An infectious disease in one country is a threat to others
- The best chance to eradicate or contain a new or a re-emerging disease is when it surfaces
- Key to timely response nationally and globally is:
 - Early detection & response, reporting, information & samples sharing within countries and with the international community
 - Treating information, samples and products (vaccines, diagnostics, drug sensitivities) as a global public good throughout the process
- On average one new human disease per year, of which 75% is of animal origin: zoonosis
- Market failures in public health: SARS a global wake-up call



Threats of Infectious Diseases

1. Current & emerging and re-emerging diseases

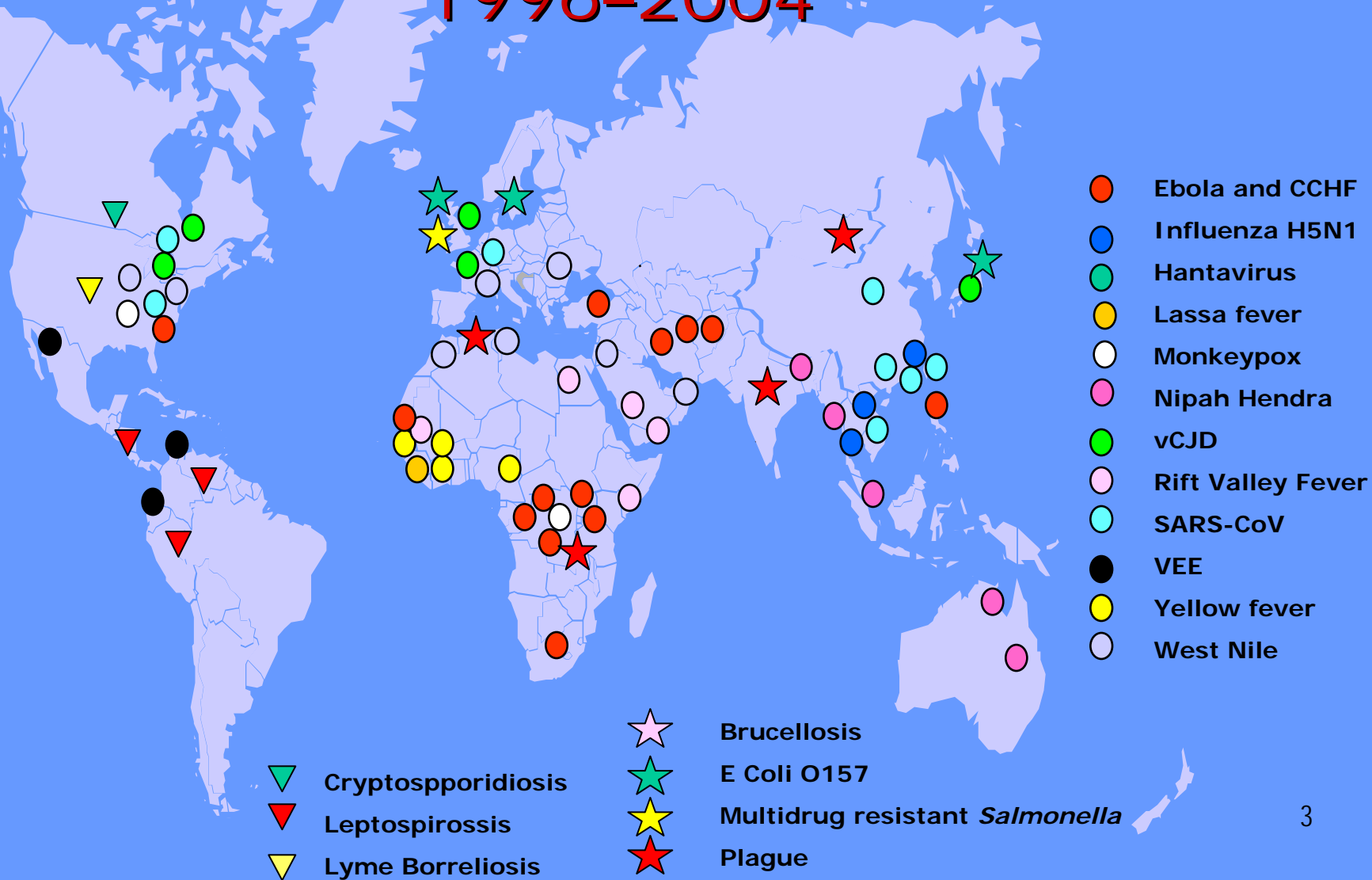
- Global challenges: AI, SARS, AIDS, tuberculosis, malaria, rabies etc.
- Diseases can re-emerge after containment if the reservoir of the virus still exists:
 - Ebola re-emerged after five years; SARS likely still reservoir in wild animals

2. Bio-safety lapses

- 11 out of 15 SARS cases after 2003 major outbreak, were linked to bio-safety lapses in 3 separate laboratories
- In 2004 bio-safety lapses occurred with Ebola and inadequately inactivated anthrax in different countries with some deadly consequences
- In 2005, live influenza A (H2N2), a strain that killed 4 million people in 1957, was mailed to 5,000 labs in 18 countries showed vulnerability current global practices



Emerging and Re-emerging Zoonoses 1996-2004



3

6



Current Threats of Infectious Diseases

3. Bio-terrorism

- Anthrax in 2001 in the US reminded us that infectious diseases can also deliberately be introduced into society



4. Drug Resistance

- Viruses and bacteria develop resistance to medication, when drugs are inappropriately taken
- Drug resistance viruses and bacteria pose great challenge not only to countries where they are created, but also to countries where they will spread to
- MDR-TB in newly diagnosed and previously untreated cases globally is 1% to 10% and even higher in Eastern Europe & Central Asia
- China 15% of global TB but 30% of global MDR in TB



How Best to Prepare for Threats of Infectious Diseases

What is needed is increased global capacity. The system is as strong as the weakest link in the chain; there is clear need for countries to effectively help each other - **International Health Regulation**

Considerably large and variable threats, but fortunately, it requires a common approach:

- ❑ Preventing diseases from becoming a threat to humans
- ❑ Strengthening early detection
- ❑ Strengthening early response, including communication
- ❑ Strengthening preparing for a pandemic and reduce morbidity, mortality, social disruption

Consistent with Asia Pacific Strategy for Emerging Diseases (APSED)



Chronic & Non-Communicable Diseases

BIGGEST GLOBAL EPIDEMIC BUT NOT ON AGENDA GLOBALLY
[NOT part of MDG targets – and little funding]

Also NOT in China - despite:

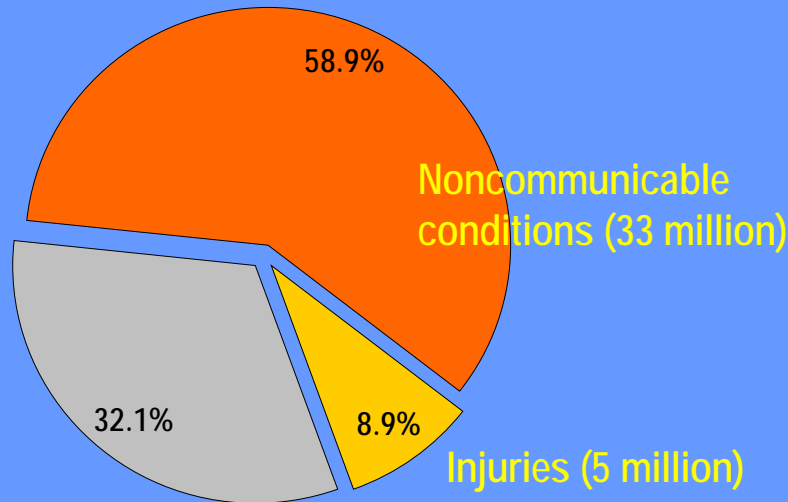
- Over 80% of deaths due to chronic and NCDs in China
- Some 350 million smokers in China – mostly men in rural areas
 - China nearly 30% of global smokers and > 30% global tobacco production
 - China state monopoly on tobacco production and ratifying FCTC but progress slowing down on key issues
- 23% Chinese overweight & 7% obese and rapidly rising
- 20 – 40 million people diabetes and 160 million with hypertension
- Injuries highest mortality in younger and middle age groups



Evidence Indicates Greater Importance for NCD, and Injuries

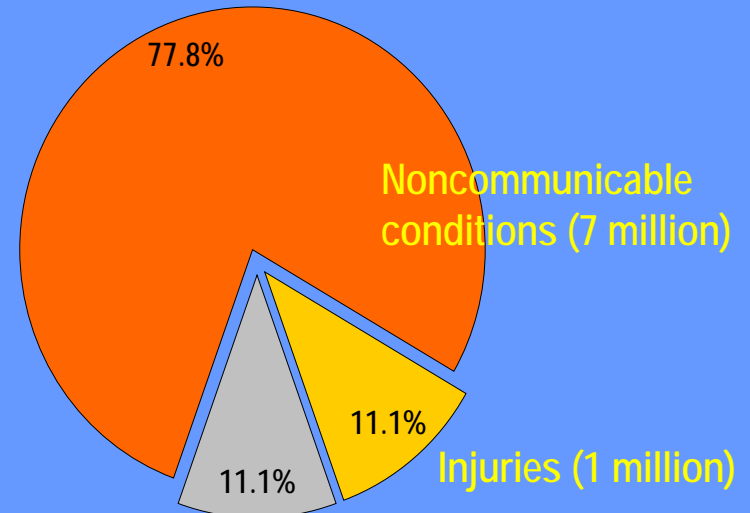
Mortality data

WORLD



Communicable diseases
(18 million)

CHINA



Communicable diseases
(1 million)

- 17 million attributed to cardiovascular disease
- **one third of these occurred in middle-aged**



Chronic & Non-Communicable Diseases

IMPACT OF CHRONIC DISEASE:

- ❑ Premature death and major adverse effect on quality of life
- ❑ Adverse economic effect on **families** (falling into **poverty**) and **societies** (in China US\$550 billion loss over next 10 yrs – CVD and diabetes alone)

We know the causes:

Underlying: Globalization, urbanization, ageing population

Modifiable risk factor: unhealthy diet, physical inactivity, tobacco

Intermediate risk factor: hypertension, diabetes, high lipids, overweight

We know what works to prevent and control chronic diseases

- ❑ Population interventions
- ❑ Individual interventions



Environmental Health and Climate Change

- ❑ Need to systematically monitor the human Health consequences to environmental pollution and climate change

Water & sanitation:

- ❑ Only 66% of rural population have access to safe water and sanitation coverage as low as 10% in some rural areas
- ❑ Some 90 percent of China's cities and 75 percent of its lakes suffer from some degree of water pollution
- ❑ Water consumption not matched by supply – climate change will aggravate this → water shortages in future worse, esp. in N China

Air pollution:

- World Bank: China has 16 out of 20 most polluted cities in the world
 - Fine particles: WHO norm <20; London = 24; NY = 27; Beijing = 142

Those most at risk will be the poor, elderly and the young



Health System Challenges

Food & Drug : Safety and Quality

- ❑ Threats to food and drug safety are symptoms of vulnerabilities in domestic and international production and supply systems
- ❑ These are global problems that do not respect national borders and need global responses

China's challenges

- ❑ Diversified production base - eg. 800 million farmers; >5000 pharmaceutical manufacturers, 12,000 distributors
- ❑ Capacity challenges in provinces to reinforce laws
- ❑ Complex institutional arrangements - different agencies responsible for different aspect of food and pharmaceuticals
- ❑ Lacking effective centralised mechanism - eg no basic food law and no national medicines list applied throughout the health system (health insurance etc.)



Health System Challenges Food & Drug : Safety and Quality

Systemic challenges need a systems-based response

- ❑ A 'farm to fork approach' with appropriate check at vulnerable points based on risk analysis
- ❑ Accreditation at every point of supply chain – food & drugs
- ❑ Enhanced coordination and communication between agencies, all sectors, countries; e.g. RAS & IMPACT dealing with counterfeit drugs
- ❑ Increase capacity to effectively re-enforce
- ❑ Appropriate and enforceable penalties



Health System Challenges

Access and Poverty

- ❑ Sickness causes poverty and poverty raises prospect of poor health
- ❑ High medical charges to patients (out-of-pocket payments) combined with low insurance coverage:
 - ✓ **LOW ACCESSIBILITY** to health care
 - ❑ **China:**
With 40% of rural population cannot afford hospital services
 - ✓ Health cost often main single reason people falling into **POVERTY**
 - ❑ **China:**
Health costs main single cause of **POVERTY**
(NHSS 30%; DRC 50%)



Health System Opportunities

Global Health Initiatives

■ Innovative financing

- Complements official development assistance (ODA), which is highly volatile (7x more than domestic revenues)
- Brings in *additional* partners – private sector and foundations, & NGOs
 - GAVI, GFATM, Stop TB, Bill & Melinda Gates foundation, Clinton Foundation
 - Airline ticket taxation for AIDS and other pandemics
 - International Finance Facility (IFF): frontloading aid to achieve MDGs

■ Leveraging additional funds and raising profile of specific issues

■ Providing a means of supporting global public goods - research, innovation, and scale up of interventions



Early Assessment Global Health Initiatives

- Instrumental in scale up of cost-effective health interventions (AIDS, TB, malaria, EPI)
- Reinforcing result based management and funding

However,

- New partners – often bring their own agendas
 - Duplication of institutional arrangements and reporting requirements
 - Rwanda – only 14% of aid for health passes through government systems
 - Many governments feel too much financing available for HIV/AIDS; not enough for other priorities eg. maternal mortality, health infrastructure
- Scale up requires health systems and policies that can deliver
- Posing coordination challenges and need for integrated approach



Invest in Health Prevention Remains the Best

Emerging infectious diseases: living safe with animals

- Deal with zoonosis while still a disease in animals
- Animals in separate shelter; abolishment of wet-markets; improve slaughter practices (AI, Streptococcus Suis)

Chronic diseases:

- Healthy life styles and early treatment

Food and Drug safety:

- Food: farm to fork approach
- Drugs: accreditation of the drug production and distribution chain

Provide access to healthcare

- Health promotion and immunization
- Treatment of infectious diseases



Invest in Health Early Detection, Response, Treatment and Be Prepared

Strengthen surveillance system and laboratory diagnostics networks

- ❑ Animal and human surveillance
- ❑ Drug resistance
- ❑ Environmental

Strengthen the communication between relevant agencies

- ❑ Not easy – BUT – essential

Reporting – BUT – work on incentives – and – build trust

Sharing information – samples – findings - products

Communication – incl. diseases, food, counterfeit drugs etc.

Prepare while you can – again multi-sectoral involvement crucial



Invest in Health

Ensure Universal Access to Health

- ❑ Invest in Health of poor people, ensuring universal access to Health interventions that works
 - Move away from fee for services as a payment method and introduce prepayment mechanism (taxes or health insurance)
 - We know what is needed, we know what works, we need more of it
- ❑ Invest in Health systems that can deliver quality Health services
 - Governments to increase health funding
 - Donors to be imaginative in their approaches (Benn)
- ❑ Invest in Research & Development and global public goods
 - More research on what is needed for the most in need
 - TRIPS – developing new drugs, and making them affordable. Need to create incentives for pharmaceutical sector
 - Technology transfer





Thank you

