

Criteria of schistosomiasis control and elimination in China

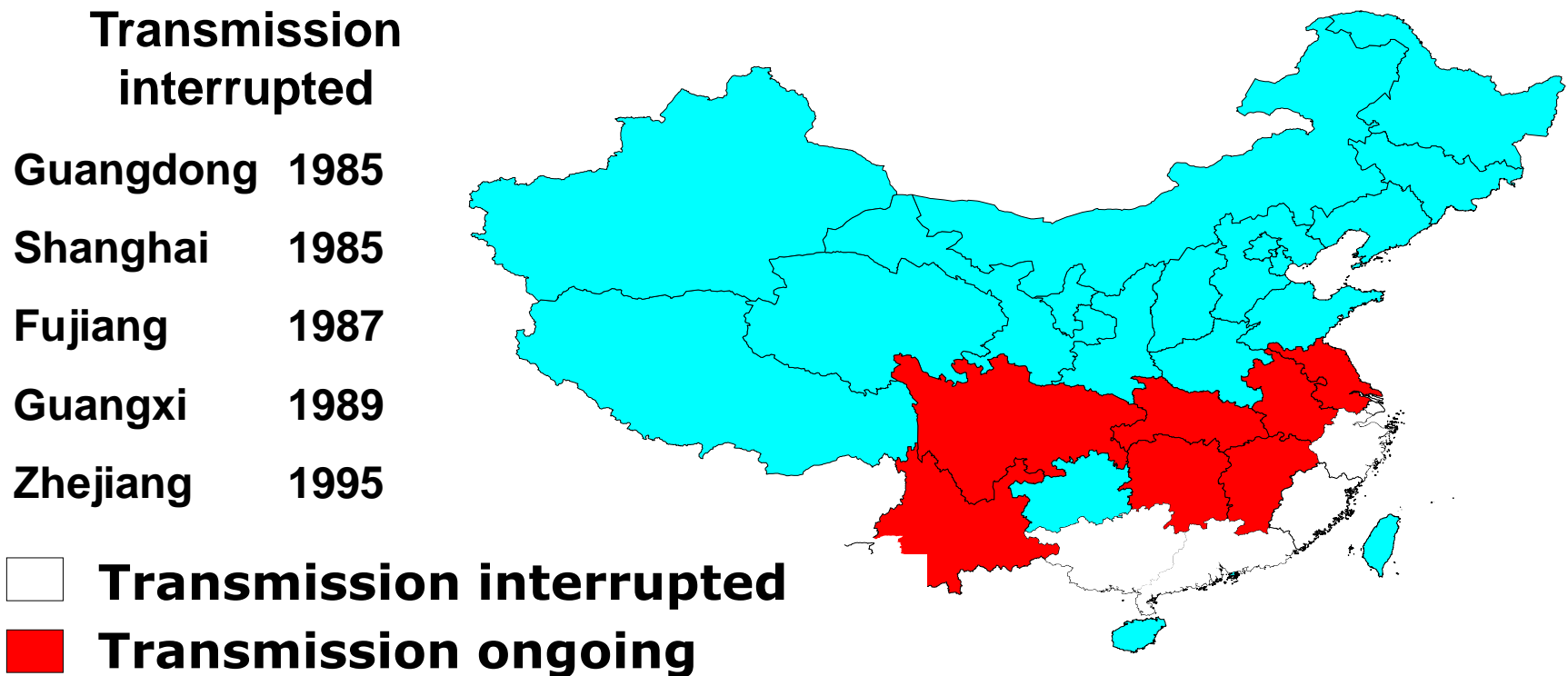
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Remarkable achievements

1. Reduction of schistosome-endemic areas

→ Interruption of *S. japonicum* transmission in 5 provinces



Why schistosomias control is priority in China

- ❑ *S. japonicum* have a very serious consequences, due to more than 10 times eggs production than other species into host's liver. In severe acute cases and advance cases will threaten host's life.
- ❑ *Oncomelania hupensis* is, unlike the *Biomphalaria* and *Bulinus*, amphibious and living in marshland, very easy to spread with the yearly floods. Eradication of this snail is impossible along the Yangtze River valley.
- ❑ In addition to people over 40 kinds of mammals can be infected and are reservoir hosts of *S. japonicum*. It is difficult to control the source of infection
- ❑ Government recognized that schistosomiasis endangers public health of the rural people, to eliminate the disease is important to maintain social stability



Review strategy of schisto-control in China

- 50-80s, Integrating methods for schisto-elimination, **focus on snail control**, including through agricultural development and water conservancy construction to eradication of snails
- 80s-2000, Since praziquantel appear the strategy is integrating methods for schisto-morbidity control, give priority to chemotherapy (mass or selective). The aim is to reduce infection
- 2003- recently, Since it is impossible to eradication of snail in along the Yangtze River, Combined with MDA **focus on multiple animal reservoirs**, Integrating methods to elimination of source of infection from animals.

The strategy including

- To prevent the contamination from bovine (replace the water buffalo with small tractors)
- To stop the eggs from human stool into the environment (MDA + Sanitation)
- Snail control
 - molluscicide,
 - environment modification
- Health education
- Safe water supply



Technical Protocol

- Catalogues of endemicity areas

- **Based on the prevalence rate of an administrative village confirmed by fecal examination:**
- **1st stratum: Prevalence rate $\geq 10\%$;**
- **2nd stratum: Prevalence rate $\geq 5\%$, $< 10\%$;**
- **3rd stratum: Prevalence rate $\geq 1\%$, $< 5\%$;**
- **4th stratum: Prevalence rate $< 1\%$;**
- **5th stratum: No any cases both in human and livestock for 5 successive years, no infected snail detected.**



Technical Protocol

- Case detection and treatment

Village level	Case detection	Chemotherapy	Adjustment of stratum
1 st stratum	By questionnaire, 1-2 times each year	Mass chemotherapy, or given to the positives in questionnaire	200 people selected at random in a village, and screened by sero-test, confirmed by fecal examination, once every 2 year
2 nd stratum	Sero-test, once a year	Selective chemotherapy given to the positives in sero-test	
3 rd stratum	Sero-test, once a year	Selective chemotherapy given to the positives in sero-test	
4 th stratum	Sero-test, confirmed by fecal examination, once every 2 years	Selective chemotherapy given to the positives in sero-test	Through field assessment by expert panel at each village level, once every 5 years
5 th stratum	Sero-test, confirmed by fecal examination, once every 3 years	Treatment given to the positive in fecal examination	Through field assessment by expert panel at each county level, once every 5 years





中华人民共和国国家标准

GB 15976—2006
代替 GB 15976—1995

血吸虫病控制和消灭标准

Criteria for control and elimination of schistosomiasis

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1.Criteria for infection control

1. The prevalence rate in residents should be less than 5%;
2. The prevalence rate in domestic animals should be less than 5%;
3. No outbreak of acute schistosomiasis occurred:
 - 3.1 Less than 10 acute schistosomiasis cases including clinical or parasitological confirmed cases occurred within 2 weeks in an administrative village, or
 - 3.2 Less than 5 acute cases occurred within 1 weeks in the same place where cause infection through water contact.
4. Data and files reflecting the changes in infections and in snail examinations at administrative village level should be available.

2. Criteria for transmission control

1. The prevalence rate in residents should be less than 1%;
2. The prevalence rate in domestic animals should be less than 1%;
3. No acute schistosomiasis cases with local infection should be found.
4. No infected *Oncomelania* snail should be found for two successive years.
5. Data and files reflecting the changes in infections and in snail examinations at administrative village level should be available.

3. *Criteria for transmission interruption*

1. No human schistosomiasis case with local infection should be found for 5 successive years;
 2. No any schistosomiasis case in domestic animal with local infection should be found for 5 successive years;
 3. No *Oncomelania* snails should be found after careful surveys for two successive years.
 4. Data and files reflecting the changes in infections and in snail examinations at administrative village level should be available, the plans and measure for surveillance should be available.
4. *Certification for schistosomiasis elimination (eradication)*

No new infection both in man and in domestic animals should be detected for five years after reaching the criteria of transmission interrupted.

Intervention

- In *S. japonicum*, the transmission control and transmission interruption means
 1. Infection rate = 0
 2. Implementation of sustained intervention needed in order to avoid the resurgence

Intervention

- strategic or active surveillance both for human and animals for >5 years
- Snail surveillance covered all historical and suspected areas for >2 years
- surveillance in mobile population and animals to prevent imported cases
- environmental modification integrated with other sectors
- health education

Achievements contributed to

- **The original goal:** to eliminate the disease from all endemic areas where are feasible by integrated approaches - including chemotherapy, snail elimination, environmental modification, health education and improved sanitation and water supply.
- **The sustained commitment** of the central and local governments with technical support
- **Collaboration** of the health sector with various other governmental sectors (notably agriculture, water conservancy and forestry)