STDs Epidemic, Prevention and Control

China CDC
STDs Center
Guojun Liang
Context

• STIs epidemic in China

• Strategy of control
STD situation in the past in China

● Before 1949, it was said there was nearly 10 million STD patients in China.

● Syphilis prevalence rate at that time:
  - City: 4.5~10.1% among STD outpatients
  - Village: 0.85~3.80% among rural residents
  - Minority: 21.7~48%
in the year of 1941, 1303 prostitutes were tested in Beijing, among them, 1257 persons were infected with STDs, infectious rate was 96.50%。

<table>
<thead>
<tr>
<th>Disease</th>
<th>number of people</th>
<th>prevalence(%)</th>
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</thead>
<tbody>
<tr>
<td>syphilis</td>
<td>1107</td>
<td>84.90</td>
</tr>
<tr>
<td>gonorrhea</td>
<td>700</td>
<td>53.80</td>
</tr>
<tr>
<td>fourth venereal disease</td>
<td>374</td>
<td>28.70</td>
</tr>
</tbody>
</table>

60% had multiple STDs
• 1964, STDs were eliminated in China

• In 1970s, STDs appeared again; in 1981, only 166 STDs was reported, but in 2002, the number of reported cases rocketed up to 744,848, incidence 8.15/100,000
Epidemic stage in China

- Stage 1 (1977～1985): Introduction. From overseas to coastal cities
- Stage 2 (1985～1988): Spread into inner land
- Stage 4 (1993 to now): Extensive epidemic
1. Overall rapid growth period in China

1985～2005: annual velocity of increase in recent 20 is 29.64%

- 1980-1989: annual growth rate--142.6%
- 1990-1999: ---20.43%
1991~2000 common STD annual increase

gonorrhea: 10.69%
syphilis: 51.63%
verruca acuminata: 19.48%
NGU: 43.84%
genital herpes: 55.17%

Total: 19.30%
1985～2005 reported STD cases and incidence in China
2、Alteration of STD proportion

- 淋病所占比重由第1位变为第2位，NGU成为发病最高的性病
- 由过去以淋病流行为主，变为多种性病共同流行
- 由过去的以经典性病为主，变为经典性病与新一代性病（衣原体感染、尖锐湿疣和生殖器疱疹等）共同流行
3. Sexual active population → high risk of STDs

- 20～49 year old STD patients account for 85%-90% of total STD patient
- In 2002, national surveillance sites showed:
  - 20～29 year old incidence: 611.56/100,000
  - 30～39 year old incidence: 547.62/100,000
  - 40～49 year old incidence: 259.08/100,000
4、Gender ratio is diminishing, different STDs have different ratios

National gender ratio among reported STD patients

- 1977～1988: 2.04:1
- 1989: 1.89:1
- 1994: 1.68:1
- 2000: 1.40:1
- 2004: 1.33:1
- 2005: 1.16:1

2004年全国不同性病的性病分布
5. High risk groups have higher incidence
Syphilis incidence among prostitute.
1993-2002 in Nanning City, from STD surveillance sites (N=129~565)
STD incidence among prostitute, 2000 in Kunming City (n=505)
Syphilis incidence among prostitutes in Jiangsu Province, Li yang City

- 2003: 7.36%
- 2004: 14.57%
STD incidence among MSMs in 2005, Nanjing, Suzhou and Wuxi in Jiangsu Province (N=150)
6、STD is spreading from high risk populations to the general population; children and women have been influenced already
STD incidence among antenatal clinic outpatients in 2005, Fuzhou city

- Syphilis: 0.2% (1/500)
- Infusoria: 3.2% (16/500)
- Chlamydia (PCR): 9.72% (49/504)
- HSV-2 (ELISA): 10.8% (54/500)
- Gonococci (PCR): 0.6% (3/504)
Reported MTCT syphilis in China, 1991～2005

increased: 56.36%
7、STD incidence is higher in economic booming regions and cities and tourist resorts. STDs prevail in rural places, too.
Factors of STDs epidemic in China — more a social problem

- **Social-economic, cultural factors**
  - 国家政策、社会环境
  - 贫富差距、失业、性产业
  - 人口结构、性别比差距
  - 城市化与人口流动、社会转型
  - 性病的社会敏感性、歧视
  - 性观念开放与知识缺乏

- **Behavioral factors**
  - 性伴数增多
  - 安全套使用率低
  - 同性性行为
  - 不正确的求医行为

- **Medical factors**
  - 可到达性、可获得性、保密性
  - 有效性、可负担性
  - 服务的质量
  - 性病医疗市场严重混乱:
    - 到处是欺骗性的广告
    - 70%以上的性病门诊被承包
    - 欺骗性的诊断和恐吓性的诊断

- **Biological factors**
  - 无症状感染者继续传染
  - 病原体耐药性
  - 病原体的多样性
  - 目前尚无疫苗
  - 宫颈异位和外翻、宫内节育器
  - 性病和艾滋病的协同作用
Direct factor

- Massive fluid population: 120 million/year
- Prostitutes >6 million
- Low condom use (<9.1%)
- Low coverage of STD medical service and low quality
Current HIV/AIDS status in China

- HIV-infected patients 650,000
- HIV/ AIDS impact start to show up
- The work of containing HIV/AIDS is at a key point in China.
Distribution chart of infected patients’ age and source of origin

- **Age distribution**
  - 20-39Y: 82%
  - <20Y: 7%
  - >40Y: 11%

- **Origin distribution**
  - Village: 70%
  - City: 30%
Surveillance sites show average infectious rate among prostitutes is increasing.
Small changes of Chinese epidemic are going to make great impact on worldwide situation

- Population 1.3 billion, 24% of the world

- If infectious rate increased from 0.05% to 0.15%, HIV infections would increase 1.3 million; if increased to 4%, then 52 million new infections (Thailand and India)
HIV/AIDS in China
Geographic distribution

No. of HIV infections

- 1-50
- 51-500
- 501-1000
- 1001-5000
- >5000

[Map showing geographic distribution of HIV infections in China]
UNAIDS / WHO definition of HIV epidemic

• Extensive epidemic
  – HIV infectious rate among general population > 1%

• Localised epidemic
  – HIV general rate < 1% ; among high risk population > 5%

• Low epidemic
  – HIV general rate < 1% ; high risk population < 5%
Context

• STIs epidemic in China

• *Strategy of control*
STD medical service model—attenuation model

1. Total STD patients
2. Symptomatic
3. On guard
4. seek for medical care
5. diagnosed correctly
6. Treated correctly
7. Follow the medical order
8. cured
Methods to improve STD medical service

1. 提高医生交流技巧
2. 提高诊断水平
3. 提高治疗水平
4. 病征处理
5. 在第1次求诊时即治疗
6. 单剂量治疗
7. 通过咨询提高遵嘱
8. 随访
Contain sexual transmitted HIV/AIDS

- Monitor
- Health education
- Management of STD treatment
- Intervention of high risk population
Strategies and measures
1. STD containing is a social work, an important governmental task

2. Officials at all levels shall recognize the importance of STD containing regarding HIV/AIDS control and take STD containing a vital step to contain HIV/AIDS

3. Internalize STD, HIV/AIDS control into governmental economic planning
4. Increase STD fund and investment

5. Government budget should have single-row STD fund.

6. Reinforce the STD prevention network and improve the quality of personnel
7. **Standardize STD clinical service, set up normative STD clinic:**
- No stigma toward STD patients
- Confidential environment
- Raise the level of clinical treatment
- Proper and prompt Inform patients’ sexual partners; patients follow up
- Offer preventive medicine care
- Suitable equipments
8. Adjust the medical market according to the law, establish strict and suitable regulations for STD clinics to enter the market

9. Carry out HIV screening or VCT in STD clinics

10. Screening strategy:

   Promote STD and HIV screening among antenatal and pre-marital clinic, OBGYN, blood donation, Custom quarantine departments and high risk group, etc.
11. Combine STD containing with Maternal and Child Health, Family Plan and Generation Health, as well as community health care

- Syphilis

- Use STD surveillance results as early warning to HIV/AIDS
strategies and measures
aimed at different target
groups
1、STD patients

• Modify STD medical service:
• Raise the level of clinical treatment: medical training courses
• set up normative STD clinic
• preventive medicine care
  • Health education and consultation
  • Condom use
  • Notify sexual partners
• HIV screening and tests
2. Sex workers

- Fewer stigma
- **Lower harm**
  - outreach
  - Peer education
  - Health education and consultation
  - Behavior change communication
  - 100% condom use
  - Condom marketing
  - STD/HIV screening
  - Group therapy
  - Advocate correct means to seek for medical care
3、MSMs

- Fewer stigma
- Culture network: pub, bar etc.
- Internet
- **Lower risk**
  - Hotline
  - Peer education
  - Behavior intervention
  - 100% condom use
  - STD/HIV screening
  - correct means to seek for medical care
4、Drug users

• Fewer stigma: special playroom for IDUs
• Low risk
  – Needle change/needle marketing
  – Methadone therapy
  – Peer education
  – Behavior intervention
  – 100% condom use
  – STD treatment/HIV screening
  – correct means to seek medical care
5、Patron of brothel

- propaganda
- Workplace health education
- Intervention of STD clinic
- Lower risk
  - hotline
  - Note for special location
  - 100% condom use
  - STD treatment/HIV screening
6、Pregnant women/premarital test/troops raising/health examination

- Propaganda and health education
- 100% syphilis screening and other STD tests
- HIV high prevalence area: HIV screening
7、Adolescent/students

• Early education
• Media propaganda
• health education and consultation
• hotline
• Condom use
Evaluation of unfavorable factors to STD prevention and control

unfavorable factors

- increasing fluid population
- increasing eroticism publications
- increasing patron of brothel
- growth of entertainment business
- increasing people go to abroad
- increasing extramarital sex
- more casual concept of sex
- developing tourism
- increasing infection sources coming from overseas
- increasing number of prostitutes
## Estimation of unfavorable factors

<table>
<thead>
<tr>
<th>factors</th>
<th>sum of ranks</th>
<th>position</th>
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<tbody>
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<td>increasing number of prostitutes</td>
<td>35.5</td>
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<tr>
<td>increasing patron of brothel</td>
<td>45.5</td>
<td>2</td>
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<tr>
<td>more casual concept of sex</td>
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<td>3</td>
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<tr>
<td>increasing fluid population</td>
<td>66.0</td>
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<td>increasing extramarital sex</td>
<td>66.0</td>
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<td>developing tourism</td>
<td>93.0</td>
<td>6</td>
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<tr>
<td>growth of entertainment business</td>
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<td>increasing eroticism publications</td>
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<td>increasing infection sources from overseas</td>
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<td>increasing people go to abroad</td>
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Evaluation of measure effectiveness

Intervention measures

strike prostitution
sweeping eroticism
promote condom use
more effective drugs
health education
monitoring and treating high risk group
management of STD patients
STD propaganda
formulate related laws
<table>
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<th>Intervention measures</th>
<th>sum of ranks</th>
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<td>STD propaganda</td>
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<tr>
<td>promote condom use</td>
<td>4 8</td>
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<td>health education</td>
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Thank you!

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