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CAUSES OF STD PATIENTS GO TO NON-REGULARIZED STD CLINICS AND THEIR EXPECTATIONS ON HOSPITAL SERVICE MODEL CHANGES

Yuan Changhai, et. al.

Center for Health Management and Policy Research
Shandong University, China

Final report of an EADN research grant project.

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1. Objectives of this study

1.1. To examine causes of STD patients go to non-regularized STD clinics
1.2. To examine STD patients' expectations on hospital service model changes
1.3. To make policy recommendations to enable STD patients to get qualified medical service.

2. Research background

2.1. Definition of STDs

Sexual transmitted diseases (STDs) are worldwide health problem. They are defined as infectious diseases transmitted by sexual activities. Chinese National Disease Control Center assigned eight STDs to be under public health surveillance in China. They are gonorrhea, chlamydiosis, genital warts, syphilis, genital herpes, chancroid, LGV, HIV/AIDS.

2.2. Significance of uncontrolled STDs

2.2.1. Damage health

Reproductive tract symptoms of STDs make patients suffering a lot. Their productive and learning efficiency is low, they are anxious about their future health, marriage and sexual ability. If not treated promptly their reproductive organs, urinary organs, and other organs or tissues may be damaged. Especially syphilis and AIDS, not only damage health but also threaten life. AIDS is a main cause of death and short life expectancy in some Africa countries already. It would be the same situation in more and more other countries according to the trends of HIV/AIDS spreading.

2.2.2. Aggravates antibiotic abuse and exacerbate drug resistance.

Many patients try antibiotics at the onset of symptoms attempt to cure themselves. Some patients feel the improvement of symptoms too slow and add additional dose of drugs doctor prescribed. Some patients visit doctors one after another, change drugs frequently and that are more likely to evoke drug resistance.

2.2.3. Cause family problems.

Most STDs in a family originally transmitted by out-marriage sex, the relationship between couples and other family members is damaged at different extent. It is a main

cause of family violence, maltreating and divorce.

An investigation took by Fan Lijuan, a social scientist in Anhui Academy of Social Science, showed that since 1990 25-35% of divorce proceedings were caused by out-marriage sex. That was the first cause of divorce since, and STDs often reveal the patients have engaged out-marriage sex [1].

2.2.4. Bring heavy economic burden

Medical service for curing STDs brings heavy economic burden to families and often causes poverty, especially for patients don't know which qualified medical agencies they should go, and patients not promptly seek medical service. As the problem of drug resistance becomes serious, medical cost for curing STDs grows fast in China.

2.2.5. Significant increased crimes

Criminals initiated by STD transmission are increasing significantly. That is destructive for social safety. Those infected by prostitutes, their sexual partners, or their spouse often feel angry and may take some measures to revenge.

2.2.6. Prohibits local economic development.

High morbidity rate and uncontrolled transmission of STDs may prohibit local economic development. Tourists feel unsafe in hotels, restaurants, and entertainment places, non-local people are not willing to come for work, so will prohibit business and tourism development. At last investors stop or decrease their input in that area.

2.3. STDs and AIDS/HIV in China

2.3.1. Epidemiology

The number of patients with sexual transmitted diseases is increasing fast in China. In 1992 about 0.8 million cases of eight STDs were reported. In 1998 the number became 3 million. In 2001 there were about 10 million STD patients, the increasing rate was 40%. The incidence rate is only lower than dysentery and hepatitis, ranked third in the nation [2].

The National Family Planning Commission did a survey in 2002 found that, 6.5% adult male had STIs, 45% females at reproductive ages (18-49) had STIs [3].

Five provinces reported most number of STD patients. They are Guangdong, Zhejiang, Jiangsu, Sichuan, and Shandong. Number of reported cases in these five provinces accounts for 44.7% of the total reported cases nationwide. Provinces with highest incidence rate are Shanghai, Zhejiang, Guangdong, and Hainan. Yangtze River Delta and Zhujiang River Delta are the highest incidence regions. The former is located in east and the latter is in south part of China, both are fast developing regions. West poor provinces reported new cases increase faster at the rate of more than 20% per year. Mother–infant transmission of syphilis increased significantly, imply that STDs are not controlled.

New HIV cases reported in 2001 increased 58%, cumulative number of cases reported was 850000[3]. 9824 cases of HIV were reported in 2002 , increased 19.5% from 2001 , Among them AIDS cases were 1045, increased 46.4%. Cumulated number of AIDS cases reported was 40560. 68% of HIV/AIDS cases were transmitted by drug injecting. In Henan and arounding provinces many peasants infected by selling blood illegally and many of them are dying. Experts estimate total number of HIV cases has reached 1 million [4]. Real number of cases is much more than reported, experts estimate by 2010 total cases would reach 10 million.

Statistics of HIV/AIDS patients showed that the median of incubation period from infection of the virus to the onset of AIDS was 8 years in 2000. The average period from symptom appearance to death was one year, most of them die between half year and one and a half year [5].

Syphilis was major STD in China in early 50s, it accounted for about 60% of all STDs. In 1964 China declared that STDs had been eliminated. In 1977 Hunan province reported first case of gonorrhea. In 1979 first case of syphilis was reported, then more and more STD cases were reported. In 2000, 80181 syphilis cases were reported nationwide, that is 40 times of 1993[6].

Syphilis incidence rate of women increases faster than that of men in Liaoning province. In 1994 less than 100 syphilis cases were reported. In 2000 8097 cased were reported. Sex ratio from 4.58:1 became 0.88:1 in 2000. Guangzhou STD Surveillance Center reported that in 2000 syphilis cases of men increased 75.65 times and of women increased 98.36 times from 1993[6].

Before 2000 gonorrhea was first common STD in number. In 2000 gonorrhea accounted for 33.3%, syphilis accounted for 9.33%, was third. After 2000, non-gonorrhea urethritis (NGU) became the first STD in number. Other STDs with most cases are gonorrhea, genital warts, syphilis, and genital herpes. STDs are ranked third among communicable diseases after dysentery and hepatitis in China now [6].

The incidence rates of the 8 STDs reported in 2002 ranked as follows: NGU, gonorrhea, genital warts, syphilis, genital herpes, chancroid, LGV, AIDS [1].

STD trends in the areas studied

In Shandong Province in 1998, 40,000 cases were reported. In 1999 the number doubled, 80,000 cases were reported. Experts believe the real number of cases would be 400,000 to 800,000 in Shandong Province in 2000 [7].

2.3.2. Causes of STD spread

The increase of STD patients is in relation with many factors. One factor is that a lot of floating population from rural to cities. Cities with economic fast development have most floating poor peasants. In Guangdong Province among 14 million peasant workers 60% were young women in 2002. An investigation revealed that 50% of immigrated young women in factories were sex active. In service agencies such as hotel, dancing hall, restaurants, barbershops, nightclubs, sex active rate of young women was 80%. Some floating young women look for sex partner is to have a companion and safe protector in leisure time. Women in rural get married early, they think they should look for lover early. Because of their low education they conduct unsafe sex and easy to be infected with HIV/STDs. Poor young peasant women with low education are difficulty to find a high-income job, they eager to make money to get out of poverty. Influenced by new culture and under the pressure of their peers and their bosses, many become sex workers. Male peasants leave their wives year round in cities often feel lonely and boring, many of them look for cheaper street sex workers. Guangdong is one of the provinces with high incidence rate of AIDS and STDs.

Now sex workers are not only seen in cities, in county towns and other small towns are often found. As the economic development is very fast, many male peasants also work in county towns. Floating peasant workers transmit STDs to their spouses. Low-income STD patients become more and more.

The spread of STDs is also owing to the change of people's attitude to out-marriage sex. Traditional sexual moral education and sexual behavior control become weak. After economic reform, many people especially young people can look for jobs in other organizations and places, so they do not worry about discrimination from organization leaders owing to their out-marriage sex. Organization leaders pay more attention to production and economic affairs. Even they also engage out-marriage sex. In addition, west culture entered China. More and more people no longer feel guilty for engaging out-marriage sex. Many people include students and the retired look for lovers, sex partners, even use prostitutes.

In 1966, professor Fan Minsheng in Shanhai Chinese Medical University investigated 5000 university students sampled, 79.3% males and 59.4% females supported pre-marriage sex, and 50.8% males and 45.4% females supported out-marriage sex [8].

From August 1999 to August 2000, Institute of Sociology, China People's University organized 36 researchers did a survey nationwide. Stratified sampling and self-administrated questionnaire were used. 3824 persons with age from 20 to 64 in 60 cities and rural areas answered questionnaire. The result showed that 6.4% of men had used sexual service and more percentage of city men had used sexual service. Rich

men who account for 5% of the sample used sexual service were 33 times of the service used by the poor men who account for 40% of the sample [9].

In Chongqing, 23.5% male and 10.2% female university students had sexual intercourse. The investigation was done by 6 students from Department of Psychology of Chongqing Teachers' College. 8 colleges and universities were chosen randomly from 28 colleges and universities. 900 questionnaires were distributed randomly and 498 were mailed back. 12.8% of male and 2.6% of female students had sexual intercourse before they went to colleges and universities. 10.9% students knew all 8 STDs listed in the questionnaire and 6.3% students did not know any STD [10].

In 2000 in 7 universities in Shanghai 700 students were investigated. 7.2% of them had sexual intercourse, 1.9% of them were living with opposite sexes. 13% students in fourth grade had sex experience. Another researcher did prospective investigations of 500 female university students for 4 years. He found that the rate of sex experience in first, second, third, and fourth year was 7%, 13%, 20%, and 25% respectively.

From 1998, in Beijing Obstetric Hospital 50% of women received induced birth were unmarried, among them 14% were under 20 years of age. Literatures show young people are more likely to accept pre-marriage sex and out-marriage sex.

Finally and importantly, non-prompt and improper treatment of STDs is also a factor for uncontrolled STD endemic.

2.3.3. STD control in China

Before 2000, government had not realized the seriousness of STD/AIDS spread in China though had taken some measures. State put inadequate fund in controlling STDs. Before 1977 the amount of fund put was even less than that in small counties for controlling STDs like Vietnam or Thailand. Little sexual education and behavior intervention was done and epidemic information of STDs and AIDS were rarely seen in public medias. Government believed that sexual morals education and prostitution eradication could eliminate STD transmission. But the social structure and economic status are much different from 50s in China. Not only prostitution has not been eradicated but also more and more people ignore traditional sexual morals. Of cause, in the activities against prostitution corruption of some local officials is the main obstacle. Cadres often receive money from agencies providing sexual service. They also use the service themselves and protect these agencies from serious punishment. In addition, some local governments worry that the eradication of prostitution would slower local economic development. They think tourists and outside investment in local service industry would decrease. Promotion of local leaders' official position is often based on fast local economic development.

International pressure and the fast spread of HIV/AIDS in China cause more attention

from central government to control STDs, especially AIDS. Several documents made out such as the “Mid-long term plan of AIDS prevention and Control, 1998-2010”, “AIDS prevention and control activity plan, 2001-2005”, and “ Working regulations of AIDS surveillance”. Just from 2001 the annual fund central government provided for prevention and treatment of HIV/AIDS increased from 15 million to 100 million Chinese dollars.

Main activities taken for controlling STDs and HIV/AIDS in China include:

2.3.3.1. Punish prostitution and illegal drug selling

It is the main measure of government. The government realized sexual service is the main source of STD transmission, and the policy is to eliminate sexual service. Punish prostitutes and service users by great amount of money fine and put prostitutes into indoctrination centers. In fact, punishing sexual service cannot eliminate sexual business because of the reasons above. Some brothels become hidden to avoid punishment.

2.3.3.2. Sex education and behavior intervention

Reproductive health education is conducted in the 90s but not at large scale and not regularly. The educators are family planning service stations and some school teachers. The receivers are young couples and some middle school students. The contents are mainly common reproductive tract infections, problems of pregnancy and contraceptive use. There is less knowledge about sexuality and STDs. Sex education just begin in recent one or two years in some middle schools and universities. The contents are different from region to region and there are quarrels on the contents, some experts oppose to provide contraceptives and contraceptive knowledge to adolescents.

One intervention is to distribute condoms freely in some area. On the **AIDS Control Day,** Some department stores gave every consumer a condom with a rose as gift [11]. At the door of SOGO Department Store several hundred condoms had given away in 10 minutes. Most adults accepted roses and condoms happily, only a few women returned condom and roses.

Famous comic dialogue actor Niu Qun distributed 999 condoms and roses in the front of Wangfujing Medical Drug Store (see picture). He told people didn’t forget safe sex. People rushed to him to take condoms and roses. But a few of people blamed this activity that would promote adolescents’ sexual intercourse.

In 2002, Zhou Yun, a manager of sale department of a condom producer in Hunan Province prepared to give big hotels 10,000 condoms for passengers. He contacted 40 hotels in one month but only four of them accepted condoms after several times of convince. Some hotel managers said if we provide condoms for free some passengers might think we provide sexual service too [12].

One manager said, "We refuse free condoms because condom is a gift that makes guests embarrassed. Condom producers give condoms to hotels is like doing advertisement. Hotels have no the responsibility to cooperate. We have our own method to propaganda AIDS prevention. If guests misunderstand that distribute condom freely is our responsibility they will ask for condoms again, and the producer cannot provide condoms free of charge for ever."

In July 2002 in Lixian County, Hunan province the project of "Condom fully use in entertainment places" started. After one year practice a evaluation of effectiveness was done recently. Three WHO officials participated the mid-term evaluation meeting. The statistics showed that the incidence rate of STD in the first half-year of 2003 decreased 33.09% compared with the same period of last year. The number of condoms sold in 31 stores was 33903, in addition to that 8627 condoms were distributed for free. Condom sale per month increased 49.93% compared with the first half year of 2002. Employees of entertainment agencies using condoms at last sexual intercourse was 80.62% while at the same time of last year the rate was 6.49%. One official of WHO said the experience here should be spread to other place of the world [13].

2.3.3.3. Manage and regulate service market

National and provincial policy guidelines for STD care

Ministry of Health published "Methods of STD Prevention and Treatment Management" in 1991. The key contents of this document are "STD prevention and treatment agencies in this document refer to stations or institutes of dermatology and venereology, and health care institutions or hospitals assigned to provider STD service by health authorities. Their responsibilities are (1) conduct local surveillance of STDs,

(2) record, analyze and predict local STD incidence, (3) do medical checkups on risky people groups, (4) visit and give advice to STD patients, (5) conduct STD knowledge dissemination, (6) conduct training of STD service personnel". "Qualified STD clinical service agency must have qualified personnel with STD prevention and treatment skill and knowledge, and have necessary diagnostic equipment and technician". "All Medical staff engaging STD service must give STD patients regularized treatment"[14].

Owing to week management of all level health authorities and corruption, none of these responsibilities has been fully realized.

Non-regular treatment of STDs is not favorable for control of STD transmission. In recent 10 years the STD service market is out of order. It becomes the market that individual businessman make huge profit. Usually, Expenses of curing a common STD patient should not exceed ¥1200, but now medical expense of curing a case is usually more than ¥4000, many patients spent ¥10,000 and had not gotten cured. Traveling unqualified doctors use their self composed drugs and may ask for 10 times profit of the cost. In recent years these unqualified doctors or businessmen rent STD department in hospitals, one day treatment they ask for ¥300 to ¥500, but the cost may be well below ¥100. They usually give ¥200,000 to ¥400,000 to a prefecture hospital to rent its STD department. They have their own channel to buy drugs.

An investigation of 1516 public hospitals in 24 provinces showed that 63.3% of STD departments were taken over by unqualified private STD service providers. Of the 1516 public hospitals most are county and prefecture hospitals [15].

For making more money, unqualified doctors in non-regularized STD clinics may not give patients appropriate diagnosis, treatment and education. They often tell patients that "STDs are difficult to cure, but we have the technique to cure these diseases if you adhere to our treatment". They exaggerate health impairment of STDs, aim to make patients to continue to seek service from them. They usually use expensive drugs.

One middle school teacher with chlamydia visited doctors 70 times in a year. One driver with gonorrhea spent ¥30,000 in local clinics. In 1998 a big hospital doctor told him he was cured but he did not believe, later spent ¥50,000 for visiting unqualified individual doctors, still felt uncured and killed himself [16].

Because of low income, lack of STD knowledge, fear of disclose their disease, many STD patients stop treatment when they feel better. Non-regularized treatment results in severe drug resistance.

As result, many STD patients have not been cured promptly and increased the risk of transmitting others. Doctors in non-regularized clinics rarely refer patients to qualified STD service agencies. They often treat non-STDs such as genital eczema, tinea as STDs. Inappropriate treatment cause more economic burden on patients.

Private STD agencies usually hire young doctors who have no STD service experience and are obedient to the bosses. The bosses instruct doctors by giving printed prescriptions corresponding with STDs to doctors. When the laboratory reports a patient has some STD, the doctor prescribe drugs and treatment procedures according to the instruction of the boss. Doctors' salary is based on how much money paid by patients for their disease. Their laboratories often report non-STD patients have STDs and use expensive drugs to make money. Private STD agencies repack common drugs as new ones and sell them at much higher prices.

In regulating STD service market central and provincial governments policy focuses on punishment other than management. While the low level governments doing much less work on management, surveillance, and punishment than expected. There are several causes. First is corruption. Unqualified service providers bribe officials, when they face punishment these officials interfere with the punishment. Second, surveillance of STD service market is lack of fund and personnel. Third, some officials have not realized the seriousness of unqualified and irregular service, think they have some medical technology and can cure some STD patients. But the fact is that many of them have little medical knowledge and their purpose is making money only. Their fraudulent treatment delays recovery of patients very much, invoke drug resistance and increase the spread of STDs.

Fraudulent and exaggerated advertisement is the tool of non-regularized medical agencies to attract patients. They make advertisements everywhere and use every media such as TV, newspaper, magazine, radio broadcast, handouts and posters. The Ministry of Health in 2002 announced that 11 kinds of medical advertisements are prohibited include STDs, but advertisement on STD treatment still everywhere and few fraudulent advertisement maker have been punished.

For attracting STD patients from non-regularized clinics and hospitals Shanghai Dermatology and venereology Hospital opened a "STD Care Supper Market". Diagnosing and treatment procedures of every STD and prices of common drugs are made public [17].

Some private doctors rent rooms in small community owned hospitals or clinics to

open their business. These small hospitals or clinics have financial difficulty. For increase their income they rent their offices to private doctors without examining their professional qualification. We call these clinics wit unqualified doctors and not approved to provide STD service as non-regularized clinics.

Health authorities did clear STD service market many times and closed many unqualified agencies. But every time, not all unqualified agencies were closed, and some time of the action, most closed agencies re-open their business, since treating STD patients can make more money than providing service to other patients. It seems that the provincial and lower level government don't think the market problem is serious, though no officials say so. They do that only to show they are obedient to central government.

There is need to do more investigation on the market problems, provide more evidence to attract government's attention for further regulating the STD service market.

2.3.3.4. Surveillance

In 1995 with the support of WHO China set up 42 HIV/AIDS surveillance stations in 23 provinces. By the end of 2002, the number of stations reached 158 and covered all 31 provinces and autonomous regions. From 1999 these station took responsibility to monitor behavior of high risk and vulnerable people groups in 22 provinces. From 2001 in some provinces serological monitor began.

Information on STD epidemiology, high-risk behavior of some people groups, education and intervention effectiveness, quality and efficiency of treatment, patients' affordability and utilization of STD service is important for taking measures to control STDs. But the surveillance status is far from satisfaction. Epidemiological data are not accurate; data on people's sexual behavior and patient seeking service behavior are few.

In recent five years in 22 provinces towards 11 kinds of high-risk people groups of HIV/AIDS more than 600 intervention experimental sites have been set up. For preventing HIV spread through blood transfusion, government invested ￥1250 million and local governments invested ￥1000 million for blood bank construction and improvement in the middle and west part of China [18].

In 2002, 744848 new STD cases except HIV/AIDS were reported, but in 2001 793786 new cases were reported [3]. Experts believe there is no real decrease of incidence in 2002, many cases were not reported because more private service providers took over the STD departments in hospitals in 2002 and the doctors in public hospitals and the health officers who responsible for collecting epidemiological data became more

unaccountability. Since STD patients do not like their cases to be reported, hospitals worry their STD patients would decrease if they report the cases to upgrade disease control centers.

Private and community STD service agencies rarely report real number of STD patients. Public medical agencies also often fail to report new cases, the unreported number of new cases accounted for 52.53% of all new cases in 4 cities in Jiangsu province in 2001 [15].

Newspapers warn STD patients don't go to unqualified STD clinics. But these clinics still serve many STD patients. In Yunnan province in 1998 a hospital treated 1526 STD patients on the average, but a private STD clinic and a community owned STD clinic treated 1964 and 3170 STD patients respectively. Most cases treated in clinics were not reported [19].

In Yunnan province there are 25 STD surveillance regions. Eight of them were chosen for survey. From each region 4 of public hospitals, 4 public preventive agencies, 4 health care (protection and promotion) agencies, 4 organizational clinics including enterprise, institutions and government agency owned, 4 community owned clinics and 4 private clinics were sampled. Their treatment records and reporting records were examined and the numbers of STD patients they served and reported were figured out. So 32 of each type agencies were examined. The result showed that the number of STD patients they served and unreported rate are as follows.

Table 1 Type of health agency and unreported STD cases

Type of agency	Average number of patients unreported	Average rate of patients unreported
Public preventive agency	16.4	19.1%
Public health care agency	14.0	62.4%
Public hospital	37.8	79.3%
Organizational clinic	22.5	100.0%
Community owned clinic	99.0	100.0%
Private clinic	61.0	100.0%

In Guangdong Zhongshan People's Hospital in 2000 most of 6855 STD patients had used antibiotics or received service in STD clinics before came to this hospital. Among 3641 STD patients in Department of STDs 71% of male patients were local residents, but only 20% of female patients were local residents. And in Department of Gynecology 67% were local residents. That means women transmitted by their husbands sought medical service mainly from gynecological service, while sex workers doubt they had got STDs and directly go to STD department [20].

STD patients move from one place to another, many of them are not cured and stop treatment. In Shanghai Hospital of Dermatology and Venereology 58% of 2968 early

stage syphilis patients under doctors' tracing stopped contact with doctors [21].

2.3.4. Populations affected by STDs

Sex ratio of STD patients was 1.42:1 in 2001 [16], while it was 2:1 in 1999 [1], suggests that women's proportion is increasing.

Average age of STD patients become younger. STD cases of adolescents and youth younger than 24 account for 30% of all cases [16].

Sex ratio of 1.4:1 of STD patients means STDs are not only transmitted through sexual service, but also through increased out-marriage sexual activities. The source of transmission is not only STD patients, people infected have no symptoms play an important role. More than 70% women infected with gonococcus or Chlamydia have no symptoms.

Statistics In Beijing Institute of STD Prevention and Treatment showed that occupation rank of STD patients is individual business boss, cadre, jobless, and worker. People on business trip and people having temporary job are the common STD patients. Patients with gonorrhea have lower income and patients with NGU have higher income. So, STD patients can be divided into two groups by social characteristics, the rich people and the poor people, but people in both groups have more individual freedom and less supervision by others.

STD patients' education level becomes higher, more of them have college and higher education levels. In the occupation composition, the ratio of government employees, cadres, military men, policemen, and students is increasing [16].

2.4. What are the main syndromes?

1) Syphilis

Fist stage presentation is a hard chancre appears on the out-genital, there is no pain or itch, there may be ulcer on it, nearby lymph nodes may be enlarged. In the second stage, after appearing of hard chancre 6 to 8 weeks, rashes appear. Patients feel uncomfortable and lymph nodes all over the body may be enlarged. In third stage, after two years of infection, rashes become larger and node-like. Parts of skin, mucosa and skeleton are damaged. Heart and blood vessels are often invaded and have pathologic changes. Some patients' nerve system maybe infected and manifests a series of symptoms.

2) Gonorrhea

The incubation period in most cases is 3 to five days after unclean intercourse. Male patients have pain when passing water and have some pus in the urine. Female patients have lighter urethritis symptoms but have cervicitis. Patients often have other complications, for males, epididymitis, vesiculitis and prostatitis are common, for females, pelvic infection, selpingitis, and endometritis are common.

3) NGU(non-gonococcal urethritis)

40% to 50% cases are caused by chlamydia trachomatis, 20% to 30% are caused by mycoplasma, and the rest are caused by trichomonas vaginalis, candida albicans and herpes simplex virus.

Incubation period is usually 1 to 3 weeks. Male patients feel slight pain or etch in the urethra when urinating. There may be little mucous discharge from urethra. Females feel uncomfortable in their lower abdomen because of cervicitis, and may have symptoms of urethritis.

4) Genital warts

It is caused by HPV. Incubation period is 10 to 12 weeks after unclean intercourse or other contact with HVP contaminated materials. Pink or gray-weight or gray-brown warts with different shape appear in the area of external-genitals. Some like papula, some like cockscomb, some like papilla. Patients feel light etch, constriction, or pain. There may be bleeding because of skin damage.

5) Genital herpes

It is caused by herpes simplex virus. Average incubation period is 6 days. There are two types, one is original genital herpes and relapsed genital herpes. For the original genital herpes the incubation period is 3 to 14 days. Blisters appear in external genitals or around anus, 2 to 4 days later they break and form ulcers. Patients feel etch or pain. Lymph nodes in groin often enlarged and have pain when being pressed. Fever, headache and faint may occur. After 2 to 3 weeks patients can recover.

Relapsed genital herpes characterized with frequent blisters appearing and disappearing, the skin damage is much lighter. Before blister appear patients may feel burn/scorch/singe or acanthesthesia/needling sensation, or other abnormal sensation. Blisters are seen in external genitals and around anus and soon break into ulcers. Patients feel light symptoms and recover in 7 to 10 days usually.

6)Chancroid

It is caused by Haemophilus ducreyi bacillus. Incubation period is 3 to 7 days. At the onset red small papule appear on external genitals. After 1 to 2 days they become pustule, then break into running sores. Sometimes patients may feel pain of different extent. About half patients have enlarged or inflammatory lymph nodes in their groin. Local skin becomes red, hot and painful. These lymph nodes can fester and infect skin in other parts of the body.

7) Lymphogranuloma venereeum

It is caused by chlamydia trachomatis serotype L1, L2 and L3. It invades white giant blood cells, evoke immune response but cannot clear local and allover infection. The incubation period is 5 to 20 days, the average is 10 days. At early stage one or few papule appear in external genitals, then they become ulcers, after several days they are disappeared automatically. One to 4 weeks later in one groin, lymph nodes become enlarged with pain. Lymph nodes then go into pustulation and break into fistulae, scars

will remain after recovery. Fever, arthralgia, enlarged lever and spleen can be seen in some patients. At late stage rectostenosis and genital elephantiasis occur.

2.5. General STD health care structure in Shandong and the rest of China

There is no significant difference of health care structure between Shandong and the rest of China. Only in the south of China in economic fast developing area more private medical agencies are set up.

Currently, most hospitals are public though the ownership is reforming and private hospitals are increasing. Prefecture, municipal, and provincial hospitals usually have license for STD care. Most private hospitals do not have. Provincial and municipal institutes of dermatology and venerology play important role. They not only provide large amount clinical service but also do much training work, and responsible for epidemiological data collection and STD surveillance. They also participate control strategy making and activity planning organized by local governments.

Clinics can be divided into four categories roughly, public, collective, private, and public clinic operated privately. Public clinics usually belong to public hospitals, public organizations, enterprises, and the army. Collective clinics are set up by communities or social parties in cities, and villages in rural areas. Few STD patients go to village clinics since their technical level is low, and residents fear their privacy is disclosed since most local people know each other. If they go out for STD service then they go to county town or cities. Private clinics are set by private persons in towns and cities. As mentioned above, many public and collective clinics are rented out to private doctors or persons. In recent years more and more hospitals' STD departments are rented to private parties.

The percentage of hospitals hold license for STD treatment is increasing. One cause is STD patients are increasing fast, the other is more hospitals apply for the license and show their ability of deal with STDs is enhanced. Especially, they have equipped new devices. However, their profit making behaviors are not decreased.

As the problem of STD/AIDS spread becomes serious, the STD care resource will be further mobilized and developed.

Potential source of STD care will include clinics in public health care facilities such as disease control centers, mother and child health care stations, family planning service stations, and community health care centers. Private hospitals or clinics may also provide regularized STD care if get support from and under strict supervision of health authorities.

The medical service price has been adjusted several times since economic reform. The principle is that permit service providers make some profit from service. So, any kind

of medical agencies are willing to provide STD service. On the other hand, there are only about 10 common STD diseases. The diagnosis and treatment technology is not difficult to learn.

3. Research methodology

3.1. Research framework

The causes patients selecting non-qualified STD service are identified mainly through survey of patients. Measures of overcoming these constraints to quality service and their feasibility are discussed with doctors, medical agency managers and local health officials. Finally, policy recommendations are proposed according to the conclusions from data analysis.

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3.2. Study sites

As in the proposal, study sites selected are Jinan city, Dezhou city, and Wucheng town. Under coordination of Department of Public Health of Shandong Province STD service units were determined and informed. See Table 2.

Table 2 STD service agencies in study sites

Study site	Population	Number of qualified STD service units	Number of unqualified STD service units	Study units selected
Jinan city	3,000,000	15	>20	3 hospitals 3 clinics
Dezhou city	300,000	2	>5	1 hospital 1 clinic
Wucheng county	400,000	1	2	1 county hospital 1 clinic

Table 3 Research subject distribution in selected medical agencies

Study units	No of patients interviewed	No of patients surveyed	No of FGD participants
3 big hospitals in Jinan	12	90	3
3 clinics in Jinan	12	90	3
Dezhou Municipal Hospital	4	30	1
1 clinic in Dezhou	4	30	1
Wucheng County hospital	4	30	1
1 clinic in Wucheng	4	30	1
Total	40	300	10

3.3. Data collection

3.3.1. Quantitative survey

300 patients have been recruited to fill out self-administered questionnaire. 150 patients were recruited in non-regularized STD clinics and 150 were recruited from hospitals and institute of venereology. The aim is to examine the percentages of

different factors affecting their decisions, the magnitude of problems in their diagnosis and treatment, the economic burden, effectiveness of treatment.

3.3.2. Individual in-depth interviews

20 STD patients were selected in non-regularized STD clinics and another 20 were selected in hospitals and institutes of venereology.

3.3.3. Focus group discussions (FGDs)

The participants are 10 doctors and clinical managers from 2 Jinan municipal hospitals, Shandong Institute of venereology, 1 Dezhou prefecture hospital and Wucheng county hospital. Topics of first FGD are: Reasons of STD patients go to non-regularized clinics first. What kind of patients like to go to hospitals first. What changes of service model in big hospitals are necessary for attracting more STD patients to go to hospitals.

The second FGD was held after individual in-depth interviews and quantitative survey were completed and analyzed. The main topic is the feasibility of patients' expectations on service model changes in regularized STD service agencies, and what management measures and policy recommendations should be proposed.

3.4. Problems met and solutions

3.4.1. Field investigation efficiency is much lower than expected

Because there are few STD patients a day in one clinic or small hospital, we used much more time than expected in collecting data. In addition, many patients are diagnosed as non-STD patients. So, we drop about 30 non-STD patients. In fact we surveyed 330 patients.

3.4.2. Doctors from county hospital spoke a little in FGD

They are shy to express their opinion confronted with doctors from big hospitals. Independent interviews were done later with them.

3.5. Data reliability and validity evaluation

Before survey or interview we explained our purpose of study. We take patients to a quiet place, in a empty room in hospitals, or a place outside doctors office, or a hotel room. We promised to keep secret for them, did not ask them about their sexual behavior and did not ask their true name, address and telephone. Patients were not nervures and were willing to tell us their experience and their expectations and recommendations. 7 patients were surveyed second time when they came to the same doctor for service again. The results are almost the same.

The survey subjects are recruited randomly so the data is representative for STD patients in the two cities and one county, and has good validity.

4. Results and implications of study

4.1. Results of the questionnaire survey

4.1.1. General information of subjects

Sex structure: among 300 cases, male 189, female 111, 63% are males.

Age structure of patients

Table 4 Age structure of recruited patients for survey

Age groups	Number of patients	Percentage of patients
< 20	11	3.67
20-29	101	33.67
30-39	101	33.67
40-49	75	25.00
≥50	12	4.00

Residence: 102 cases are from rural areas, account for 34%; 198 cases are from towns and cites, account for 66.0%.

Marriage status: Most STD patients are married, unmarried account for one fifth.

Table 5 Marriage status of patients surveyed

	From town or city Number(percentage)	from rural area Number(percentage)	Total Number(percentage)
Unmarried	49 (24.75)	9 (8.82)	58 (19.33)
Married	136 (68.69)	84 (82.35)	220 (73.33)
Divorced	10 (5.05)	4 (3.92)	14 (4.67)
Widow/widower	3 (1.51)	5 (4.90)	8 (2.67)
Total	198 (100.00)	102 (100.00)	300 (100.00)

Occupation: peasant, 60; government employee, 55; worker of industry, 52; driver, 32; merchant, 41; manager or cadre, 20; worker of service sector, 14; student,9; army man, 1; jobless, 14; other, 2

Education: primary, 27, account for 9.0%; junior middle school, 84,28.0%; senior middle school, 104,34.67%; college undergraduate, 78, 26.0%; graduate 7,2.33%.

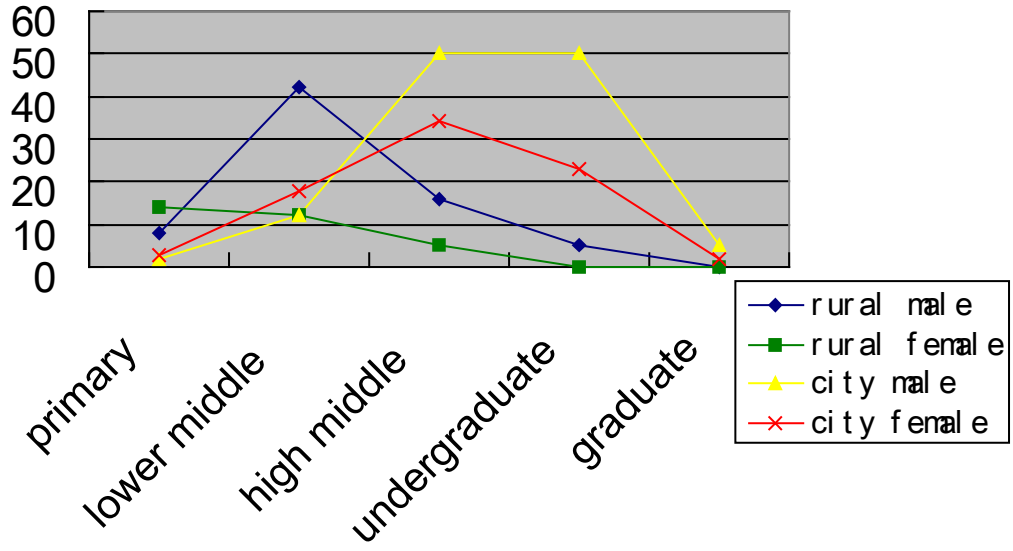

Figure 1 Education structure by sex and residency

Personal income: According to Shandong government classification of personal income, high income refers to monthly income above ￥2000 , 57, middle income is ￥1000 to ￥2000, and low income is below ￥1000.

Table 6 Distribution of personal income levels

Residence	High income	Middle income	Low income	Total
City and town	78	83	37	198
Rural	7	24	71	102
Total	85	107	108	300

Diagnosis: Since 49 cases have multiple infection the number of infections diagnosed is more than 300. Five most common infections are listed in table 7.

Table 7 Age and diagnosed STDs

Age (n)	Gonorrhea	NGU	Genital wards	Syphilis	Genital herpes	Total
<30 (112)	33	61	33	18	16	161
≥30 (188)	17	62	74	22	18	193
Total(300)	50	123	107	40	34	354

Patients younger than 30 are 112, and in older group are 188, the prevalence rates of gonorrhea and genital wards between the two groups are statistically significant (X^2=3.95, p<0.05 and X^2=19.43, p<0.01). Younger group has higher prevalence of gonorrhea and older group has higher prevalence of genital wards. Other STDs

include chancroid, 3 cases, lymphogranuloma venereeum, 2 cases; candidosis, 23 cases; other genital infections, 12 cases. HIV/AIDS cases are much fewer compared with other STDs. In our investigation there is only one case of HIV infection.

Table 8 STD distribution among rural and non-rural patients

Residency(n)	Gonorrhea	NGU	Genital wards	Syphilis	Genital herpes	Total
City/town (198)	18	78	67	31	23	217
Rural (102)	32	45	40	9	11	137
Total (300)	50	123	107	40	34	354

Rural patients have higher rate of gonorrhea (X^2=24.064, p<0.001)

4.1.2. Factors affecting selection of medical agency for service

114 cases (38%) selected regularized and 186 cases selected non-regularized medical agencies for cure when they got ill the first time. In fact, more than 90% STD patients don't know which medical agencies are regularized or qualified. We group all medical agencies patients selected for service the first time into these two categories, and count their main characteristics.

Sex and service provider selection

Table 9 Sex and service provider selection

Sex	Type of agency selected		Total
	non-regularized	regularized	
Male	79	110	189
Female	35	76	111
Total	114	186	300

Sex has shown no significant influence on the selection of different types of provider. (P=0.0769)

Age and service provider selection

Table 10 Age and service provider selection

Age group	Regularized	Non-regularized	Total
<30	15(13.39)	97(86.61)	112(100.00)
30-39	76(72.38)	29(27.62)	105(100.00)
≥40	23(27.71)	60(72.29)	83(100.00)
Total	114(38.00)	186(62.00)	300(100.00)

Occupation and service agency selection: Drivers and peasants have the highest rate to select non-qualified agencies. (χ^2=38.101, P= 0.0000)

Table 11 Occupation and service provider selection

Occupation	Regularized	Non-regularized	Total
Peasant	12 (20.0)	48 (80.0)	60 (100.0)
Organization staff	13 (23.6	42 (76.4)	55 (100.0)
Enterprise worker	19 (36.5)	33 (63.5)	52 (100.0)
Businessmen	29 (70.7)	12 (29.3)	41 (100.0)
Driver	5 (15.6)	27 (84.4)	32 (100.0)

Enterprise workers usually live in cities and have better access to qualified medical agencies, while many rural teachers and some basic level government employees have to go long distance to reach qualified medical agencies.

Income and service agency selection

More than half high income patients selected regularized STD service providers, only 15.3% low income patients selected that kind of providers first. The difference is very significant.

Table 12 Personal income and service provider selection

	Regularized	Non-regularized	Total
High income	48(56.4)	37(43.6)	85(100.0)
Middle income	47(43.9)	60(56.1)	107(100.0)
Low income	19(15.3)	105(84.7)	108(100.0)
Total	114(38.0)	186(62.0)	300(100.0)

(χ^2=46.4882 , P= 0.0000)

Education and service agency selection: 13.9% of patient with college education and over first go to big hospital, 8.8% of patients with lower education level go to non-big hospital.

Table 13 Education and service provider selection

Education	Regularized	Non-regularized	Total
Primary	9(33.3)	24(66.7)	27(100.0)
Low middle	10(11.9)	74(88.1)	84(100.0)
High middle	33(31.7)	71(68.3)	104(100.0)
College and above	62(72.9)	17(27.1)	85(100.0)
Total	114(38.0)	186(62.0)	300(100.0)

Marriage status and service provider selection

Table14 Marriage status and service provider selection

Marriage status	Regularized	Non-regularized	Total
Unmarried	15(25.9)	43(74.1)	58(100.0)
Married	93(42.3)	127(57.7)	220(100.0)
Divorce/widow	6(27.3)	16(72.7)	22(100.0)
Total	114(38.0)	186(62.0)	300(100.0)

X^2 test shows married patients have higher rate of selecting regularized service providers（P= 0.0406）.

Severity of STDs and service provider selection

Statistical test does not show severity of STDs influences patients to select different types of service providers. Maybe the number of patients in each group is too few, or interfered by other factors like education, income, residency and so on.(X^2=7.18 , p= 0.13.)

Table 15 Severity of STDs patients felt and service provider selection

Working ability	Regularized	Non-regularized	Total
Fully lost	17(40.5)	25(59.5)	42(100.0)
Almost lost	53(35.1)	98(64.9)	151(100.0)
Significant damage	22(39.3)	34(60.7)	56(100.0)
Less damage	7(26.9)	19(73.1)	26(100.0)
Little influence	15(60.0)	10(40.0)	25(100.0)
Total	114(38.0)	186(62.0)	300(100.0)

Logistic regression on factors influencing service provider selection

From Table 16 we can see significant factors for selecting non-regularized medical agencies are women, young patients, rural residency, married, low education, industry worker and driver, low income, live near non-regularized STD service agency, and patients perceived good technology, responsiveness, secret keeping promise, and quiet environment.

Young patients have less knowledge of STDs and STDs treatment, peasant, drivers, and industry work have low education, so more STD knowledge and service information should be provided to them. STD patients like better responsiveness, quiet environment and more strict privacy protection in non-regularized medical agencies, so, service model in regularized medical agencies especially in big hospitals should be changed accordingly.

Table 16 Logistic regression analysis on factors influencing unqualified medical agency selection (G=4526.559，P<0.001)

Independent variable	B	p	OR
Sex（male=0）	9.506	0.007 **	0.000
Age （>50=0）			
30-49	1.873	0.002 **	2.491
<30	2.375	0.000 **	4.761
residence（rural=0）	-11.606	0.031 *	0.000
Marriage(unmarried=0)			
Married	1.027	0.020 *	2.792
Divorce/widow/widower	-0.088	0.295	1.455
Education (primary=0)			
Low middle school	-0.613	0.038 *	0.542
High middle school	-4.915	0.091	0.610
College and above	-3.032	0.305	1.738
Occupation（peasant=0）			
Organization staff	0.080	0.681	1.083
Industry worker	0.602	0.000 **	1.825
Businessman	0.026	0.880	1.026
Driver	0.479	0.007 **	1.615
Personal income(high=0)			
Middle income	6.854	0.008 **	0.720
Low income	7.037	0.000 **	1.268
Distance from unqualified agency (near=0)	-4.917	0.000 **	10.215
Perceived technique level(low=0)			
High	-7.970	0.717	0.828
Perceived responsiveness (unsatisfied=0)	19.327	0.000 **	13.781
Perceived secret keeping by doctor （poor=0）	12.563	0.008 **	9.562
Service environment(poor=0)	7.327	0.041 *	1.369
Constant	-4.628	0.025 *	1.003

* significant ** very significant

Patient self-evaluation of treatment effectiveness

Table 17 Treatment effectiveness evaluation in regularized and non-regularized medical agencies by patients

Effectiveness	Regularized	Non-regularized	Total
Almost recovered	31	4	35
Significant improved	41	5	46
Less improved	23	26	49
No change	6	34	40
Worse	8	115	123
Total	99	184	293

Patients receive service in regularized medical agencies felt the treatment is more effective than patients receive service in non-regularized medical agencies. That will influence their selection of next service provider if they do not satisfy the service or get ill again.

4.1.3. Reasons for selecting certain type of medical agencies

Table 18 Reasons 186 patients cited for selecting non-regularized medical agencies (multiple choice)

Reason	No.	%
Short distance from home or work place	149	80.1
No case report	139	74.7
No registration	124	66.7
Keep secret for patients	98	52.7
Warmth service attitude	95	51.1
Little chance to meet acquaintance	92	49.5
No other patients watching	80	43.0
Waiting time is little	75	40.3
Disease is minor	69	38.2
Low price	63	34.4
Good skill of doctor	30	16.1
Advanced equipment	25	13.4
Consider patients' opinion when prescribing	21	11.3
Randomly	5	2.7

Table 19 Reasons 114 patients cited to select regularized medical agencies (multiple choice)

Reason	No.	%
Good skill of doctor	110	96.5
Advanced equipment	82	71.9
Reliable quality of drugs	64	56.1
Short distance from home or work place	52	45.6
Keep secret for patients	46	40.4
Warmth service attitude	44	38.6
Little chance to meet acquaintance	31	27.2
No other patients watching	30	26.3
Less expensive	26	22.8
Low price	23	20.2
Doctor adopt patients' opinion when prescribing	7	6.1
No registration	4	3.5
No case report	4	3.5
Randomly	5	4.4

4.1.4. Medical expenses and type of service providers of first time selection

Medical expenses is cumulative from seeking service to the date we investigate them. Some patients have recovered fully, they come to medical agency only for checkup or consulting doctors with some questions. Many STD patients just begin seeking service when we investigate them, so the expenses do not represent how much they will spend to cure their diseases. But in table we still can found that those selected clinics and county or district hospitals experienced longer treatment period. Most of them were not satisfied with the effectiveness and later seek service in provincial hospitals and provincial institute of venereology. Their medical expenses are significant higher than those select provincial medical agencies.

Table 20 Medical expenses and type of medical agency selected by patients first time seeking service

Type of agency	Number of cases	Average days of Treatment	Average expenses(￥)	SD (￥)
Clinic	61	77	5157	3987
County or district hospital	56	81	4263	3762
Municipal hospital	41	68	4633	3137
Provincial medial agencies	134	33	1954	1738

Medical expenses are not in direct relation with the extent of effectiveness. Maybe, cases with poor effectiveness need more resource, maybe the incorrect selection of medical agency make the cure of disease delayed.

Table 21 Medical outcomes and expenses

Outcome	Number of cases	Average expense(￥)	SD(￥)
Cured	24	3035	2107
Near cured	81	5332	4458
Significant improve	105	3949	3507
No Change	82	3469	3631

Different STDs use different amount of money for treatment. From Table we can see the total expenses for cure most STDs will exceed ￥4000. The standard deviation of expenses for each disease is high, so for some cases the expenses are much more than other cases, this is much because of doctors behavior in service. Non-regularized behavior are more serious in non-regularized medical agencies.

Table 22 Diagnosis and medical expense

Outcome	Number of cases	Average expense(￥)	SD(￥)
Gonorrhea	36	4921	4201
NGU	80	3884	3120
Genital warts	67	4172	4027
Syphilis	35	5353	4196
Genital herpes	30	3784	3238
Multiple infection	43	4609	3866

Though these expenses are not the cure cost we still can find that average expenses among STDs are significant different. Genital warts and syphilis have the most expenses. These two diseases make patients more anxious. Genital warts is easy to relapse and syphilis is a traditional STD, people know this disease can lead to disability and death.

4.2. Result of In-depth interviews

4.2.1. Basic information of patients interviewed

Sex: Male, 24; female, 16

Age: younger than thirty, 17; older than or equal to thirty 23

Marriage status: married, 20; unmarried, 14; divorced, 4, widower, 2

Income: high(>￥2000/m), 10; middle(￥1000-2000/m), 17; low, 13 (<￥1000 /m)

Education: Primary, 6; low middle school, 10; high middle school, 12; college, 12

Diagnosis: Gonorrhea, 7; chlamydiosis, 7; Genital warts, 7; genital herpes, 5; candidosis, 3; multiple infections, 7; other genital infections, 4;

Type of medical agency first selected: regularized, 17; non-regularized 23 (clinic 10, community hospital 13)

Self-treatment before seeing doctors: 7

Interrupted treatment because of lack of money: 6

4.2.2. Reasons for selecting non-regularized clinic or community hospitals

Table 23 Reasons cited for selecting non-regularized medical agencies by 20 patients interviewed

Reason	No. of cases
Attracted by advertisement	16
Doctors there willing to answer more questions	15
Many patients in big agencies and feel embarrassed before them	10
Short distance	9
Felt disease minor and easy to cure	8
Doctors keep secret	15
No registration	17
No case report to health authority	11
Though price cheap than big hospitals	10
They use traditional drugs	3
Can negotiate treatment plan and amount of drug prescription	5
No reason to leave home to go to a city	4
Fear to meet acquaintance in big hospitals	7

4.2.3. Expectations and recommendations for performance improvement in big hospitals

Table 24 Patients' recommendations for service improvement in big hospitals

Recommendations	No. of patients propose
Doctors in big hospitals should be as warmth as doctors in clinics	10
Hospital should manage of patients to protect privacy	8
Doctors should give more knowledge of STDs to patients	11
Hospitals take measures that STD patients are not easily recognized	5
General hospitals should set up a STD clinic nearby	6
Hospital doctors should increase conversation time with STD patients	8
Hospital should have a consultation room	6
Hospitals should use videotapes to specifically educate patients	6
Doctors should prescribe drugs according to patients affordability	5
Hospitals let patients select doctors freely with detailed information	6
Nurses should not ask too much personal information	3
Hospitals should lower their price	5
STD magazine should be prepared in waiting room	4
Hospitals should make examination fee and drug price public	9
Hospital doctors are not allowed to take drug sellers' benefit	9
Doctors who are sophisticated at STDs should be hold certificate	9
Hospitals should make more and accurate advertisements	6
STD education brochures should be distributed in hospitals for free	5
Male doctors should not serve female STD patients, and female doctors should not serve male STD patients	4
Condoms should be given to STD patients free of charge	2

4.2.4. Recommendations to health administrative authorities

Table 25 Patients' recommendations to health authorities

Recommendation	**No of patients propose**
Stop unqualified doctors to provide service	13
Qualified doctors always hold their certificates	14
Inspect advertisements strictly	12
Medical agencies show their STD service license in public place	10
Use every kind of media to pronounce qualified STD service agencies	15
Publish average cost and its proper range of curing each STD	10
Price of common drugs for STD treatment should be made public	12
Medical insurance cover STD treatment expenses	5
A reproductive health hospital should be constructed in every city	4
Videotapes of STD education should be displayed in entertainment sites	5
Condoms and STD brochures should be distributed in public places	4
Health bureaus should protect STD patients' rights	3
TV programs should be made for STD education	5

4.2.5. Specific problems for STD patients

From Table 23, 24, and 25 above we know main reasons of STD patients for selecting non-regularized medical agencies, and their service needs and expectations. There two points that STD patients are the same as other patients, one is to be cured quickly and one is to spend as little money as possible. But these two expectations are more difficult realized for poor and rural STD patients. In rural areas there is lack of qualified STD service, and STD service agencies and doctors want to make more money from patients by taking the advantage that STD patient want their STDs to be cured more quickly than other diseases they have. Because STD patient want to keep their disease secret, some lie to their spouse, family members and other persons they live with to avoid sex before cured, to ask money and time for seeking service. If the treatment course is too long, secret keeping will be very difficult. So many patients look out the advertisements to find a service provider who can cure them quickly. A 34 years old woman said " *I saw an advertisement on a street wall, it said only three days, one day one injection can cure gonorrhea for sure. So I went to that clinic without doubt." In their advertisement they say, "Just one injection will relieve symptoms". A 25-year man said.*

Difficult to get money is one problem too. Though some STD patients have much personal income, but the money is managed by their wives or husbands or commonly. One must state the reason why take so much money. Youth or students have little personal income are difficult to explain to their parents why they want much money.

Another problem is time for STD service. Qualified service providers are usually big hospitals, are far from rural patients. Even STD patients think big hospitals will give them proper treatment and cure them sooner than local clinics, they can not find out a reason to tell their family members why they have to go to a city. Owing to long time waiting in big hospitals, even some city STD patients prefer clinics. *" The clinic is on the street near the road along which I go to work, it took little time for injecting drugs"*, A 28 man live in Dezhou said.

Heavy psychological burden is a serous problem. STDs are social stigma diseases. Patients fear firs is their reputation that can leads to divorce, family conflict, job loss, friend loss, and social support network loss. The other psychological burden is about their health. Many of them worry their reproductive ability loss, the health of their future babies, most worry their sexual ability loss, and some worry complications like kidney disease, prostatitis, and so on. So, secret keeping is an important factor in selecting service providers, and many patients willing to spend more if they can bue cured quickly and completely. But patients usually do not know how much money can cure them. Doctors, especially in non-regularized agencies do not tell the truth or refuse to tell accurate cost. For poor patients and patients not easy to get money in hand often interrupt their treatment.

4.2.6. Summary of Expectations of STD patients

(1) Clear STD service market completely and manage it permanently
(2) Give detailed information of qualified STD service providers to help patients selecting right medical agencies for care
(3) Increase accessibility of STD service, especially in rural areas
(4) Lower service price and avoid excessive expenses
(5) Warmth service and respect STD patients
(6) Keep secret and improve medical service environment
(7) Health education and psychological care

4.2.7. Constraints to regularized STD service

4.2.7.1. Lack of STD knowledge

Patients do not think they may have got STDs. Doctors participating FGDs said "*Many patients do not know they have got STDs when they have symptoms they go to local clinics or community hospitals. A middle aged woman told me 'I thought I got urithritis since I felt itch and burn when passing my water, and I let general clinic doctor prescribe some drugs fo me'*".

Patients think their STDs are minor and treat themselves

They may think they have general infection and can be cured in clinics or small hospitals. Some feel their symptoms not severe and buy drugs in drugstores to cure themselves. " *My girlfriend was cured after she used the drugs prescribed by doctors in a hospital, I thought I had the same disease and bought the same drugs to treat myself*". A young man said when interview him.

Patients believe ordinary clinics and small hospitals can cure their "non-severe" STDs. Some patients think they have got STDs but feel their symptoms not severe, believe it is easy to cure, and doctors in ordinary clinics and small hospitals are able to cure non-severe STDs. A patient said " *I thought only severe STDs need to go to big hospitals*". Some patients try clinics and local hospitals first, if not effective they go to big hospitals. " I was not sure I got STD and I was not sure that local clinic doctors were not able to deal with it." A rural STD patient said.

4.2.7.2. Lack of information of STD service providers

STD patients don't know which service providers are regularized or qualified and which service providers are non-regularized or unqualified. Government and media rarely publish this information. So most patients think all clinics hand a board of "STD Care" are qualified. Near all patients don't know doctors see STD patients need hold license.

They also don't know about how much money can cure each common STD. Many patients perceive the price is higher in big hospitals and have to spend more there to get cure. But the fact is STD patients have to spend more if they select non-regularized medical agencies first because there they get improper treatment

using expensive drugs or fraudulent treatment, at last, many of them have to go to big hospitals and the germs may become drug-resistant.

4.2.7.3. Lack of strict advertisement management and inspection

To attract STD patients these unqualified clinics and hospitals give STD care make exaggerated advertisements everywhere. Especially advertisements on television and newspapers are easily to attract patients because people usually trust these medias. Advertisements on these medias usually advocate that they have experts in the field of reproductive health and have advanced equipment. Usually businessmen who rent hospital offices make advertisements on TVs and newspapers. Clinics usually hire some people to deliver their advertisements directly to peoples' hands on the streets or just adhere them on walls or columns supporting electric wire.

4.2.7.3. Old service model and cold attitude block some STD patients going to big hospitals

Patient are anxious when they get STDs, they need not only clinical treatment but also psychological care, need more knowledge of STDs. People know in big hospitals doctors are busy, not warmth to patients, don't like listen more to patients, and don't like to answer patients' questions. They also prescribe drugs do not mind the affordability and how much money patients have in hand. So, patients feel more relaxed in receive service in clinics. "*I ask the doctor after using up the drugs if I can be cure, he did not answer until finished my record and said 'you have to come back'". A middle-aged man from rural said. "I spoke to my doctor, 'Doctor, could you cure me sooner?' doctor said ' god doesn't permit you recover so fast, otherwise, it will encourage you to have more out-marriage sex.*"

"*Health administrations should inspect their attitude to STD patients as an indicator of their performance. When my father was ill I toke him to a provincial hospital, doctor was very cold l. So when I get ill this time I went to a clinic for my illness."* A 35 years old rural man said.

"*Hospital should improve management of patients waiting for service to protect privacy of STD patients. When several patients watched me while doctor asking my symptoms I felt I was a low-down women".* A 38 years old woman said.

4.2.7.4. Low access to qualified medical agencies

More than half county hospitals still don't have STD service license. Even they have they maybe rent STD department to private doctors or businessmen, and those rented STD departments may not hire qualified doctors, and even hire qualified doctors may instruct them to give patients non-regularized service.

4.2.7.5. Disadvantages of STD patients

Disadvantages of STD patients may prevent them from regularized service, like poor patients, patients fear disclose secret in big hospitals, patient difficult to ask money from family, and shy patients fear to be criticized in big hospitals, etc.

4.2.8. Result of Focus Group discussions

First Focus Group discussion

Participants are 10 doctors, among them, 4 from 2 Jinan big hospitals, 2 from Provincial Institute of Dermatology and Venerology, 2 from 1 Dezhou big hospital, 2 from 1 county hospital.

Main discussion topics and results are as follows:

How many STD patients in hospitals?

STD patients visit 3 departments: dermatology, gynecology, and urology. In provincial hospitals in one department there are usually 8 to 10 STD patient visits in one weekday. Jinan two big hospitals set up STD department, there is usually 20 to 30 patients a day, but one third finally found are not STD patients. In weekend there are only 4 to 5 a day. In county and community hospital there are usually less than 5 STD patients visits a day.

What is the social composition of STD patients?

STD patients now can be seen in every occupation. Students with STD are increasing. The age range is likely wider in recent years. But common STD patients are merchants, cadres and managers, drivers, organization employees, industry workers and peasants. Army men are also can be seen. We can not exactly estimate the percentages of every occupation of patients, because many of them do not tell the truth.

What is the composition of STDs?

Among 8 STDs under national surveillance, gonorrhea, chlamydiosis, and genital warts are most common. Chlamydiosis, genital warts, multiple infections, and syphilis are increasing fast.

Is service model for STD patients the same as for other patients in hospitals?

It is almost the same. STD patients are also asked to be registered. Before we see them we don't know if they are STD patients. But they can use pseudonym to be registered. Habitually, we call patients' name not their registration numbers when we see them. That may make some patients embarrassed when they are with acquaintance.

We now keep secret for STD patients. But some patients waiting for service at the door or come into doctors' office for that, when we call them they can hear immediately, especially when many patients waiting for service. We now rarely criticize patients for their sexual behavior, because STDs are common and common. Culture environment is changing, but some health personnel still give them cold face.

Complaints or suggestions for hospital service improvement form STD patients

Rarely STD patients complain our service or give suggestions. Few patients complain that management of waiting place is very poor. When other patients are watching the

diagnosing process, STD patients may not tell the truth of their sexual behavior, symptoms, that may lead to incorrect diagnosis. Patients suggest doctors providing more STD knowledge. Female STD patients infected by their husbands complain they have not got enough respect as they are innocent to be infected.

What are the causes of patients for selecting qualified hospitals, who they are?
City STD patients like to go to hospitals. Hospitals have better doctors and equipment, are not far from their homes. Some rural patients also come to city hospitals for high quality of diagnosis and treatment. In addition, if they go to local hospital or clinics they may meet acquaintance, and fear that doctors there may not keep secret for them because doctors are familiar with local residents.
Rich STD patients, patients with higher education, patients often read newspapers or watch TV health programs, would select hospital first.

What are the causes of patients for selecting non-regularized STD service agencies?
Many patients do not know they have got STDs when they have symptoms hey may think they have general infection and go to local clinics or community hospitals.

Some patients doubt they have got STDs, but feel their symptoms not severe, believe it is easy to cure, and doctors in clinics or small hospitals are able to deal with STDs. Some patients try clinics and local hospitals first, if not effective they go to big hospitals.
Clinics and community hospitals make advertisement on street and TV, they say in advertisement: "*we guarantee the cure, show effectiveness in one or two days", "the effectiveness can be seen only after one injection*", that attract many STD patients to go there.

General hospitals rarely do advertisement on STDs, patients may think STDs are not our main service.

STD patients not living in cities usually have no much free time to go to city hospitals for service. Even they like go to big hospitals, they are difficult to tell their spouse or parents why they go to cities.

Some STD patients may think the price is higher in big hospitals than in clinics and small hospitals. Poor patients and patients have no much personal income may think they have no enough money for service in big hospitals.

City STD patients go to clinics for fear that they may meet acquaintance in big hospitals.

What are advantages and disadvantages of non-regularized STD clinics and hospitals?

Non-regularized medical agencies have no much advantage in fact, only that patients need not to wait for service, because there are few patients. They use dishonest methods to attract patients is not their advantage. Their disadvantages are, of course, poor equipment and low education personnel, and lack training of STD care.

Feasibility and prerequisites for hospitals to set up STD clinics on streets

It is may be feasible if the clinic is near hospital. We give patients primary service, give them basic knowledge of STDs they have and introduce advantages of our hospitals. We may refer some of them to our hospital who need more sophisticated service. But we should know how many patients will come per day.

What service model changes in big hospitals are necessary for attracting more STD patients?

"Do more advertisement to give information on our technology, price of treatment, knowledge of STDs, and promise for privacy keeping."

"Improve patient management, let them see doctors in order. So that, when a STD patient seeing a doctor would not be surrounded by other patients and feel embarrassed to tell their symptoms and disease history. Doctors and nurses should warmly to listen to patients, do not criticize or to be disgusted with them."

"Paste a notice that STD patients can directly go to doctors' office without being registered."

"Tell patients that they can use pseudonyms to register and we use the pseudonyms to do case report, to prescribe laboratory examinations and drugs".

"We should propaganda our service price and average cost of curing each common STD, so that patients know in big hospitals medical expenses are not much higher than in clinics and small hospitals"

"STD knowledge materials can be pasted on walls out doctors' office, so patients can learn from these materials when waiting for service."

"Some of laboratory specimens collection can be taken in a room near doctors' office, and nurses can send these specimens to the laboratory instead of patients themselves".

Results of second FGD

Participants are also 10 doctors from the same medical agencies. Discussion contents are mainly the feasibility of patients' expectations and recommendations.

"The feasibility of STD market clearance and advertising inspection is not certain. If the central government is resolute to solve these problems the market will certainly be cleared. If only rely on local governments these problems will exist continually."

“The service model change in big hospitals is going on, but quick changes need hospital leaders’ and health authority officials’ intervention. Since the economic value of “warm service” for STD patients is not realized by most hospital leaders the intervention is still week and the changes will take long time.”

“The payment mechanism based on diagnosis is not feasible now. STDs are not covered by medical insurance. Even common diseases covered by medical insurance the payment on diagnosis are not realized countrywide except in several cities and only for few diseases. Medical agencies expect more profit from STD patients, so this mechanism cannot be implemented in the near future.”

“Setting up STD clinic on street by a hospital may be feasible in some circumstances. If STD patients more enough or the hospital has residual doctors then the hospital is willing to open a clinic nearby. But now no one knows if there will be enough STD patients and if the clinic can make profit.”

“Education or consulting room set up in big hospitals is feasible if health authorities ask the hospitals to do so. In fact, in some hospitals it is already set up”.

“Psychological service is not feasible now. We don’t think STD patients are willing to pay much money for that service. Hospital managers have not considered this question yet. Traditionally, hospitals are not willing to pay any professionals who cannot make money from their service”.

“Since in a county STD patients are not many, if profit making behavior is prohibited county hospitals will not invest much in STD service, except that government give them enough compensation. So the access to qualified STD service in rural areas can not be improved soon.”

“Publishing of information on regularized or qualified STD service agencies should e feasible, since it doesn’t need much money. TV, newspaper, and Internet are good media for disseminating this information. It only needs the responsibility of health officials.”

5. Conclusions

5.1. More than half STD patients go to non-regularized STD service agencies for medical care because of lack of STD knowledge, information of STD service agency, no enough money and time, and non-modern service model in big hospitals.

5.2. Most recommendations from patients and doctors for improving STD service are feasible if local government and health authorities give enough attention.

5.3. Qualified STD service is lack in rural area and far distance is a constraint for rural

patients to get regularized service.

5.4. Main expectations of STD patients are improving rural STD service, giving more knowledge of STDs to patients, giving detailed information of qualified STD care agencies, lower price of service and regularized service behavior, respecting patients' dignity and privacy, give some psychological care.

6. Research recommendations

6.1. Clear STD market thoroughly

Non-regularized service in rural areas and in cities not only brings heavy economic burden on STD patients but also harmful to control of STDs. There are no technical and legal difficulties to recognize and close unqualified STD service agencies since the standards of regularized STD service is clear in the document made by Ministry of Health. The implementation body of STD service market clearance is disease control centers or anti-endemic stations jointed with agencies in public security and commercial sectors. The only prerequisite is resolution of main leaders in local governments. Central government should organize a meeting of local main leaders to realize the seriousness of STD/AIDS spread and the importance of clearance and management of STD care market.

6.2. Enhance rural STD service ability

Though STD clinics are easily found in county towns but few of them are able to deal with all STDs. Even in county hospitals many doctors cannot give correct diagnosis and treatment. Many county hospitals have no enough equipment, and few doctors are trained by participating a STD diagnosis and treatment training course. The manifestations of patients with same STD are often very different, and the sensitivity to antibiotics of germs varies from place to place and from person to person.

As the prevalence of STDs is near 1%, on the average, in one county there would be 4000 STD patients a year. So every county should have at least one qualified agency to provide STD care.

First step in 3 or 4 years is to enhance half of county hospitals according to the quality of STD service personnel and equipment, and the population size. County hospitals have better STD service personnel and equipment should be enhanced first. Other county hospitals should be limited to give service to some specific STD patients. And in 5 years all county hospitals should be enhanced.

Price of STD service should be managed strictly according to provincial health service pricing document. County hospitals that lose money for STD service is because of too few STD patients. In this circumstance local government should give hospitals compensation.

What kind of rural primary STD service standard is effective and affordable? How

much financial support should government provide? These questions need further study.

6.3. Inspect STD care advertisements seriously

Fraudulent advertisements deceived many STD patients, and cause unfair competition of medical market. If the inspection is still not serious in the future, more and more STD service agencies will provide non-regularized service. The inspection of medical advertisement involve several sectors, the main leaders of local government should be the coordinator. To keep the advertising in correct track one sector such as health, or commerce, or Press management agencies should be assigned as the coordinator for regularizing medical advertising.

On the other hand, big hospitals qualified for providing STD service make few advertisements. They should be encouraged to make more advertisements to state their technology, price of service, and good responsiveness to patients' need.

6.4. Publish information of regularized STD service agencies

At provincial and prefecture level government or health authorities should publish information of qualified STD care agencies, like their name list and addresses, average cost for curing each common STD, average days of curing each STD, and so on. Local newspapers, health magazines, TV and Internet are all good medias for publishing this information. This information will help STD patients to select right medical care agencies.

In addition, hospitals or clinics qualified to provide STD service must put their license in public place within their agencies. And doctors must always hold their certificates when serving STD patients.

6.5. Examine and evaluate STD care agency periodically

Qualified STD care agency would not always provide regularized service. Their behavior may change, their personnel may change, and their equipment can become old and ineffective. The quality of their service should be examined and evaluated by experts periodically, and supervised by disease control centers. They should be mandatory to record and provide their service information to health authority for supervision and for comparison between them.

6.6. Give more STD education to patients and general population.

Doctors should give more knowledge of STDs to patients to raise their awareness of proper use of drugs, importance of following doctors instruction, changing their sexual behavior and prevention of relapse. For this purpose, doctors should increase conversation time with STD patients, to comfort patients when they are sad, explain their illness status, answer their all questions, and give the knowledge they lack.

Hospitals that have STD patients more than 20 should be open a room specifically to educate STD patients after diagnosing. "*Videotapes on STD should be displayed. This is also a consultation room for STD patients, where patients have seats, can drink,*

and can complain to consultant". "*Reproductive health magazines including STD prevention and early symptoms should be prepared in waiting room and health education room"*.

Whether there is STD education room and materials in STD care department, and whether doctors give patients satisfactory education should be a indicator in evaluating the quality of STD service.

For the general population, not only STD prevention knowledge but also manifestation of common STDs should be given by popular medias.

6.7. Promoting service model changes in big hospitals

Traditional attitude to STD patients in public hospitals has been not friendly since patients sexual behavior is against socialism and traditional moral standards. In addition, big hospitals do not worry the decrease of their patients since they feel they have better technology and equipment, so their attitude to patients is difficult to change. As medical market become larger, competition is becoming extensive, some doctors especially hospital leaders realized they should be more warmth to patients. They also advocate "patients centered service" in recent years. Now it is the time for health authorities to promote STD service model change in big hospitals. For example, permit or encourage STD patients use pseudonym to register, or directly go to doctors' office in STD department. Privacy protection rule should be firstly stated to patients. Regulations on respecting patients' dignity should be made and posted on the wall of doctor's office. Nurses should be also be trained to help STD patients and protect their privacy in the process of specimen taking and laboratory examination and buying prescribed drugs.

When making treatment plan patients opinion should be asked and considered, if the opinion of a patient is not proper, doctor should explain the reason clearly. The amount of drugs in one prescription should be in accordance with patient's money in hand and tell the patient how much should be prepared in the future. Many patients leave hospitals without buying drugs because they have no enough money, they go drugstores to buy little amount of drugs, there the quality of drugs may not be good.

"*Hospitals let patients select doctors freely with detailed information of every doctor, especially indicate who are experts of some STDs*". Nurses should not ask patients what symptoms they have and assign them to doctors without getting consent of patients.

If possible, male doctors should not serve female STD patients, and female doctors should not serve male STD patients because many patients are more shy to tell their disease history and symptoms to opposite sex doctors.

6.8. STD care expenses control

As STD control has much social value and public benefits the expenses should be controlled so that more STD patients especially poor patients can get prompt care. Health authorities and government price control agency should inspect STD service price strictly. All qualified STD service agencies should be asked to make their examination fee and drug price public in waiting hall or in registration place, or out of laboratory and pharmacy.

Health authorities should collect STD care expenses in all STD care agencies, analyze the data and publish the comparison result to lead patients to select good quality and cheaper service.

Average cost or a proper range of cost of every STD should be published on newspaper, TV, and other media. Diagnosis based payment mechanism should be studied and practiced in some agency to explore the feasibility.

Doctors take drug sellers' benefit should be punished.

Hospitals must give medical expense invoice to patients. Medical authorities, government price control agencies, consumer rights and interest protection agencies are all have responsibility to help deceived STD patients to be compensated.

6.9. Social control measures

STD patients regret to be infected and proposed recommendations on social measures to prevent STDs. "*STD education brochures should be distributed in hospitals for free". "TV programs for STD education and prevention should be made more available". "Videotapes for STD education should be displayed in bars, dance halls, videotape display halls, cinemas". "Condoms and STD brochures should be distributed in parks, bars, and dance halls". "Condoms should be given to STD patients free of charge in hospitals for preventing transmission to others".* Implementing these recommendations need some cost but affordable for local government, and valuable for control STDs.

Some patients propose to construct a reproductive health hospital in cites. This idea is also need to be considered. It can provide comprehensive service and concentrate some high level professionals. STD patients should be one kind of their main clients. They would be less embarrassed in receiving service there.

Expenses of STD treatment should be covered by medical insurance for patients who participated the insurance.

7. Research result dissemination

7.1. Papers have been already published

(1) Improving sexual transmitted disease prevention and treatment network, satisfy

patients' need. Journal of Chinese Clinical Medicine, Volume 4, Issue 12, page 95-96, 2003

(2) Expectations of STD patients for improving hospital STD service. In Zhang Kaining, Deng Qiyao. "New Challenges and New Count Measures in Asia and Pacific Regions". Chinese Population Press, Beijing, July 2004, page 181-185

(3) Expectations of STD patients for regularize STD care market. With this paper participated "21 Century Second National Academic Conference of Venereology and Dermatology" held in Nanjing, China, May 15-17, 2004. And this paper was collected in a book: Zhang Gguocheng, Chen Xiangsheng. "Clinical and Preventive service of Dermatoses and STDs". Press of Second Military Medical University, Shanghai, May 2004, page 281-284

7.2. Papers to be publishing

The following papers are planned to be written and send for publishing: (1) Reasons and factors of STD patients going to non-regularized medical agency for service; (2) Policy recommendations for improving service quality for STD patients.

7.3. Report and research findings dissemination

Final report will be sent to Chinese Disease Control Center, Ministry of Health, Shandong Department of Public Health.

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Appendix I

Guideline for patient individual in-depth interviews

I. Background information

1. Sex, age, education, residency, occupation, marital status, family size, position in family
2. Personal and family income

II. Process of STD diagnosis and treatment

1. When did you find you had got STD? How did you respond to that first?

2. It is the first time that you get STD? If not, tell me the process of recovery of your previous disease.

3. Where did you go for diagnosis and treatment first? What made you select that agency? Why you did not select other medical agencies for service?

4. Have you changed your service provider later? Where and why?

5. How did/do you perceive your disease can be cured? How do you worry about your disease?

6. Have you ever treated yourself? How?

7. Does any one else know that you have the symptoms /disease? How that person influences you to select service provider?

8. What is the reaction if your family member knows you have the disease? How that influences your selection of service provider?

9. How do you evaluate effectiveness of treatment and accuracy of diagnosis you experienced in different medical service agencies? Do you think your medical expenses worth the quality of service received in different agencies (frequency of doctor visit, length of treatment, symptom improve, expenses, etc.)? How are you satisfied with the service from different providers?

10. What advantages and disadvantages in STD clinics and relevant departments of hospitals you feel/know?

11. What is the difference between doctors in STD clinics and doctors in hospitals to STD patients (education and background, technique, knowledge and experience, attitude to patients, friendliness, STD knowledge education to patients, measures of diagnosis, choice of treatment, flexibility of prescription and payment, etc.)?

12. What factors and differences of service model between clinics and hospitals influence your service seeking decision (amount of money at hand, distance, registration, time of waiting, waiting room and doctor office environment, mixed with other kinds of patients, pay on credit, patients' files keeping, laboratory test, etc.)?

13. How easy do you get money for medical service?

14. Do you regret for your decision on selecting service providers? Why?

15. What is your plan of future treatment? Why?

III. Expectations and policy recommendations

1. What changes of STD service model do you expect to happen in big hospitals? What changes of service model do you expect to happen in independent STD clinics and clinics run by communities?

2. What policy do you recommend to make the changes you expect to happen? What measures the government and health authorities should take to improve STD medical service quality, or help patients select qualified agencies for medical service, or reduce service expenses?

3.What knowledge did/do you need to help you to select service provider?

4 What is your suggestion on regulation of advertisement of STD clinics, hospitals?

5. Do you have enough knowledge of your disease? What is your suggestion on STDs education and control methods dissemination for mass media?

Appendix II

Guideline for focus group discussion

1. Current conditions of STD patients visits in hospitals (number of STD patients, social composition of patients, percentage of initial visits, composition of STDs and average cost, etc.)

2. Service models for STD patients (registration, file keeping, case reporting, pseudonym use, special diagnosing office or mixed with other patients, call patients by name or registered or number, waiting room and doctor office environment, attitude of nurses, doctors and other staff, waiting time, laboratory time, patients dignity and secret keeping, etc.).

3. Complaints and suggestions of STD patients to hospitals and medical personnel

4. Causes of patients for selecting hospitals or non-regularized STD clinics as their first/ main service providers

5.Advantages and disadvantages of non-regularized STD clinics and hospitals from the view of patients and doctors

6. Expectations of STD patients on changes of behaviors of hospital personnel and service model of hospitals. Feasibility of these expectations

7. Advantages of non-regularized STD clinics for attracting patients. Feasibility of adopting these advantages for hospitals

8. Feasibility and prerequisites for hospitals to set up STD clinics on streets

9. Policy recommendations to prevent STD patients from going to non-regularized STD clinics

10. Policy and management recommendations for attracting STD patients to go to hospitals

Appendix III
Draft self-administered questionnaire

《Confidential》

This survey is to investigate your disease treatment process. Your participation will contribute to the public interest very much, and is beneficial to yourselves and other patients. Your name, telephone number and address are not required, and we will keep your all information completely confidential. You tick off the appropriate answer of each question with selective answers, and write appropriate answer to each question with a blank. Mail the questionnaire with the envelope we provided as soon as possible after you finish.

Thank you very much!

Terminology Explanation:
Small hospital: with beds less than 50, or staff less than 100
Medium hospital: with beds between 50 and 400, or staff between 100 and 600
Big hospital: with beds more than 400, or staff more than 600
Unsafe sex: intercourse without using condoms
Unclean sex: have sex with a person who may have STD(s)

GENERAL INFORMATION

Sex _____ Age _____ Marriage:(1) never married (2) has spouse (3) divorced or spouse died
Residency: (1) rural area (2) town (3) city
Who do you live with? (1) alone (2) spouse (3) parents (4) parents and spouse (5) friends (6) others

Education:
(1) primary (2)junior middle school (3)senior middle school (4) university

Occupation:
(1) peasant, (2) factory worker, (3) government employee, (4) driver, (5) cadre or manager, (6) student, (7) businessman (8) staff in other service agencies (9) no work, (10) other_____

Personal income per month(￥):

5000-, 3000-, 2000-, 1500-, 1000-, 500-, 300-, 100-, 50-, <50

Per capital income per month of family (￥):

<300, 300- 500-, 1000-, 1500-, 2000-, 3000-, 5000-

Social position of your spouse
(1) cadre with power, government staff (2) regular employee (3) part-time employee (4) no job (5) retired (6) self-employed (7) peasants (8) other_____

Social position of your parents
(1) cadre(s) with power (2) government staff (3) regular employee(s) (4) part-time employee(s) (5)no job (6) retired (7) self-employed (8) peasants (9) other_____

Medical service experience

What type of medical agency in which we met you and gave you the questionnaire?
(1) private clinic (2) community clinic (3) county hospital (4) prefecture hospital (5) municipal hospital (6) institute of venereology

Distance from your residence to this agency
(1) less than 5 km (2) less than 20 km (3) less than 100km (4) more than 100km

What is the latest diagnosis of your STD?
(1) Gonorrhea (2) non-gonococcal urethitis (3) genital herpes (4) chlamydia (5) syphilis (6) human papilloma virus or HPV (7) lymphogranuloma venereum (8)Granuloma inguinale (9) trichomoniasis (10)chancroid (11) candidiasis (12) HIV or AIDS (13) other _____ (14) not determined

When did you feel you get a STD? _____

How did it influence your work or life when you began to seek medical service?
(1) could not work or bear (2) very much (3) much (4) little (5) no influence

How many working days you lost because of the disease? _____

How much income you lost because of the disease? ¥ _____

How many medical agencies have you gone to for service? _____

How much money did you have when you first saw a doctor?
(1) enough (2) almost enough (3) not enough

What kind of medical agency did you go first?
(1) independent private STD clinic (2) community run STD clinic (3) small hospital (4) medium hospital (5) big hospital (7) Institute of STDs (8) others_____

Reasons for select this agency (you may tick more than one reason as appropriate to you):
(1) Technology level (2) keep secret for patients (3) short waiting time (4) no registration (5) do not report to disease control center (6) friendly doctors (7) no other patients ridicule me (8) good equipment (9) low price (10) make treatment plan according to patients' opinion (10) less chance to meet familiar people (11) short distance (12) attracted by advertisement (13) recommendation from other people (14) randomly

How do you evaluate treatment effectiveness of the first agency you selected?
(1) very good (2) good (3) not too bad (4) bad

What is the outcome of treatment given by this agency?
(1) completely recovered (2) almost recovered (3) significant improvement (4) no change (5) worse

How many times have you visited the first agency?_____

How long time treatment you experienced from the first agency? _____

How much money have you spent in the first agency? _____

Is the agency in which we met you the first agency providing service for your STD(s)? (1)yes (2)no

If "yes", fill Table 1 directly, if "no", what are your reasons for selecting this agency (you may tick more than one reason as appropriate to you):
(1) Technology level (2) keep secret for patients (3) short waiting time (4) no registration (5) do not report to disease control center (6) friendly doctors (7) no other patients ridicule me (8) better equipment (9) low price (10) make treatment plan according to patients' opinion (10) less chance to meek familiar people (11) short distance (12) attracted by advertisement (13) recommendation from other people (14) randomly

How do you evaluate treatment effectiveness of this agency?
(1) very good (2) good (3) not too bad (4) bad

What is the outcome of treatment given by this agency?
(1) completely recovered (2) almost recovered (3) significant improvement (4) no change (5) worse

How many times have you visited this agency? _____

How long time treatment you experienced from this agency? _____

How much money have you spent in this agency? _____

Table 1 Please fill your number of visits, time of treatment, expense, and the effectiveness of service in your each category of service providers

	Private clinics	Community clinics	Small hospitals	Medium Hospitals	big hospitals	STD institutes
Number of visits						
Days of treatment						
Expenses (￥)						
Effectiveness (tick)						
Very good						
Good						
Not too bad						
Bad						

Who know that you have STD except medical workers?
(1) spouse (2) parents (3) other family member (4) friends (5) others (6) no one

Do you think your disease will be cured?
(1) already cured (2) will be cured soon (3) can be cured but take long time (4) cannot be cured but improve (5) don't know

Do you think your disease would reoccur automatically without unsafe/unclean sex?
(1) it will (2) most likely (3) less likely (4) will not (5) don't know

Has the doctor in the agency we met you told you that your disease is curable?
(1) Curable and soon (2) curable but need more than one month (3) can be improved (4) Has not told me about that

How much money do you think it is needed to cure your disease from now?

(1) less than ￥500 (2) between ￥500 and ￥1000 (3) between ￥1000 and ￥2000 (4)

between ￥2000 and ￥5000 (5) above ￥5000 (6) don't know

Have you made decision that to treat your disease continuously in the current medical agency in which we met you?
(1)yes (2)no

If “yes”, how much money you can spend in this agency?

(1) as much as it needs (2) cannot exceed the limit of ￥_____ (3) according to the effectiveness

(4) no idea now

If “no”, what is your future treatment plan?
(1)stop treatment (2) I treat myself (3) go to a clinic affiliated to a regularized big hospital/institute (4) go to a private clinic (5) go to a community clinic (6) go to a small hospital (7) go to a medium hospital (8) go to a big hospital (9) go to a STD institute (10) no idea now