Final Summary Report

Hanjiang Navigation Electric Pivot Project

HIV/AIDS Prevention Program

Zhongnan Hospital of Wuhan University

Disease Control Center of Xiangfan City, Hubei Province

December 21, 2009
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Part 1  Background

AIDS is an infectious disease without effective cure and has a high mortality rate at present. Studies have shown that AIDS is transmitted through three ways of sexual contact, blood and mother-to-infant (including pregnancy, childbirth and breast-feeding), which is complex of its popular factors and spread rapidly.

Since 1981, the researchers of USA found that the world's first AIDS, AIDS has spread rapidly in the Worldwide, which has been becoming a major global concern's issue of public health and social hot-spot. China discovered the first case of AIDS in June 1985. To October 31, 2006, the report of the National accumulated over the years showed that national total of AIDS cases has reached 1,837,733, which spread in 31 provinces (Autonomous regions, Municipalities) and the three kinds of transmission of AIDS mentioned above all exist in our country. AIDS is transmitting from high-risk groups to the general population so that we should attach importance to the work of prevention of AIDS.

Since April 1995 the first batch of HIV-infected persons was found in Xiangfan City, the total number of the HIV-infected has reached 114 cases and there were 38 cases of death to the end of March 2007 in Xiangfan City. The persons account for 84.72% through blood transmission, 9.03% through sexual transmission, 1.39% through mother-to-infant transmission, 1.39%
through injecting drug-abuse and there are 3.47% of them whose routes of transmission are still unknown.

Cuijiaying navigation-power junction of Han river is located in Xiangcheng area of Xiangfan city. The project will last 4 years from 2006 to 2009 with the total investment of 2.5 billion dollars. The number of workers and managers is about 3800 during the time of construction. There are 87 places involved in sex service around Cuijiaying navigation-power junction and more than 300 persons supply sex service.

Due to construction workers away from their families for long-term, more sexual partners, unsafe sex and lack of knowledge of AIDS prevention, Construction workers have a great risk of transmission of AIDS so that they are an important group of the prevention of AIDS. China has taken preventive measures in the past years for several types of susceptible people, including injection drug-abuse users, selling blood, sex workers and gay men, however, we did not pay attention to the construction worker in the past.

According to the experience of building for developing countries, World Bank considers it necessary to carry out the construction workers and residents living along the publicity and education work on AIDS so that reduce their risk of infection. Therefore, the World Bank grants 800 million dollars in publicity and educational activities on AIDS for Cuijiaying navigation-power junction project. Entrusted by the World Bank and Hubei provincial Communication department, Zhongnan Hospital of Wuhan University
Part 2 Introduction

AIDS is an important public health problem of infectious diseases, there is currently no effective vaccine, health education and health promotion is an important strategy to resolve this issue. To explore the effectiveness and sustainability of the AIDS prevention and health education model of migrant workers. Since the launch of AIDS prevention program in Cuijiaying navigation-power junction project of Han river, we have launched a publicity consultation, held lectures, played motion pictures, given out condoms, etc. form of AIDS prevention and health education and behavioral intervention, and made questionnaire before and after the activities. Survey includes the general situation, the source of AIDS information, AIDS knowledge, behavior and attitude of a total of five aspects of the problem 34. Mainly includes awareness to AIDS infection, trends of AIDS, infection source, transmission routes, prevention, policies of AIDS prevention and control, the attitude of the respondents to drugs, sex, relevant medical activities, and so on.

Entrusted by Word Bank and Hubei provincial Communication department, Zhongnan Hospital of Wuhan University implement the prevention of AIDS in Cuijiaying navigation-power junction project. Since the AIDS prevention project started in 2006, formally launched the implementation in
August 2007, ended in November 2009, which lasted 27 months. Project work carried out in three phases, August 2007 - September 2009 for the project preparation stage, September 2007 - July 2009 for the project implementation phase, September 2009 –November 2009 for the summary Stage.

The prevention of AIDS in Cuijiaying navigation-power junction project, which entrusted by World Bank and Hubei provincial Communication department, started to develop AIDS prevention project and finalized finalized in 2006. Since the AIDS prevention project started in August 2007, we have done these works, such as diagnostic visit, organization and coordination, program design, lectures on AIDS prevention knowledge to project management staff, furthermore, public education and consultation, free examination, free condoms, baseline survey, behavioral intervention, impact assessment have also been done to workers. The number of workers and managers is 3090 during the time of construction. At the first stage of construction (civil engineering), there will be 1563 workers including 325 managers. There are 87 places involved in sex service around Cuijiaying navigation-power junction and more than 300 persons supply sex service. 260 persons who works in 121 entertainment places (beauty salons, hotels, saunas, etc) supply sex service, while 498 persons don’t. The number of the workers is 469 during the second stage of construction including 52 installers, 155 construction staff and 262 villagers. Zhongnan Hospital Wuhan University sign an agreement with Xiangfan City Center for Disease Control during the project implementation. The construction headquarters and CDC of Xiangfan issued the “the implementation views
on AIDS prevention of Cuijiaying navigation-power junction project”. The AIDS prevention leading group is established, and Cheng Wu deputy director of Cuijiaying Project is designated as group leader, some leaders of Project department and CDC as members. Make clear every member’s responsibilities and put forward concrete requirements. After the document issued, every unit enhances information communication, make sure the AIDS prevention carry out successfully.

Part 3 Objectives

1. Intervention plan

Cuijiaying navigation-power junction project of Han river of HuBei province will be implemented from 2006 to 2010. Specific intervention plan is as follow:

1. Understand the basic situation and lay the basis for the work

Understand the basic conditions of the target population, mainly including the number of communities of the construction points, the community in which knowledge of STD and AIDS, the occurrence of high-risk behavior, condom use, learning about the incidence of sexually transmitted diseases and HIV infection, the basic situation of the actual needs of the project.

2. AIDS propaganda

Hold lectures on AIDS and STD. Put up posters including AIDS posters, VCT, wall maps, which are in the workers gathering place. Provide promotional materials about, including “AIDS and STD prevention” foldings, “AIDS prevention” pamphlet, “AIDS prevention” pokers. The number of
materials is more than the construction workers and people in entertainment.

3. Health Education

Promote public health knowledge and encourage people to establish a healthy and civilized way of life in the construction workers of associated communities and the village near the construction site. Reduce drug abuse, unsafe sex and eliminate illegal blood collection.

4. Free voluntary counseling and testing

Medical and health units near the construction site establish a number of HIV free voluntary counseling and testing points. Train of professionals, provide the appropriate test reagents. Conduct free voluntary counseling and testing of STD and HIV and monitor of sexually transmitted diseases and HIV infection disease.

5. Early diagnosis and treatment of STD

In view of venereal patients being a high risk of HIV infection, Venereal patient should be early, standardized treatment.

6. Condom project

Carry out 100% Condom Project in the point of the project and related communities. Provide condoms free to construction workers and people at entertainment place and set up free condom distribution points.

7. HIV-infected persons follow-up

Create a personal file for detected HIV-infected people and Professionals is responsible for follow-up. Regular free medical examinations and laboratory
CD4 cell counts are offered. Psychological counseling and the necessary relief also are offered.

8. Treatment of opportunistic infections of AIDS and anti-retroviral therapy

AIDS patients found on the follow-up study, promptly treat opportunistic infections in which they appear who is in line with the treatment conditions to give free anti-retroviral treatment. Serious patients treat in Zhongnan Hospital of Wuhan University.


Timely adjustments based on the assessment of the results of interventions and methods of intervention in order to achieve better results. After the end of the project by the Hubei Provincial Communications Department and the Wuhan University Zhongnan Hospital and the Hubei Province, Xiangfan City, Center for Disease Control and Prevention, the composition of a third party will have the effect of implementation of the project for final evaluation.

2. The purpose:

1. Improve the construction workers and surrounding residents of awareness of AIDS knowledge;

2. Reduction of construction workers and surrounding residents are affected by AIDS population discrimination;

3. Reduce construction workers and surrounding residents for AIDS high-risk behavior;
4. Explore, summarize and promote the large-scale infrastructure construction projects in AIDS prevention experience.

**Part 4  Project Principle**

The design and implementation of the project had always been guided by the following principle:


2. combine with the local CDC AIDS and STD prevention work

3. coordinate with construction progress.

4. voluntary, confidential, equal cooperation.

**Part 5  Organization and Responsibilities**

1. The implementation of organization

   1. Zhongnan Hospital Wuhan University sign the agreement of AIDS prevention with Xiangfan City Center for Disease Control.

   2. The AIDS prevention leading group is established, and Cheng Wu deputy director of Cuijiaying Project is designated as group leader, some leaders of Project department and CDC as members. Make clear every member’s responsibilities and put forward concrete requirements.
2. Principles

1. Zhongnan Hospital of Wuhan University in Hubei Province is mainly responsible for the overall design and implementation of AIDS prevention projects program, supervision and coordination.

2. The project Office of communications Department in Hubei Provincial is mainly responsible for project management and coordination.

3. The construction headquarters of Cuijiaying Project is responsible for Supervision and coordination.

4. Xiangfan City Center for Disease Control is mainly responsible for the specific implementation of the project, at the same time all of its construction workers and surrounding residents of entertainment places were the target population.

Part 6 Strategy and Activity

1. The progress of the project is divided into three stages.

Outline of the first stage: Determine the AIDS prevention organization unit, work out the AIDS prevention scheme. In order to do better of AIDS prevention work of Cuijiaying Project, Zhongnan Hospital Wuhan University sign an agreement with Xiangfan City Center for Disease Control. The construction headquarters and CDC of Xiangfan issued the “the implementation views on AIDS prevention of Cuijiaying navigation-power junction project”. The AIDS prevention leading group is established, and Cheng Wu deputy director of Cuijiaying Project is designated as group leader, some leaders of Project department and CDC as members. Make clear
every member’s responsibilities and put forward concrete requirements. After the document issued, every unit enhances information communication, make sure the AIDS prevention carry out successfully.

The second phase is pilot test of the education programs.

1. Determine the intervention people: The intervention people are construction staff of Cuijiaying Project (including personnel of Hubei Provincial Communications Department, construction managers, construction workers) Entertainment workers and surrounding residents.

2. Divide the intervention work:

   (1) Construction workers: The intervention work carried out by Cuijiaying Project headquarters, project department Xiangfan CDC and Zhongnan Hospital

   (2) Entertainment workers: The intervention work carried out by STD and AIDS prevention department, their partner and other people.

3. Preparation work of the intervention: Communicate and coordinate with the target population: the project team shifted their workers from August 2007 to April 2008 according to project progress. During this time we carried out no less than agreement people. Accomplish the baseline survey and AIDS prevention knowledge survey of the construction workers of the second stage from May 2008 to July 2009, at the same time develop education partner, spread 100% condom item, promote voluntary test work.

4. Intervention principle

   (1) combine with AIDS and STD prevention work
(2) voluntary, confidential, equal cooperation
(3) coordinate with construction progress

5. Intervention process

From August 2007 to July 2009, total 24 months, divided into two stage.

(1) the first stage: August 2007 ~ April 2008

(2) intervention measures of the first stage

① provide condoms to construction workers and people in entertainment free, and the number of condoms is more than this two kinds of people.

② Provide promotional materials about, including “AIDS and STD prevention” foldings, “AIDS prevention” pamphlet, “AIDS prevention” pokers. The number of materials is more than the construction workers and people in entertainment.

③ Put up posters including AIDS posters, VCT, wall maps, which are in the workers gathering place. There are three different kinds of publicity materials in every manager department and work area.
Hold lectures on AIDS and STD. The lecture will be held at least one time at each manager department and work area, which includes the basic knowledge of AIDS prevention, some factors influencing health, basic knowledge of STD and some clinic points of common STD.

Make voluntary consultation test. According to the voluntary consultation principal and procedure, answer their question of the voluntary construction workers and residents, fill in the VCT form, make HIV, hepatitis B virus and treponema pallidum test of the voluntary people the number of which is no less than the agreement.

play the VCD about AIDS and STD prevention. Combine concentrated projection and construction team projection together, cover more than 85%
people.

⑦ Provide "Migrant workers must-read manual". No less than the two kinds of people.

⑧ Provide condoms from time to time. Install vending machine, at the same time provide condoms free three times, the amount according to the need of construction workers and residents.

⑨ Provide available promotional material related to AIDS at every county and area, at least three times, the amount according to the need of construction workers and residents.

(3) Intervention time of second stage: May 2008 ~ July 2009

(4) Intervention measures

① Provide AIDS and STD prevention materials

② Provide condoms free to construction workers and people at entertainment place

③ Make voluntary consultation test. Make HIV screen test free, along with Hepatitis B virus and treponema pallidum test.

④ Hold lectures on AIDS and STD. The lecture will includes the basic knowledge of AIDS prevention, some factors influencing health, and carry out questionnaire survey.
Make statistical analysis, write report and submit

The third stage: project results and assessment
Management of intervention work and quality control

(1) Every preparation work must be done before intervention at the scene.

(2) Train workers, make them master knowledge of AIDS, skills of interventions and communications with related population.

(3) Reach the expected intervention effect.

From August 2007 to July 2009, the average AIDS knowing rate of Cuijiaying Project workers is more than 98%, the condom usage rate is 100% when have sex with non-marital partner. To June 2009, the average AIDS knowing rate of people working in entertainment places surrounding
construction places is 98.93%, the condom usage rate is 95% when have sex with non-marital partners.

2. Implementation of intervention plan

1. In early August 2007, 5 project team members including Professor Gui Xien, went to Xiangfan City Health Bureau and the construction site to make organization and coordination, diagnostic visits, base visits. and made an informal discussion with Cuijiaying Project responsible people on the importance of AIDS prevention and communicated this project, also gave out brochures and cards about 10 copies.

2. On September 14, 2007, Professor Sheng-Xiang made an AIDS lecture to headquarters managers of Cuijiying Project, with 30 people participated.
3. From November 2007 to April 2008, carried out a baseline survey of more than 300 project managers and construction workers. Used the "AIDS knowledge and behavior questionnaire" to survey 268 people, got 256 valid questionnaires. Collected a total of 260 blood samples through voluntary testing, one HIV positive person was found through screening, evidence for HIV infection by confirmed experimental; syphilis test results were negative, 5 positive for hepatitis B surface antigen, and positive rate of 6.10%. Installed 3 vending machine sets at the construction site, with the activities of giving out 500 condoms at the scene; issued 350 "love life, to ensure the safety and health" Reading books for workers and managers; 350 AIDS pokers; 290 cakes of souvenir soap; 231 ball-point pen; posted 12 AIDS posters.

4. From May 2008 to June, carried out the intervention and evaluation work. On the evening of June 2, professor Sheng wanxiang played the movies of "AIDS knowledge" for the engineering personnel, and gave out 51 copies of baseline questionnaires and brochures. On the morning and afternoon of June 3, the Working Group came to the construction site twice, made publicity and education of AIDS prevention knowledge for workers, And 98 copies of baseline questionnaire were issued at the scene, the total of the "AIDS knowledge and behavior questionnaire" surveyed 149 people, got 146 valid questionnaires, gave out 320 condoms and 151 brochures, 151 cakes of small gifts (soap). Before and after intervention the statistical analysis of
questionnaire see Table appendage. The results showed that AIDS through various forms of intervention, target population of AIDS prevention knowledge and awareness have increased.

5. In order to consolidate the results of the previous intervention, Xiangfan City CDC, engineering headquarters and project department carried out a large-scale AIDS prevention and health education activities at Cuijiying project department on August 1, 2008. Li Tao director of Xiangfan CDC used slides to explain the core information of AIDS prevention and also carried out the activities of voluntary AIDS counseling and testing, materials distribution, and condom distribution, small gifts, ecc. which got a positive response of workers and managers. Activities were reported to the publicity through the Xiangfan Daily, Xiangfan Evening News, Xiangfan television, Xiangfan People's Broadcasting Station. More than 600 engineering and management personnel took part in this activities, issued 3500 copies of leaflets, 800 brochures, 200 AIDS poker, 400 condoms, more than 300 copies of AIDS knowledge and behavior questionnaires, 8 people voluntary to accept antibody testing, released 150 ball-point pen, 8 cakes of soap on-site. through this activities the three ways of HIV infection, prevention measures have been
strengthened once again, and guided the target population to establish a safe
life style and learned to protect themselves or their families from HIV infection.

6. Places related sex services used "CSW health questionnaire". Now 327
people are investigated, voluntary testing sample of 300 people, HIV were
negative, including hepatitis B surface antigen positive for 28 people, the
positive rate is 9.3%, syphilis positive for 6 people, positive rate is 2.0 %. In
put up 118 posters in the Services-related sites, gave out 538 condoms. To do
a good publicity and education work in sex-related services places, trained
eight peer educators and provided the appropriate financial support in
Xiangcheng area. 14 teams of the existing works 17 teams have been
evacuated, according to the construction schem.

7. From October to December 2008. From December 2008 to July 2009 is
the third stage of the Cuijiying project, that is, equipment installation and
debugging stage. 52 installers and some 155 construction workers will be the new people to construction site. According to the construction progress, we made the training seminars on AIDS prevention to 52 installers on March 7-8, 2009, Professor Sheng Wanxiang explained knowledge about AIDS prevention and control, issued 51 copies of the baseline questionnaire, AIDS 102 copies of publicity materials of AIDS prevention, 32 gifts, 255 condoms, 32 people voluntary for free blood samples testing.

8. June 30, 2009, the same publicity and education and behavioral interventions had been done to surrounding residents. Issued 262 copies of the baseline questionnaire, 250 copies promotional materials on AIDS prevention, 210 gifts, 525 condoms.

9. Developed 5 peer education members, promoted 100 percent condoms project, promote voluntary monitoring deeply.
10. From July 2009 to November further completed the AIDS Prevention of 155 scattered construction workers, "CSW Health Survey Questionnaire" and the intervention.

Part 7 Outcome

1. Effect Evaluation of Health Education about ADIS Prevention

In order to investigate the effectiveness and sustainability of the mold of ADIS prevention health education work in migrant workers we have developed various forms of activities about health education and behavior intervention, including propaganda and counseling, holding lectures, playing movies, dispensing condoms and so on since the launch of ADIS prevention program in Cuijiaying Navigation and Electricity Project. Besides, we make questionnaire survey before and after the activities above. Results of survey analysis are as follows.

1. Intervention Object

The objects are construction worker, management staff of Cuijiaying Navigation and Electricity Project and casino, and surrounding residents.

2. Intervention method

Relevant target groups were sampled by cluster sampling method and series of activities about health education and intervention were developed, questionnaire survey and comparative analysis carried out before and after the intervention respectively to evaluate their effect. Questionnaires are offered by Zhongnan Hospital, Wuhan University. Inquirers who are trained by Xiangfan Health Education Office before the survey guided the target group to fill in questionnaires which were then taken back all together. The number of questionnaires taken back is 1196,
1165 of which are available, including 602 before intervention and 563 after intervention, and the taking back rate of available questionnaires is 97.41%.

3. Survey Content
The content comprise five aspects: general status, source of ADIS knowledge, basic knowledge of ADIS, behavior and attitude, totally 34 questions, which mainly about awareness of AIDS infectivity, epidemic trends, infection source, route of transmission, prevention methods, related policies of AIDS prevention, their attitudes to drugs, sex, related health activities, AIDS sufferers and so on.

4 Method of Statistic Analysis
Data is recorded in by Microsoft Excel and analyzed with Epi6 software.

5 Results Analysis
5.1 General information
5.1.2 Age: 363 individuals are more than 30 years old, accounting for 34.16%; 802 individuals are less than 30 years old, accounting for 68.48%.
5.1.3 Gender: 1122 male individuals, accounting for 96.31%; 43 female persons, account for 3.69%.
5.1.4 Education level: 75 individuals are above junior college, accounting for 6.44%; high school, 278 people, account for 23.86%; junior middle school, 416 people, account for 54.59%; primary school and below, 176 people, account for 15.11%.
5.1.5 Time being employed: More than half a year, 892 individuals, account for 76.57%; less than half a year, 273 individuals, account for 23.43%.
5.1.6 Income: More than 1000 Yuan per month: 801 people, account for 68.76%; 500-1000 Yuan per month: 265 people, account for 22.75%; less than 500 Yuan per month: 99 people, account for 8.50%.

5.2 Source of AIDS knowledge and information
5.2.1 933 people have seen or accepted the materials about AIDS prevention
and health education, accounting for 80.09%; 232 people haven’t, accounting for 19.91%.

5.2.2 Route of getting AIDS prevention knowledge: The situation of the respondents’ route to get AIDS prevention knowledge is seen in Table 1. The main ways are through television and broadcast, secondly through newspaper and magazine.

<table>
<thead>
<tr>
<th>Route</th>
<th>Number</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Television and broadcast</td>
<td>910</td>
<td>77.87</td>
</tr>
<tr>
<td>2. Newspaper and magazine</td>
<td>665</td>
<td>57.08</td>
</tr>
<tr>
<td>3. Doctors in hospital</td>
<td>166</td>
<td>14.25</td>
</tr>
<tr>
<td>4. Propaganda of their own unit</td>
<td>609</td>
<td>52.27</td>
</tr>
<tr>
<td>5. Propaganda of other unit</td>
<td>245</td>
<td>21.03</td>
</tr>
<tr>
<td>6. Colleague, countrymen, friends, relatives</td>
<td>233</td>
<td>20.00</td>
</tr>
<tr>
<td>7. Other ways</td>
<td>100</td>
<td>8.58</td>
</tr>
</tbody>
</table>

5.2.3 The situation of AIDS knowledge before and after intervention

Table 2. Awareness rate of AIDS-related knowledge before and after intervention

<table>
<thead>
<tr>
<th>Question</th>
<th>Before intervention</th>
<th>After intervention</th>
<th>X²</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Have you ever heard of AIDS?</td>
<td>578</td>
<td>557</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>96.01</td>
<td>98.93</td>
<td>9.894</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>3.2 Is AIDS infectious</td>
<td>523</td>
<td>559</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>86.88</td>
<td>99.29</td>
<td>67.74</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>
3.3 The source of AIDS

3.4 Which way can transmit AIDS

3.6 Do you know the HIV-Ab testing organization

3.7 Is HIV-Ab testing free

3.8 Is the treatment AIDS patient free

3.9 The tendency of AIDS development in our country

Table 5.2.4 Knowledge about AIDS: Awareness rate before and after intervention (see e 2). The question of title 3.1 has no significant difference before and after intervention, but both are higher than 95%, which indicates that the target population have heard AIDS mainly through other routes before the implementation of our program. The percentage of correct answers to other questions have been significantly increased after intervention.

5.2.5 Method of AIDS prevention: The awareness of methods of AIDS prevention before and after intervention (see table 3). As seen in the table except question 8 and 12 the percent of correct answers to other questions have been increased prominently after intervention.

Table 3 Awareness situation of method to prevent AIDS before and after intervention

<table>
<thead>
<tr>
<th>Questions</th>
<th>Before intervention</th>
<th>After intervention</th>
<th>$\chi^2$</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Avoid being bitten by mosquitoes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of correct</td>
<td>Percent (%)</td>
<td>Number of correct answers</td>
<td>Percent(%)</td>
</tr>
<tr>
<td></td>
<td>answers</td>
<td></td>
<td>answers</td>
<td></td>
</tr>
<tr>
<td>2. Don’t abuse drug and share syringe</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>518</td>
<td>86.05</td>
<td>537</td>
<td>95.38</td>
</tr>
<tr>
<td>3. Reduce unnecessary transfuse and</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>423</td>
<td>70.27</td>
<td>508</td>
<td>90.23</td>
</tr>
<tr>
<td></td>
<td>271</td>
<td>45.02</td>
<td>453</td>
<td>80.46</td>
</tr>
</tbody>
</table>
4. Correctly use condom when have sexual behavior

<table>
<thead>
<tr>
<th></th>
<th>Before</th>
<th>After</th>
<th>Increase</th>
<th>( \chi^2 )</th>
<th>( \alpha )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injection</td>
<td>417</td>
<td>69.27</td>
<td>483</td>
<td>85.79</td>
<td>45.189</td>
</tr>
</tbody>
</table>

5. Block maternal-infant transmission

<table>
<thead>
<tr>
<th></th>
<th>Before</th>
<th>After</th>
<th>Increase</th>
<th>( \chi^2 )</th>
<th>( \alpha )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal-infant transmission</td>
<td>165</td>
<td>27.41</td>
<td>425</td>
<td>75.49</td>
<td>269.052</td>
</tr>
</tbody>
</table>

6. Treat STD as soon as possible

<table>
<thead>
<tr>
<th></th>
<th>Before</th>
<th>After</th>
<th>Increase</th>
<th>( \chi^2 )</th>
<th>( \alpha )</th>
</tr>
</thead>
<tbody>
<tr>
<td>STD</td>
<td>231</td>
<td>38.37</td>
<td>427</td>
<td>75.84</td>
<td>166.189</td>
</tr>
</tbody>
</table>

7. Don’t donate blood in illegal blood collecting unit

<table>
<thead>
<tr>
<th></th>
<th>Before</th>
<th>After</th>
<th>Increase</th>
<th>( \chi^2 )</th>
<th>( \alpha )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood</td>
<td>346</td>
<td>57.48</td>
<td>441</td>
<td>78.33</td>
<td>57.729</td>
</tr>
</tbody>
</table>

8. Isolate ADIS suffers to protect other people

<table>
<thead>
<tr>
<th></th>
<th>Before</th>
<th>After</th>
<th>Increase</th>
<th>( \chi^2 )</th>
<th>( \alpha )</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADIS</td>
<td>496</td>
<td>82.39</td>
<td>482</td>
<td>85.62</td>
<td>2.24</td>
</tr>
</tbody>
</table>

9. Don’t swim with AIDS patients

<table>
<thead>
<tr>
<th></th>
<th>Before</th>
<th>After</th>
<th>Increase</th>
<th>( \chi^2 )</th>
<th>( \alpha )</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIDS</td>
<td>515</td>
<td>85.55</td>
<td>522</td>
<td>92.72</td>
<td>15.29</td>
</tr>
</tbody>
</table>

10. Make propaganda for AIDS prevention

<table>
<thead>
<tr>
<th></th>
<th>Before</th>
<th>After</th>
<th>Increase</th>
<th>( \chi^2 )</th>
<th>( \alpha )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propaganda</td>
<td>207</td>
<td>34.39</td>
<td>433</td>
<td>76.91</td>
<td>212.501</td>
</tr>
</tbody>
</table>

11. Care for and help AIDS patients

<table>
<thead>
<tr>
<th></th>
<th>Before</th>
<th>After</th>
<th>Increase</th>
<th>( \chi^2 )</th>
<th>( \alpha )</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIDS patients</td>
<td>153</td>
<td>25.42</td>
<td>436</td>
<td>77.44</td>
<td>315.029</td>
</tr>
</tbody>
</table>

12. Keep far away from AIDS patients, don’t eat with them

<table>
<thead>
<tr>
<th></th>
<th>Before</th>
<th>After</th>
<th>Increase</th>
<th>( \chi^2 )</th>
<th>( \alpha )</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIDS patients</td>
<td>409</td>
<td>67.94</td>
<td>491</td>
<td>87.21</td>
<td>61.483</td>
</tr>
</tbody>
</table>

5.2.6 ADIS-related behavior (see Table 4)

5.2.7 Respondents’ AIDS-related sexual behavior and cognition

5.2.8 Proportion of respondents who have pre-marital or extramarital sex is 23.92% and 22.38% before and after the intervention, which don’t have many differences. With regard to the question about usage of condoms, condom usage rate rise from 42.2347% before intervention to 95.38% after intervention.

5.2.9 There are no significant differences before and after intervention in the cognition of therapy to sexually transmitted diseases, but, the rate of correct answers to the right choice of medical institution of sexually transmitted diseases rise from 27.91% before intervention to 74.42% after intervention.

5.2.10 Drug behavior and manners of respondents
There is no significant difference in the proportion of respondents who drug abuse before and after the intervention which were 21.26% and 18.65% respectively; Proportion of sharing syringes decreased from 85.719% before intervention to 44.05% after intervention.

Table 4 ADIS-related behavior and cognition situation before and after intervention

<table>
<thead>
<tr>
<th>Title</th>
<th>Before intervention</th>
<th>After intervention</th>
<th>( \chi^2 )</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Having pre-marital or extramarital</td>
<td>144 23.92</td>
<td>126 22.38</td>
<td>0.388</td>
<td>&gt; 0.05</td>
</tr>
<tr>
<td>2. Rate of condom usage in pre-marital or extramarital sex</td>
<td>253 42.23</td>
<td>537 95.38</td>
<td>379.427</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>3. Awareness of STD</td>
<td>431 71.59</td>
<td>443 78.68</td>
<td>7.806</td>
<td>&gt; 0.05</td>
</tr>
<tr>
<td>4. Treatment of STD</td>
<td>168 27.91</td>
<td>419 74.42</td>
<td>251.805</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>5. Drug abuse</td>
<td>128 21.26</td>
<td>105 18.65</td>
<td>1.24</td>
<td>&gt; 0.05</td>
</tr>
<tr>
<td>7. Sharing injectors</td>
<td>516 85.71</td>
<td>248 44.05</td>
<td>223.731</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>8. History of blood donation</td>
<td>155 25.75</td>
<td>137 24.33</td>
<td>0.31</td>
<td>&gt; 0.05</td>
</tr>
<tr>
<td>9. Selection of legal blood collection site</td>
<td>338 56.15</td>
<td>387 68.74</td>
<td>19.628</td>
<td>&lt; 0.01</td>
</tr>
</tbody>
</table>

5.2.11 Behavior and attitude about blood donation of responders

The proportion of responders who choose legal blood collection site rises from 56.15% to 68.74% after intervention.

5.2.12 Related attitude to ADIS
2.5.1 Responders’ related attitude to ADIS before and after intervention (see Table 5)

Table 5: Statistics of related attitude to ADIS before and after intervention

<table>
<thead>
<tr>
<th>Questions</th>
<th>Before intervention</th>
<th>After intervention</th>
<th>( \chi^2 )</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would you like to live with AIDS patients</td>
<td>336 55.81%</td>
<td>455 80.82%</td>
<td>83.43</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Is it necessary to provide condoms to prostitute</td>
<td>410 68.11%</td>
<td>467 82.95%</td>
<td>34.43</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Is it necessary to have large propaganda and education</td>
<td>537 89.21%</td>
<td>537 95.38%</td>
<td>15.42</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>Can health sectors refuse ADIS patients</td>
<td>519 86.21%</td>
<td>531 94.32%</td>
<td>21.43</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>How to intercommunicate with ADIS patients</td>
<td>487 80.8%</td>
<td>515 91.47%</td>
<td>27.04</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Can our government control prevalence of ADIS</td>
<td>351 58.31%</td>
<td>438 77.8%</td>
<td>50.56</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Will you understand ADIS prevention knowledge initatively</td>
<td>527 87.54%</td>
<td>522 92.72%</td>
<td>8.694</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Will you tell friends about ADIS prevention knowledge</td>
<td>532 88.37%</td>
<td>533 94.67%</td>
<td>14.71</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

As can be seen from the table, with regard to respondents’ related attitudes to AIDS before and after the intervention, all have been significantly increased except question No. 3 after intervention activities.

Part 8 conclusion

1. Summary
Through the previous work, we make clear the basic situation of the target population, AIDS knowledge, attitude, behavior and other information, which provide a train of thought for further AIDS publicity and intervention. Through the implementation of this project, very significant results can be seen by Statistical analysis of survey results. There are great improvement of target population in terms of AIDS-related knowledge, or attitude compared with before the implementation of the project.

The assessment of the effects in this project through a questionnaire survey shows that the implementation of the project in the previous stage is successful, the survey results should be pay more attention suggested by the relevant information.

The majority of construction personnel are migrant workers employed by construction units temporary, who are highly mobile and difficult to fixed, male, less than 30 years of age, below junior school, working more than half a year for the majority, and have a certain income (1000 yuan / month or more accounted for 75.63%). With the establishment of long-term mechanism, there is important significance to carry out AIDS prevention in this part of the crowd.

There is less access to obtain AIDS knowledge and information from this unit and other departments, and lower level of interpersonal communication at the same time, suggesting that the relevant units should pay attention to AIDS prevention, make sure to carry out AIDS protection measures. Low levels of
interpersonal communication should be related to low awareness, the concept of AIDS and other factors.

Judging from the knowledge of AIDS, people are clear of the harm of AIDS before this project, but the source of infection, route of transmission, antibody detection such knowledge rate is lower, which is the focus of future work. About the methods in the prevention of AIDS, care for and help AIDS patients, publicity of AIDS prevention knowledge, maternal and child block knowledge and sexually transmitted diseases, these knowledge rate are lower.

About attitudes on AIDS, that whether prepared to live with AIDS patients in the same community and how to communicate with AIDS patients have a low knowledge rate, reflecting a significant portion of people have fear, psychological discrimination to AIDS patients. It is necessary to strengthen the guidance of persons involved in the investigation, because construction workers have low level of education, poor understanding.

The AIDS prevention program in Cuijiaying navigation-power junction project was able to successfully implement and achieved results. Express my sincere thanks to the Support of World Bank, the Ministry of Transportation in Hubei Provincial, Xiangfan City Center for Disease Control and the construction unit of the relevant staff.
And we recommend that the World Bank to provide more funds to promote AIDS prevention work on other highways, so that more groups of people affected by AIDS benefit from it.

2. suggestion

1. Recommend that the World Bank to provide more funds to promote AIDS prevention work on large-scale construction projects, so that more groups of people affected by AIDS benefit from it.

2. Interventions can be taken these means such as radio, television, film shows, interactive activities.

Zhongnan Hospital Wuhan University

Xiangfan City Center for Disease Control of Hubei Province

December 12, 2009