

# Evaluation of the 100% Condom Programme in Thailand



**UNAIDS**  
**Case study**

**July 2000**



---

---

# **Evaluation of the 100% Condom Programme in Thailand**

---

---

**UNAIDS**

**in collaboration with**

**AIDS Division, Ministry of Public Health, Thailand**



**UNAIDS Case Study**

**July 2000**



---

**UNAIDS/00.18E (English original, July 2000)**

---

Joint United Nations Programme on AIDS (UNAIDS) 2000. All rights reserved. This document, which is not a formal publication of UNAIDS, may be freely reviewed, quoted, reproduced or translated, in part or in full, provided the source is acknowledged. The document may not be sold or used in conjunction with commercial purposes without prior written approval from UNAIDS (Contact:

UNAIDS Information Centre).

The designations employed and the presentation of the material in this work do not imply the expression of any opinion whatsoever on the part of UNAIDS concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries.

---

**UNAIDS - 20 avenue Appia, 1211 Geneva 27, Switzerland**

Telephone: (+41 22) 791 46 51, Fax: (+41 22) 7914187

Email: [unaids@unaids.org](mailto:unaids@unaids.org), Internet: <http://www.unaids.org>

## **Acknowledgements**

The evaluation research on which this case study is based was conducted by the Institute for Population and Social Research, Mahidol University. Funding for implementation of the research was provided jointly by UNAIDS and the AIDS Division of the Thai Ministry of Public Health. Technical support at the design stage of the research was provided by WHO/GPA. This case study was adapted by Tim Brown from a report prepared by Mahidol University. The author wishes to acknowledge the members of the research team in the evaluation of the 100% Condom Promotion Programme, Institute for Population and Social Research, Mahidol University: Aphichat Chamrathirong, Varachai Thongthai, Wathinee Boonchalaksi, Philip Guest, Churnrurtai Kanchanachitra, and Anchalee Varangrat. Special thanks is also extended to the government offices, drug stores, and sex establishments that provided invaluable information.

# TABLE OF CONTENTS

<b>Introduction: A Brief History of the 100% Condom Programme</b>	1
The urgency of the HIV situation in Thailand	1
Piloting a new programme to promote condom use in commercial sex	1
Moving the 100% Condom Programme to the national level	2
The programme makes a difference	3
<b>Taking a Closer Look at the 100% Condom Programme</b>	6
An evaluation study of the 100% Condom Programme: the IPSR study	6
Biases in the study	8
<b>How the Programme was Implemented in the Provinces</b>	10
Organizational structures of the programme	10
Key provincial activities for implementing programme components	15
<b>Has the Programme Worked? Effectiveness at the National and Provincial Levels</b>	26
Evidence of effectiveness at the national level	26
Evidence of effectiveness at the provincial level	28

<b>Factors Influencing Successful Implementation</b>	33
<b>Considerations for Strengthening the Programme</b>	36
Improving access indirect sites	36
Lower levels of condom use in indirect sites	37
Adapting the programme to the changing balance of direct and indirect sites	37
<b>Lessons Learned</b>	39
Best Practice Criteria	42
<b>For more information</b>	45
<b>References</b>	47

## ***Introduction: A Brief History of the 100% Condom Programme***

### ***The urgency of the HIV situation in Thailand***

Thailand was the first Asian nation to recognize that it had a major HIV/AIDS problem, a problem so serious as to deserve priority on the national agenda. While sporadic testing among female sex workers, injecting drug users (IDUs), and men having sex with men detected little HIV through the end of 1987, the rapid growth of HIV infections among IDUs in early 1988 spurred efforts to monitor the epidemic systematically. By mid-1989, a national sentinel serosurveillance system had been established. In the first round of testing in 14 provinces conducted in June 1989, high infection levels were detected among sex workers in the country's northern provinces, especially among sex workers in brothels. By June 1990, with the system expanded to include all 73 provinces, HIV prevalence among brothel-based sex workers had risen from 3.1 per cent in June 1989 to 9.3 per cent nationally (provincial median) and was climbing fast. By June 1991, it had grown to 15.2 per cent. Prevalence was also growing rapidly among young Thai men - who were tested when conscripted into the military at age 21 - from 0.5 per cent in November 1989 to 3.0 per cent in November 1991. Studies of behaviour and HIV infection among these conscripts and other populations soon demonstrated that most new HIV infections in Thailand were occurring through commercial sex.

### ***Piloting a new programme to promote condom use in commercial sex***

From the earliest days, many Thai public health workers and researchers had feared that widespread sex work would come to dominate the Thai epidemic, a viewpoint strongly validated by the available data from the early 1990s. Thus, even as early as 1989, a new

approach to promoting condom use in commercial sex was being pioneered in Ratchaburi province: the 100% Condom Programme.

The programme addressed the observation that sex work establishments requiring condom use or sex workers insisting on condom use would often lose clients and money to those who did not. Because many clients did not want to use condoms, there were economic disincentives for establishment owners who promoted safer behaviour at their establishments: men could simply go to another establishment or to a sex worker who did not require condoms. Regional Communicable Disease Control officials in Ratchaburi in 1989 realized that one solution to this fundamentally economic problem was to require that all establishments and sex workers in the province use condoms in every sex act. This would assure owners and managers that they would not lose business by enforcing the policies requiring condom use, since clients could not go anywhere else to obtain unprotected sex. They initiated a collaborative effort among local authorities, public health officers, sex establishment owners, and sex workers to ensure that clients could not purchase sexual services without condom use in the province. When this programme was implemented, the rates of sexually transmitted diseases (STDs) dropped quickly and significantly. Soon afterwards, the efforts were expanded into the provinces around Ratchaburi (e.g., Samut Sakhon province) and in a few other provinces in other parts of the country (e.g., Phitsanulok in the north) with equally positive results. During this early period the Faculty of Medicine at Khon Kaen University was also piloting similar approaches in Khon Kaen, as was the Thai Red Cross Society in Bangkok and Pattaya.

### ***Moving the 100% Condom Programme to the national level***

Despite these initiatives, economic disparities still existed across provincial borders. If a man could not buy unprotected sex in Ratchaburi, he could always go across the border to any neighbouring province and purchase it there. Armed with strong epidemiological and behavioural data, which showed the important role of sex work in the Thai epidemic and the success of these pilot efforts, a set of planned steps to make

this programme national policy was undertaken. In 1991, this included presentations to a regional meeting of provincial governors and their staff in April, to high level administrators of the Ministry of Public Health in June, and to the permanent secretaries of a number of government ministries in July. In August, the National AIDS Committee, chaired by the prime minister, issued a resolution to implement the 100% Condom Programme on a national scale. The resolution stated:

*“The governor, the provincial chief of police and the provincial health officer of each province will work together to enforce a condom-use-only policy that requires all sex workers to use condoms with every customer. All concerned ministries will issue directives that comply with this policy.”*

Several national efforts in the early 1990's under the umbrella of the National Condom Promotion Campaign were undertaken concurrently with the 100% Condom Programme. Condoms were added into the Medical Device Act which required quality assurance. To ensure high quality condoms, a working group was established between the Ministry of Public Health and Ministry of Industry to revise existing condom quality control guidelines, implement quality checks, and ensure enforcement of the guidelines. Condom use was promoted through mass media, peer education, and outreach programmes aimed at specific groups throughout the country. The Ministry of Public Health began providing approximately 60 million condoms a year free of charge, primarily distributed to sex establishments. After the adoption of the resolution, the Prime Minister's Office and Ministry of the Interior organized presentations at national meetings of all provincial governors and all district officers and provincial and district chiefs of police. The Ministry of Public Health also organized meetings of all provincial chief medical officers to encourage the implementation of the program as quickly as possible and to provide reports back to the MOPH on a regular basis. These meetings demonstrated the high level of national commitment to the programme and instructed the meeting attendees to implement the programme locally. By mid-1992, all provinces reported that the 100% Condom Programme was in place.

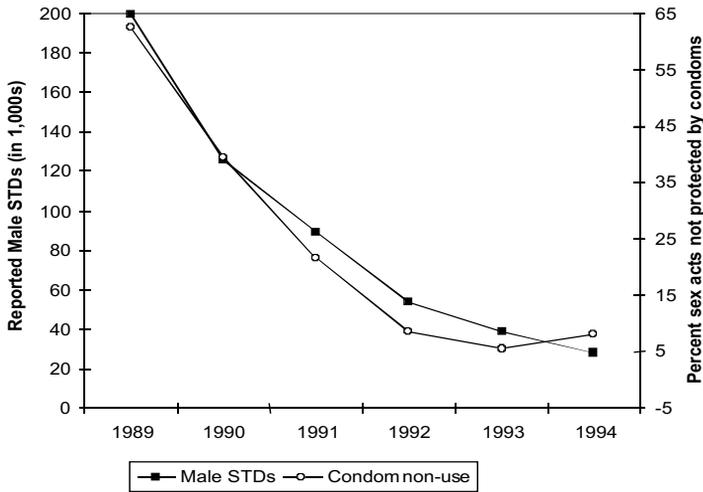
---

## ***The programme makes a difference***

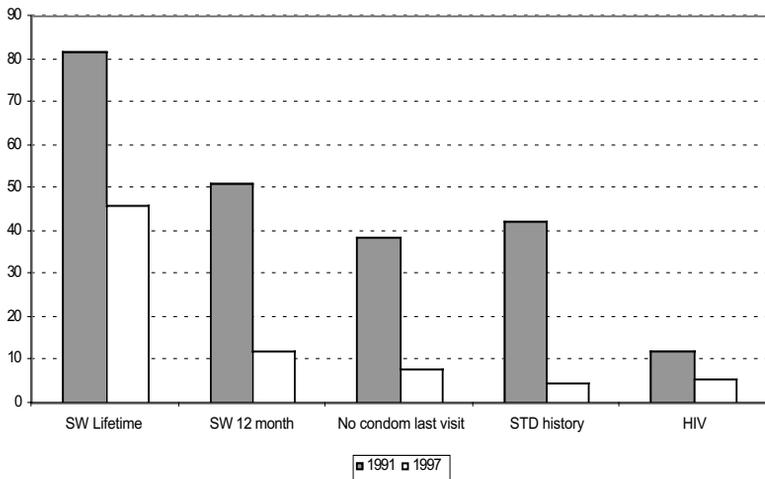
Initially, many people did not believe the programme would work. For example, reporters from a Thai newspaper went to Chiang Mai in 1991, shortly after the implementation of the programme there, seeking to purchase sex without a condom. To their surprise, they were unable to do so. Small studies have examined the ability to purchase sex without a condom, and have found that most sex workers are quite resistant to the idea. Numerous other studies, as well as questions asked of sex workers during the national sentinel serosurveillance, now routinely find that condom use in brothels and massage parlours exceeds 90 per cent (for a review of these studies, see UNAIDS 1998). These findings imply that the 100% Condom Programme, in combination with other prevention efforts, has been very effective at discouraging unprotected intercourse in establishment-based sex work (Chamrathirong et al. 1999a).

There are clear indications that these efforts have had an impact on HIV transmission at the national level. Nationwide monitoring of condom use in brothel-based sex work and of levels of reported STDs among men has shown a strong relationship between the increase in condom use and the rapid decline in STDs (see Figure 1). Data from studies of army conscripts have shown a steady increase in their use of condoms with sex workers, a decline in the number of visits to sex workers, and a decline in reported histories of STDs and in HIV prevalence (see Figure 2). Studies found a tenfold reduction in STD incidence and a fivefold reduction in HIV incidence among young Thai men between 1991 and 1993 (Celentano et al. 1998). Thus, all indications are that the 100% Condom Programme has been an important contributor to large-scale reduction of HIV transmission throughout the country (see UNAIDS 1998).

**Figure 1. Comparison of increase in condom use with decline in reported male STDs on a national scale, Thailand, 1989-1994**



**Figure 2. Changes in behaviour (use of condoms in sex work and visits to sex workers) and resulting changes in STD history and HIV prevalence, northern Thai male conscripts 1991-1997**



(Source: Nelson et al. 1998)

## ***Taking a Closer Look at the 100% Condom Programme***

### ***An evaluation study of the 100% Condom Programme: the IPSR study***

Such anecdotal evidence, small studies, and even national figures do little to tell us about the essential components of the 100% Condom Programme, to evaluate the factors that have contributed to its success, or to identify the programme's limitations. In order to address these issues, UNAIDS and the Ministry of Public Health of the Royal Thai Government (MOPH) supported the Institute for Population and Social Research (IPSR) of Mahidol University to design and implement a detailed study in mid-1997 examining the effectiveness of the programme at the provincial level.

The IPSR research team developed a two-phase strategy to explore the effectiveness of the programme in the provinces. In the first phase, they analysed existing data and held in-depth interviews with key provincial officials involved in the implementation of the programme. The team used the information gathered in this phase to identify the most important programme components and to develop ways of defining and measuring 22 programme inputs in the provinces (see Box 1). Detailed questionnaires were then designed to assess these inputs in the provinces. The second phase of the project surveyed implementing officials, pharmacists, and sex establishment owners and managers to measure the programme inputs at the local level. This phase also used surveys with sex workers and young men (many of whom were clients of sex workers) to determine the programme's local impact on behaviour. These research efforts are described in greater detail in the reports prepared by the team (Chamrathirong 1999a, 1999b).

**Box 1. Programme inputs defined and measured by the IPSR team**

- I. Demand creation and campaign
  - 1) Policy and strategy setting
  - 2) Future commitment
  - 3) Campaign directly with sex workers
  - 4) Campaign directly with owners
  - 5) Other campaign activities
- II. Availability and accessibility of condoms
  - 6) Condom supply management
  - 7) Stock of condoms
  - 8) Storage of condoms
  - 9) Quality of condoms
  - 10) Distribution to sex workers
- III. Personnel and management, target setting, and evaluation
  - 11) Sufficient personnel
  - 12) Efficiency (self-estimate)
  - 13) Target setting
  - 14) Evaluation activity
  - 15) Per cent success (self-estimate)
- IV. Provision of direct physical examinations and mobile clinics
  - 16) Physical examinations for sex workers
  - 17) Mobile clinics
- V. Outside help and collaboration
  - 18) Budget support
  - 19) Collaboration with the provincial governor
  - 20) Provincial committee on AIDS meetings
  - 21) Collaboration with police in arranging meetings or closing sex establishments
  - 22) Collaboration with sex establishments

---

This study had three major components, conducted in approximately one-third of all Thai provinces (24 out of 76 provinces, 6 within each of the country's 4 regions):

- A review of existing data to determine the extent and nature of sex work in each province and to validate observed declines in STDs at government clinics.
- A series of in-depth qualitative and quantitative interviews in each province with government personnel involved in the implementation of the programme, owners and managers of sex establishments, and local pharmacists. These provided quantitative measurements of the programme's inputs.
- Detailed surveys of both sex workers (approximately 100 per province) and young males (approximately 200 per province) to measure the effects of the programme.

The remainder of this document reports on the findings of this study in three key areas: the implementation of the programme at the provincial level; the effectiveness of the programme in the provinces studied; and a contextual analysis of the known limitations of the programme as well as the factors contributing to successful implementation.

### ***Biases in the study***

As with all studies, this one has certain biases. Although the 100 per cent condom programme attempts to reach all types of sex establishments, the study had an emphasis on direct sex establishments that should be kept in mind. Sex work sites in Thailand are often divided into direct and indirect establishments. In direct establishments, such as brothels or hotels, the services available are primarily sexual and often take place on site. In indirect establishments, such as bars, massage parlours, cafés, or restaurants, sexual services are offered in the context of other services such as food, massage, or entertainment, and sex often, but not always, occurs off site. The sites for interviewing sex workers in this study were primarily direct for two reasons. First, sites were selected from Ministry of Public Health lists that are routinely kept in

---

each province. These lists are maintained locally from a combination of reports from STD patients about where they contracted STD, reports from sex workers coming for STD exams, knowledge of other sites by local health officials and police, and historical information on where sexual services are available. In some provinces, they may overrepresent direct sites, which are easier to identify and where more sex, and consequently more STD transmission, occurs. Second, the study team frequently encountered difficulties in interviewing sex workers at indirect sites. Either the owners would refuse access or the sex workers would maintain that they did not offer sexual services.

An additional bias relates to the selection of provinces. While the first half were selected randomly, in some provinces it was not possible to locate the required number of sex workers for interviews. Thus, some provinces - where there were low numbers of sex workers or where the MOPH had more limited access to sex workers - were excluded.

Taken together, these biases suggest that the findings presented here apply more to the situation at direct sex work establishments in areas of Thailand where the study team had good access. The findings of this study say less about what is happening in indirect sites.

## ***How the Programme was Implemented in the Provinces***

The fundamental idea of the 100% Condom Programme is to enlist the aid of provincial administrative and health authorities, governors, the police, sex workers, and the owners and managers of sex establishments to make it impossible for clients to purchase sexual services without using a condom. In addition, the programme must be implemented with a large coverage, at least in a cluster of provinces so that clients cannot 'escape' the programme even if they visit sex establishments in an adjacent province. This simple-sounding idea, however, hides a somewhat more complex reality. Many components and the cooperation of multiple agencies and individuals are needed to implement the 100% Condom Programme effectively. Box 2 gives an example of how the programme has been implemented in the province of Phuket, in southern Thailand. These activities are typical of those conducted in provinces around the country as part of this programme.

### ***Organizational structures of the programme***

Although the directive to implement the 100% Condom Programme came from the highest levels of the Thai government, the actual management and implementation of the programme's components make use of both existing and recently added health structures at the regional and provincial levels. In most provinces it was implemented primarily with existing local staff and health structures. Management at these levels makes the programme more responsive to local needs and helps to increase the relevance of the strategies and activities to the local situation. However, it also means that, while there are many features common to most or all provinces, the actual programme implementation details do vary somewhat from place to place. This report will focus primarily on those features and factors that are common to most or all of the provinces.

**Box 2. An example of the implementation of the 100% Condom Programme at the provincial level: Phuket province in southern Thailand**

Phuket provides an example of the typical implementation of the 100% Condom Programme in Thailand. The Provincial Public Health Office (PPHO) in Phuket is the main organization responsible for the policies and strategies of the programme in the province. The PPHO receives support from the Provincial AIDS Committee, which is chaired by the governor of Phuket and consists of personnel from the provincial administration, the police, and the PPHO itself'. Each year, the committee holds meetings to inform responsible about problems, trends, and the spread of AIDS locally. In the past year, two meetings were held, both with the active support from the governor.

A number of approaches are used in Phuket to ensure that every sex worker uses a condom every time sexual services are provided. Support is provided for regular physical examinations for sex workers. The PPHO works closely with police in visiting sex establishments and encouraging the owners to cooperate with the efforts of the programme. Other activities include having condoms available in every hotel room, providing 100-baht health vouchers to sex workers, displaying stickers and posters advocating condom use, and holding meetings among sex establishment owners and sex workers. These meetings provide information on STDs, HIV/AIDS, and proper condom use. In the past year, (In 1996) one meeting of the owners was organized, with 40 owners in attendance. In addition, approximately 100 meetings were held with groups of sex workers, an indication of the programme's emphasis on frequent contact with sex workers.

The PPHO provides STD clinics for physical examinations and for free condom distribution to sex workers. Sex workers receive weekly physical checks for STDs. Results are monitored closely, and a positive test is taken as an indication of condom non-use or breakage. This information is then used to direct prevention efforts. At each appointment, a sex worker is provided with a box of 100 condoms. If these are used up before her next visit, she can come back to the clinic and pick up more. A mobile clinic is also used which provides physical check-ups at local establishments approximately 12 times a month.

The PPHO reserves an adequate stock of condoms well in advance, anticipating upcoming needs. The condoms are obtained from the Regional Office of

**Box 2 (Cont.)**

Communicable Disease Control (RCDC) several times a year. In the last year, the PPHO made 3 withdrawals of 50 crates containing 4,000 condoms for a total of 600,000 condoms. In the last year, the PPHO received 600,000 condoms. These are not kept long before distribution and are stored in an air-conditioned room away from sunlight, heat, and humidity. Condom quality is closely monitored, and the PPHO has received complaints that some of the condoms break easily, that size is not appropriate for the clients, or that the colour, odour, and taste are not appropriate for the sex workers' needs.

The Phuket PPHO has 11 personnel working on the programme, but most perform other duties as well. The programme has set a target of 95 per cent condom use. Although a formal evaluation has not been done in the last year, the PPHO believes, based on declining STD rates in the province, that the programme has been successful. The office is satisfied with the effectiveness of the programme, and both senior and lower-level personnel agree that the programme should continue.

Financial support for the programme comes partly from the provincial public health budget, with condoms provided by the RCDC. Besides this assistance, the programme receives support from various individuals and organizations, especially the governor, who pays serious attention and provides active support to the programme.

In summary, it appears that the 100% Condom Programme in Phuket has been implemented successfully, with good cooperation among the various stakeholders, including the governor, provincial health authorities and workers, the police, sex establishment owners, and the sex workers themselves.

Adapted from Chamrathirong et al. 1998a.

Responsibilities for programme management are divided between two levels: the Regional Offices of Communicable Disease Control (RCDCs) and Provincial Public Health Offices (PPHOs). Each of the twelve RCDCs in the country has broad public health responsibilities for five to seven provinces, with the 100% Condom Programme being only one of the many public health efforts the offices supervise. Within each RCDC, three units have responsibilities related to the 100% Condom Programme in addition to their other public health duties:

- the Pharmacy Section, responsible for the storage of condoms provided by the Ministry of Public Health
- the Implementation Support Section, responsible for estimating needs for condoms and managing their distribution to the provinces
- the STD and AIDS Centre, with responsibility for providing STD examinations and prevention programmes for sex workers.

RCDCs have two additional units with responsibilities related to the 100% Condom Programme:

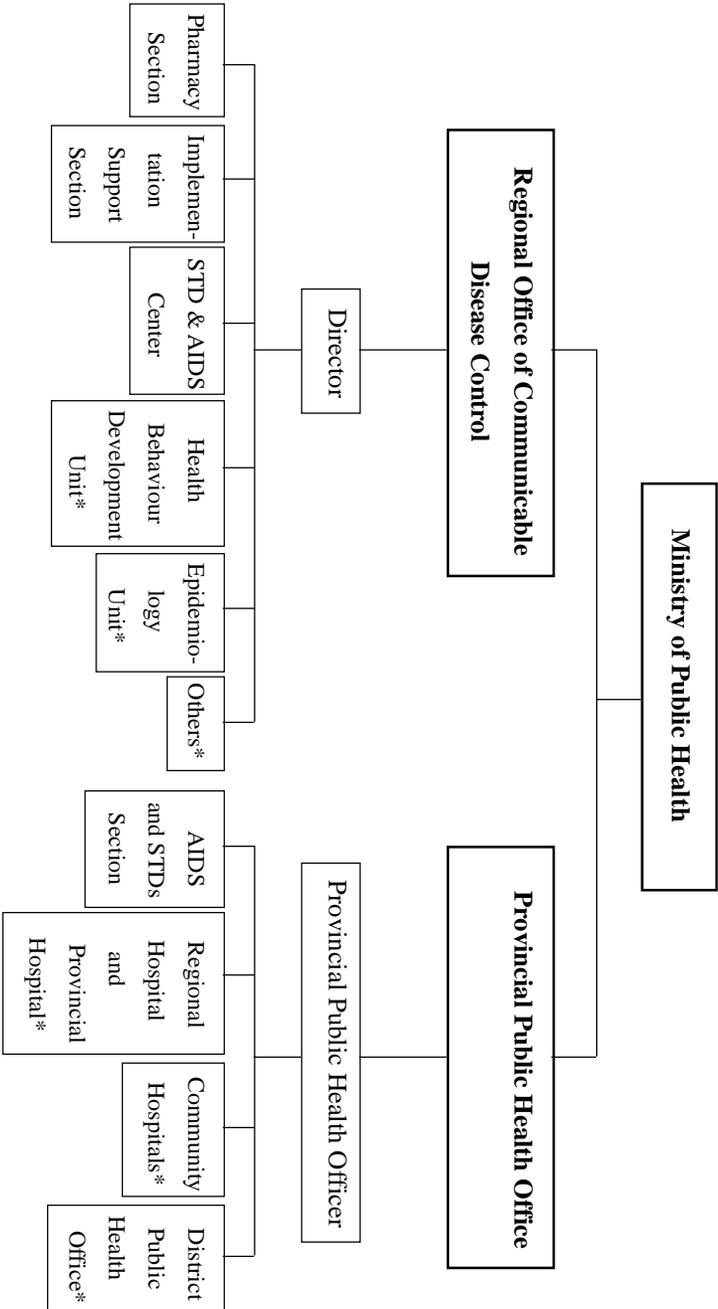
- the Health Behaviour Development Unit, providing HIV/STD prevention and care training for sex workers and the general population
- the Epidemiology Unit, which assists in monitoring the use of condoms in sex establishments.

These organizational structures are illustrated in Figure 3. For this study, personnel at 10 of the 12 RCDCs were interviewed about their policies, strategies, and activities related to the 100% Condom Programme.

In the PPHOs, the AIDS and STD Section is responsible for prevention programmes for sex workers and others, especially male clients; for monitoring and evaluating the programme; and for the direct distribution of condoms to establishments, sex workers, and other groups. These activities may involve regional, provincial, and district hospitals and district public health centres when their assistance is helpful and relevant (e.g., for the distribution of condoms or for STD treatment). For this study, key staff were interviewed at the PPHOs in each of the 24 provinces included.

While the RCDCs have larger responsibilities for supervising the programme at the regional level in the provinces they manage, they also often become directly involved in activities. Although the PPHOs collaborate closely with the RCDCs in the programme, the former re-

**Figure 3 Organizational structure of the 100% Condom Programme at the regional and provincial levels**



Note: \* = No interview conducted

main responsible for most field activities in their own provinces. This means that the activities associated with the 100% Condom Programme in any given province are the sum total of the activities of the RCDCs and the PPHOs. In the description that follows, the combined results of RCDC and PPHO activities will be used in discussing the activities undertaken.

### ***Key provincial activities for implementing programme components***

From the initial qualitative analyses, the research team identified five essential components of the 100% Condom Programme:

1. Campaigns to build programme support and create demand for condoms
2. Availability and accessibility of quality condoms
3. Appropriate staffing, management strategies, and evaluation
4. Checkups and STD care for sex workers and STD clients
5. Collaboration between health workers, governors, police, sex establishment owners/managers, and sex workers.

After analysing its qualitative and quantitative research findings, the IPSR study team identified several activities within these five major components.

#### ***1. Building programme support and creating demand for condoms***

*1.1 Meetings were held with the owners/managers and regular contact was maintained.*

An obvious requirement of the programme is to enlist the cooperation of the owners and managers of the establishments - they control access to the sex workers for prevention programmes and STD services. Various methods were used to establish a basis for cooperation.

Three-quarters of the provinces reported meetings within the last year with the owners and managers of the establishments, with anywhere from 10 to 100 owners and managers in attendance. This claim was validated by interviews with the owners and managers, about two-thirds of whom reported attending such meetings at least once a year. At these meetings, the local AIDS and STD situation was described, prevention was discussed, the support of the owners and managers was enlisted for condom promotion, and better relationships were developed between provincial health officers and the owners and managers. Contact with owners and managers was maintained regularly in arranging site visits for prevention programmes or STD checks among the sex workers. Finally, if it were felt necessary, implicit threats of police action could be used on occasion to enlist cooperation. In about one-third of the provinces, the police assisted in inviting the owners and managers in for the meetings. In most provinces, this strategy was rarely used; the PPHOs felt that, in the long term, developing cooperative, collaborative relationships with the owners was more effective than coercion. However, the involvement of the police helped to provide legitimacy to the programme in the eyes of brothel owners, even if police did not participate in implementation activities.

### *1.2 Visits to sex workers were conducted at establishments.*

The other major activity seen in virtually all provinces was regular visits by health workers to the establishments to discuss prevention alternatives with sex workers and to provide STD testing and treatment. In interviews with the owners and managers, over 90 per cent reported that health workers had come to the establishments to discuss health issues. These visits were frequent, with over half of the owners/managers saying they occurred at least once a month. The visits focused primarily on the sex workers: only about a third of the establishments reported that health workers had talked to any establishment personnel other than sex workers about prevention issues. These regular visits to sex establishments by pro-active health workers clearly play an essential role in raising awareness, building demand for condom use, and keeping the focus on the issues.

### *1.3 Other activities were implemented.*

Because the implementation of the programme was locally managed, a variety of other activities to promote condom use were undertaken in some provinces, but not in others. These included training peer educators among the sex workers, supplying two free condoms in all hotel rooms, and setting up projects to improve the relationships between sex workers and establishment owners. Other activities included the use of financial incentives, such as providing STD services at reduced rates if no STDs were detected.

## **2. Availability and accessibility of quality condoms**

It is obvious that, if condoms are unavailable, they cannot be used when commercial sex occurs. Thus, considerable attention was paid to the logistics of condom procurement and distribution at both the RCDC and PPHO levels.

### *2.1 Condom supplies equal to demand were provided by the government.*

Condoms were supplied from the central Thai government by the Ministry of Public Health to each RCDC according to the RCDC's annual plan - that is, a supply sufficient for the demand anticipated for sex work in that region. The RCDCs would then redistribute them to the PPHOs upon request. Most provinces requesting condom supplies about once a month. This system functioned fairly well. Most PPHOs reported no supply problems at all, although five reported one instance of short-fall in the year preceding the study. This was primarily related to a shortage of size 52 mm condoms, which were in high demand, while size 49 mm was oversupplied.

### *2.2 Condoms were stored in appropriate conditions.*

Personnel at both the RCDC and PPHO levels were well educated about the requirements for condom storage to protect quality. When possible, RCDCs stored condoms in air-conditioned warehouses on shelves raised above the floor to avoid humidity. Those with no air con-

ditioning would place them in warehouses away from the walls in raised low stacks. Similar steps were taken at the PPHOs, with careful attention to avoiding sunlight and humidity, providing good air circulation, and keeping the condoms raised above the floor. However, the primary measure to ensure quality was to match supply and distribution so that the condoms were not long in storage. Health staff referred to this as a “fresh in and fresh out” policy.

### *2.3 Condoms were distributed directly to sex workers.*

The primary distribution mechanism was to provide boxes of condoms to the sex workers when they came for STD check-ups, which were required or strongly encouraged in each province. Typically, a sex worker would be given a box of 100 condoms at a time and could ask for more if she needed them. In only one-eighth of the provinces surveyed were the condoms actually delivered to the establishment owner rather than to the sex workers. When the sex workers were asked where they got condoms, three-quarters reported a government source, and about one-quarter said from pharmacies, but only 10 per cent reported getting them from the sex establishments (the total is greater than 100 per cent because they could report more than one source). A number of the RCDCs also distributed condoms to STD clinic attendees, the military, NGOs, private enterprises, or other populations and places where they felt they would be used effectively to prevent HIV transmission.

### *2.4 Staff paid careful attention to quality issues.*

From the interviews, it was clear that staff at both the RCDC and PPHO level paid attention to quality issues with the condoms they were distributing. Almost all of the RCDCs and three-quarters of the PPHOs reported some problems, including condoms breakage or shortages of condoms of the proper size. In addition, they reported complaints from the sex workers and clients about the unattractive packaging and lack of different flavours or colours of the government condoms. Although the organizations were clearly tracking these issues, the high number of quality issues reported indicates a need for expanded quality control.

---

### **3. Appropriate staffing, management strategies, and evaluation**

Sufficient staff, appropriate management strategies, and regular monitoring and evaluation are essential to the effectiveness of any programme. This is particularly true of the 100% Condom Programme, where the behaviours in question occur behind closed doors in sites that are not always easily located, and the use of condoms can be ascertained only indirectly, through self-reports or condom distribution figures. Meeting the needs of this programme requires active staff able to go into the field frequently, well-thought-out strategies for locating and managing sites that have ongoing transmission, and concrete means of ascertaining that the programme is having an impact. These needs were met through a number of strategies.

*3.1 Existing staff with appropriate skills were involved in the programme, and additional staff were occasionally added when needed.*

For many decades, Thailand has had a strong government STD care and prevention effort, which has expanded substantially in recent years as the severity of the AIDS epidemic became apparent. These activities operate through STD/AIDS clinics at the regional, provincial, and district levels. The staff already involved in these activities were supplemented by additional staff as needed to mount overall HIV/AIDS prevention activities and ensure good coverage in each province. As described in the section on management structure, the 100% Condom Programme responsibilities were integrated into the responsibilities of a number of different departments or units at the RCDC and PPHO level, rather than creating a new vertical programme. This helped to contain costs, produce a sustainable programme, and provide sufficient staffing to support the required activities. In this study, only two of the ten RCDCs reported insufficient staff in one or more departments to support this programme. All of the PPHOs felt their staffing was adequate for the programme's needs.

---

*3.2 Updated lists of sex establishments were prepared periodically and used to direct prevention efforts to sites with ongoing risk.*

The AIDS and STDs Section in each PPHO regularly maintained listings of sex work establishments in the province and updated these every six months. Updates were based upon reports from men presenting at government clinics with STDs (who were asked where they contracted the STD) or results of STD testing among sex workers either in clinics or at the establishments themselves. These reports were then used to direct prevention efforts to those sites where STDs were still occurring, since continued transmission suggested failure to use condoms.

*3.3 Sites where STDs still occurred received increased attention for prevention and enforcement activities.*

The existing infrastructure for STD prevention and care meant that STDs could be used as an indicator of ongoing risk behaviour and failure to use condoms consistently. Thus, when provincial officials detected sites with ongoing STD transmission, they would make the owners and managers aware of this fact, expand the treatment services offered or step up STD testing at those sites, and increase the number of visits to those sites to ensure compliance with the programme. Because the programme had been launched with strong support from the national government and both the governors and police were actively engaged from the start, these groups could provide the necessary authority to ensure that owners and managers cooperated. But, while the authority clearly existed to close down sex establishments, by the time of this study that power was not being used very frequently. No RCDCs and only one PPHO reported closing a site in the preceding year. Instead, most expressed reservations about calling the police in for closures; they felt either that they already had good cooperation from the owners and managers or that it would damage their relationships with them, making it more difficult to conduct prevention activities.

*3.4 Appropriate targets were set and progress was evaluated periodically.*

All but two of the RCDCs and five of the PPHOs had set targets for the programme in terms of expected levels of condom use. Most RCDCs and PPHOs set either 90 or 100 per cent targets, but a small number of PPHOs set targets as low as 70 per cent, perhaps reflecting their own field experience. In the last year, 3 RCDCs and 15 PPHOs conducted evaluations of the programme. The most common indicators for evaluation were STD incidence, followed by HIV infection rate among sex workers, and numbers of condoms used. Even in provinces that did not conduct a formal evaluation, almost all were closely monitoring STD rates. About half of all provinces looked at numbers of condoms distributed and/or HIV infection levels among sex workers, and about half used the proportion of condom use in sex work, a behavioural indicator.

#### **4. Check-ups and STD care for sex workers**

As described above, STD check-ups and care played the most important role both in directing prevention activities to the sites of greatest need and in evaluating the success of the 100% Condom Programme. Thus, it is not surprising that most RCDCs and PPHOs placed a high premium on STD-related activities.

*4.1 Government STD services for sex workers were available and heavily utilized in every province.*

In every province, either the RCDC or the PPHO maintained an STD clinic, and each of these clinics provided physical exams for sex workers as part of its services. In describing their overall strategies, many RCDCs and PPHOs required sex workers to obtain check-ups between two and four times per month. Having regular STD checks provided an incentive to the workers to avoid infection, while simultaneously allowing the follow-up of problem sites with field visits and expanded prevention activities.

These services were well utilized by the sex workers. In the survey conducted as part of this project, 91 per cent of the sex workers re-

ported receiving regular STD check-ups, ranging from 95 per cent in the brothels to a low of 86 per cent in the restaurant sites. Over 90 per cent of those getting check-ups received them at least twice a month, and over 90 per cent received these services from government clinics or hospitals. Only in the massage parlours did approximately one-quarter receive their care from private clinics or hospitals rather than from government sources. This reflects the fact that massage parlours represent the upper end of the commercial sex market in Thailand, and many of the women working there can afford private medical services. Every province also had mobile teams that visited sex establishments to provide HIV and STDs education and conduct condom promotion activities.

*4.2 STD care for male STD patients was used to monitor the programme.*

Public sector STD clinics were used in three ways to assist the programme:

1. They provided information to health officials on establishments with ongoing sexual risk
2. They allowed provincial officials to evaluate if sexual transmission of STD and HIV were still occurring, and
3. They allowed indirect evaluation of the success of the programme

## **5. Collaboration between health workers, governors, police, sex establishment owners/managers, and sex workers**

Although sex work is illegal in Thailand, it remains part of the sexual culture, and regular public health services such as STD care are provided for sex workers. Thus, rather than using legal approaches to restrict sex work, which could not curtail demand and would only drive the industry underground and make prevention efforts more difficult, Thailand chose the more pragmatic and effective approach of working cooperatively with all those who influence the sex industry. Thus, the 100%

Condom Programme involves a number of different actors and agencies. These include the National AIDS Committee, provincial governors, the police, regional and provincial health workers, the owners of the establishments, the sex workers themselves, and the clients. Each has different, but essential, roles to play in the execution of the programme, and close collaboration among them is the key to the programme.

*5.1 Central government and governors gave the programme legitimacy and motivated others to participate seriously.*

Because securing the support of the governor ensures the cooperation of others, the programme devoted considerable effort to educating and enlisting the support of governors. These efforts were largely successful in the provinces studied. Almost 60 per cent reported excellent cooperation from the governor, with another third reporting moderate cooperation. In at least one province, the governor even investigated sex establishments himself to ensure that condoms were available in every room. In some cases, governors would write letters to noncooperative owners or managers, insisting on their participation. Only one province reported low levels of cooperation from the governor.

*5.2 Owners and managers provided more access to the workers.*

While it might be hoped that the owners and managers of the establishments would be motivated to take a central role in prevention efforts at their establishments, this was not seen to be the case in this study. Most establishments did not have extensive education programmes of their own, despite often high turnover in staff. Less than half had meetings where they would discuss health matters with the workers. Although those who did hold such meetings said they used them to discuss condoms and STDs, these topics were probably not high on their priority list; almost two-thirds claimed they had never seen STDs in their establishments or only saw them about once a year. Among the sex workers, less than 2 per cent reported anybody associated with the establishment as a significant source of information about the 100% Condom Programme. In terms of enforcing the programme, about four-fifths of the owners and managers said they would refuse a client who

wouldn't use a condom, but the other fifth said it was up to the sex worker. Moreover, only a fifth said they would take any punitive action against a sex worker who didn't use a condom.

*5.3 Health workers provided prevention skills training, condom delivery and promotion, and STD care, and used the STD information to monitor and direct their efforts.*

From the survey among sex workers, it was clear that most of their awareness and information about the Condom Promotion Campaign came from television or health care workers. Health workers and, in some places, NGO workers provided training to sex workers on condom use and negotiation skills. Similarly, most STD care for sex workers and a substantial part of care for clients was provided through government clinics or government on-site STD services. Health workers also took the primary responsibility for managing day-to-day programme activities, condom distribution, and evaluation of ongoing efforts. These constituted the core activities of the programme.

*5.4 Police provided implicit guarantees of enforcement.*

Because the provincial governors took the programme seriously, police did so as well in most cases. There is little doubt that, in the early days of the programme, enforcement actions were taken against establishments in at least some provinces to obtain the owners' cooperation. However, by the time of this study the role of the police seemed to be a much less visible one. The programme input survey found that police assisted in organizing meetings of owners in about a third of the provinces. Thus, at present their primary role seems to be one of potential enforcement, although most provinces are increasingly operating on a cooperative rather than confrontational basis with owners and managers.

*5.5 Sex workers remain the prime motivators of condom use.*

While all the activities of the programme certainly helped to create a supportive environment for condom use and improved STD care, much of the encouragement for using condoms still came from the sex workers. In the survey for this study, sex workers reported that about one-

---

fifth of men put on a condom without request and another two-thirds would let the sex worker put it on without objection. But there remained a core of about 10 per cent of clients who had to be convinced to use condoms, although ultimately less than 1 per cent would totally refuse. This points to a clear need for ongoing training for new sex workers in negotiating condom use with resistant clients.

*5.6 Most clients recognized the need to use condoms and cooperated and they generally received prevention information from sources other than the 100% Condom Programme.*

In the surveys of young men undertaken as part of this project, about two-thirds of those visiting sex workers said condom use was their own idea, while about a fifth attributed it to the sex workers. This indicates that most men have had the importance of using condoms in commercial sex impressed upon them, primarily through mass media campaigns (television, radio, and newspapers). It is worth noting that these media messages were part of the National AIDS education and condom promotion campaigns and were efforts mounted by government agencies (e.g., the Office of the Prime Minister or the Ministry of Public Health), NGOs, or other organizations. Only about 20 per cent of the men listed health workers as a substantial source of information. That is, most of their information and motivation to use condoms came from sources other than the 100% Condom Programme. This indicates the importance of simultaneously implementing campaigns to reach the clients through other avenues.

As the above discussion shows, the effective implementation of this programme requires strong political commitment and the cooperation and assistance of a large number of different individuals and agencies.

## ***Has the Programme Worked?***

### ***Effectiveness at the National and Provincial Levels***

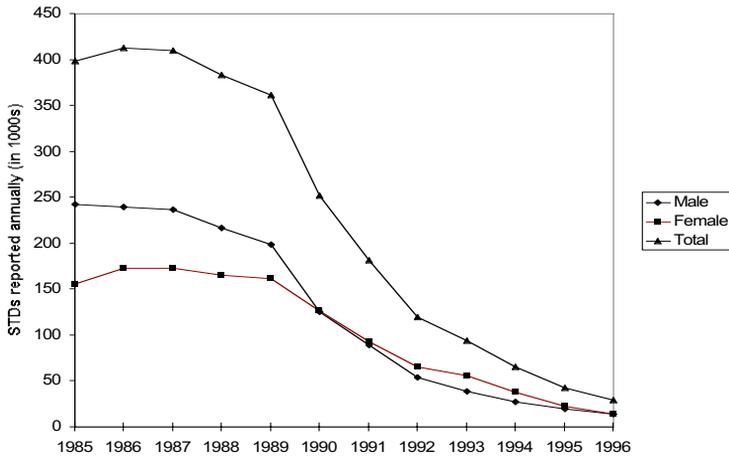
In an overall picture, the 100% Condom Programme, in combination with the National Condom Promotion Campaign, is effective in significantly increasing condom use in sex work throughout the country.

### ***Evidence of effectiveness at the national level***

At the time of this study in mid-1997, the 100% Condom Programme had been in effect nationally for five years. STD rates in the country, as reported by the Venereal Disease Division of the Ministry of Public Health, had fallen over 90 per cent (see Figure 4) since the earliest field trials of the 100% condom programme began in 1989, while condom use at direct sites as reported by the Epidemiology Division of the MOPH had climbed to over 90 per cent (see Figure 5). As was shown in Figure 1, the rise in condom use at direct sex establishments tracked the fall in STDs quite well, implying a strong relationship between condom use in sex work and the rate of STDs in the country. This relationship has been supported by numerous studies among men reporting the suspected source of their STDs (see Rojanapithayakorn and Hanenberg 1996). It is interesting that the rapid decline in STDs has been noticed since 1990, around the time the 100% Condom Programme was implemented in one sixth of the Thai provinces, and STDs continued a steady decline through the national full scale implementation of the 100% condom programme in mid-1992 and afterwards.

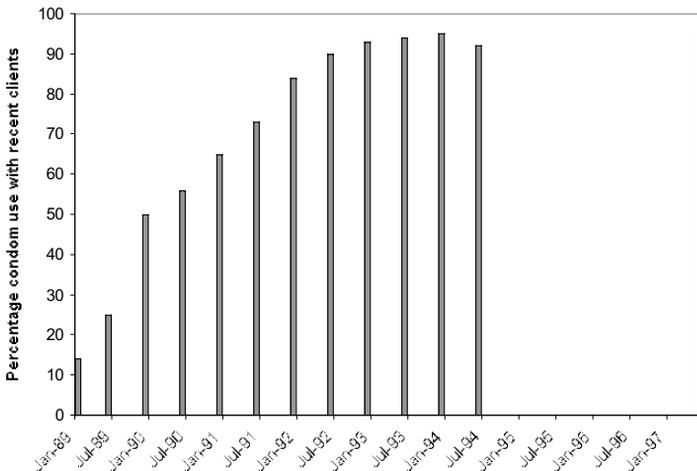
Some have questioned whether the decline in reported STDs resulted from men and women changing from government clinics to other treatment sources. This does not appear to be the case: the reported numbers appear to represent a real decline in STDs on a national scale as documented in other studies (e.g., UNAIDS 1998). This interpretation was supported by the interviews done with pharmacists in this study,

**Figure 4 Reduction in male, female, and total STDs reported at government clinics, 1985-1996**



Source: Venereal Disease Division, Ministry of Public Health, Thailand

**Figure 5 Increase in condom use with recent clients as reported by sex workers at direct sex establishments in the sentinel serosurveillance**



Source: Epidemiology Division, Ministry of Public Health, Thailand

over 80 per cent of whom reported a decline in the sale of antibiotics used for STD treatment over the last five years (Chamrathirong *et al*, 1999a). It was also supported by the fact that roughly three-quarters of the sex workers interviewed reported receiving STD services from a government source, indicating no major shift in treatment-seeking behaviour by sex workers.

### ***Evidence of effectiveness at the provincial level***

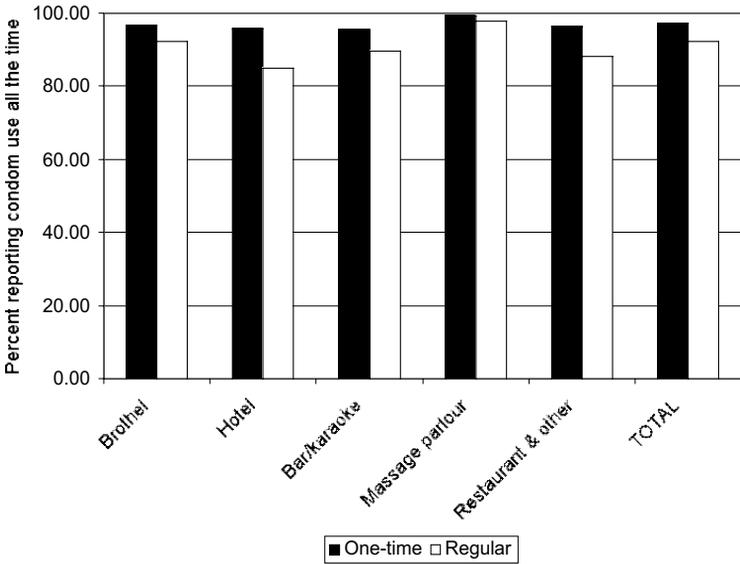
From the IPSR study, two sources of information about the effectiveness of the 100% Condom Programme at the provincial level were available: interviews with sex workers and interviews with young men, about half of whom had visited sex workers at some point. Both indicated that the programme, in conjunction with other prevention activities in the community and the national AIDS education and condom promotion campaign, had made major progress towards its objective of 100 per cent condom use.

#### ***Condom use as reported by sex workers***

The roughly 2,000 sex workers interviewed in this study reported approximately two clients per day during the week prior to the interviews. They reported uniformly high condom use with commercial sex partners: 97 per cent always used condoms with clients they would see only one time, and 93 per cent always used them with regular clients (those they would see repeatedly). This slightly lower use of condoms with regular clients has been seen in many other studies in Thailand.

Consistent condom use with one-time clients was high in all types of sex establishments, around 96 per cent in brothels, bars, restaurants, and hotels, and over 99 per cent at massage parlours (see Figure 6). However, more variation was seen between the different types of establishments in consistent condom use with regular clients. Consistent use was highest at massage parlours (98 per cent), lower at brothel, bars, and restaurants (around 90 per cent), and lowest at hotels (85 per cent). This implies that the 100% Condom Programme efforts have been most effective in the most tightly structured and controlled settings (massage parlours and brothels). When asked if they would

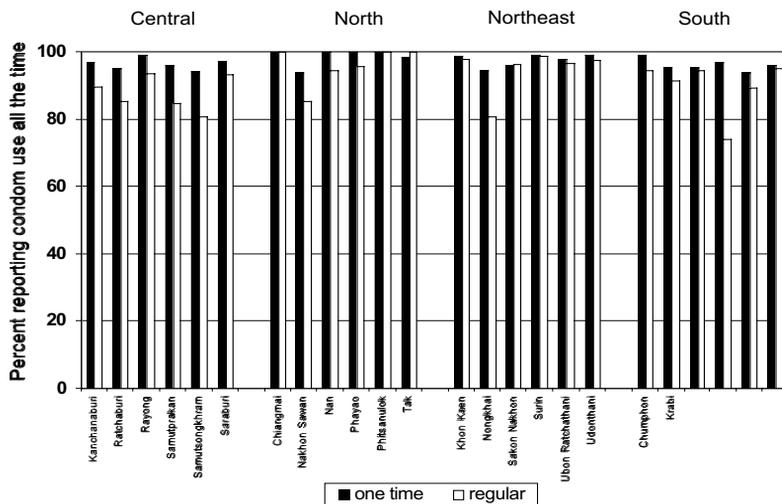
**Figure 6 Percentage of sex workers reporting using condoms every time with one-time and regular clients, by type of establishment**



have sex without a condom for more money, only 3.5 per cent of the sex workers answered “yes,” although almost three-quarters reported having been asked to do so by clients.

On a provincial basis, relatively little variation in consistent condom use with one-time clients was seen (see Figure 7), ranging only from a low of 94 per cent to a high of 100 per cent, which was observed in several provinces in the north. More variation was seen in consistent condom use with regular clients, ranging from a low of 74 per cent to highs of 100 per cent, once again observed in the north. A small regional variation is evident, with the north and northeast having overall rates of consistent condom use with regular clients about 5 per cent higher than the central and southern regions. In addition to this limited variation between regions, each region had one or two provinces where condom use rates with regular clients were closer to 80 per cent and others with rates in the mid- to upper 90 per cent range.

**Figure 7 Percentage of sex workers reporting always using condoms with one-time clients and regular clients, by province and region**



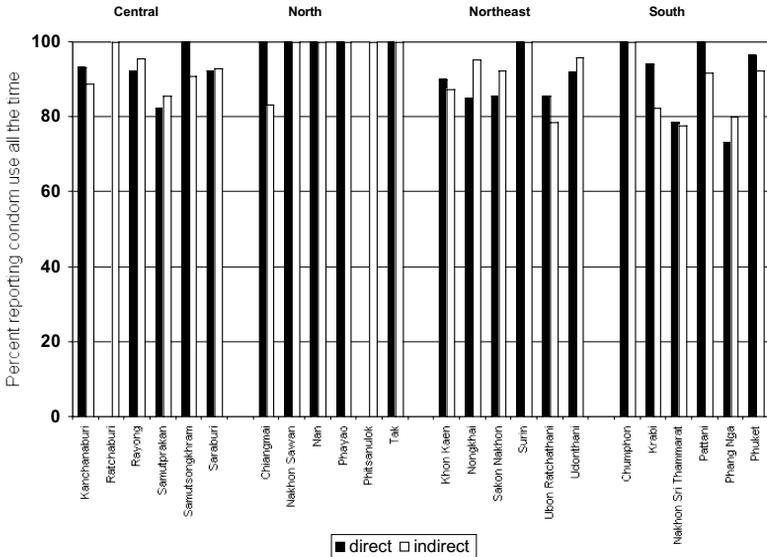
Despite such impressive success, substantial avenues for HIV infection remain for many sex workers. With non-commercial sexual partners, levels of condom use by the sex workers were much lower. For sex with lovers, fiancés, and male friends, the rates of always using condoms varied between 32 and 75 per cent. The net result is that when all partners, both commercial and non-commercial, in the year before the study are considered, only about 60 per cent of the sex workers used condoms consistently with all partners. This implies that the other 40 per cent are still at risk for HIV and STD, largely through their non-commercial sexual partners.

### ***Condom use as reported by clients***

In the course of the study, interviews were done with over 4,000 young men between the ages of 20 and 29 about their sexual behaviour and condom use. About half of them had visited sex workers, but only 16 per cent had done so in the last year.

Condom use by those visiting sex workers in the last year was found to be quite high across all regions and provinces (see Figure 8), above 90 per cent in most provinces. It did, however, vary by whether it was a direct or indirect sex establishment being visited and whether the sex worker was visited regularly or only transiently. Across all provinces, consistent condom use in direct sites was 91 per cent with sex workers they did not know and 88 per cent with sex workers they visited regularly. In indirect sites, it was 91 per cent with sex workers they did not know and 81 per cent with those they saw regularly. These figures probably reflect beliefs by the young men that sex workers at indirect sites are somewhat safer than are sex workers at direct sites. (These rates are slightly lower than those reported by the sex workers, but this may be because the men were selected randomly within the province and may therefore capture more of the clients who visit indirect sites, where condom use is a little lower.)

**Figure 8 Percentage of men reporting always using condoms with direct and indirect sex workers they do not see regularly, by province and region**



As was the case for sex workers, condom use with non-commercial partners was still fairly low - only about 40 per cent claimed to use condoms consistently with fiancées and girlfriends and about two-thirds with other female friends. This may present an important avenue for HIV transmission to young men outside of sex establishments. Another finding with important prevention implications was that roughly 40 per cent of the men did not realize that condoms had expiration dates. This might lead them to use expired condoms with increased risks of breakage.

Thus, all indications from both the national and provincial level data are that the 100% Condom Programme has contributed remarkably to raising condom use between sex workers and clients, but has had little impact on condom use in non-commercial sexual relationships, leaving potential routes for HIV transmission.

## ***Factors Influencing Successful Implementation***

As discussed above, all five major components of the 100% Condom Programme have generally been implemented in most provinces. That is, the overall level of programme inputs is uniformly high across the provinces, with only limited variation. This in itself is a rather remarkable achievement. Similarly, the level of success as measured by self-reported condom use by both sex workers and clients is also quite high.

The original intention of the IPSR study had been to examine in detail the impact of various programme inputs on effectiveness as measured by overall levels of condom use in commercial sex. However, the limited variations found in both the inputs and the outputs (i.e., levels of condom use) made this difficult. For this reason, the study was unable to determine the influence of components present in almost all provinces, such as campaigns to reach sex workers or extensive STD testing and treatment, that doubtless were among the most critical contributors to the success of the programme. It must also be remembered that national AIDS awareness and condom promotion activities were ongoing and certainly contributed as well.

In order to measure the influence of those factors that did vary somewhat from province to province, the analysis was redesigned to look at the sex workers' use of condoms with their regular clients as the output variable. This form of condom use showed the greatest variation between provinces and different types of establishments. Thus, the impact of programme inputs on condom use with regular clients could be ascertained for those inputs that varied from province to province.

The two factors found to influence condom use with regular clients were:

- the extent of collaboration between the various actors within the province

- whether the province was home to one of the Regional Offices of Communicable Disease Control.

Increased collaboration with the governor, police, and establishment owners was found to increase the level of condom use with regular clients. Provinces that were home to the RCDCs were also found to have higher levels of condom use with regular clients. These findings can be tentatively interpreted to mean that the improved programme efforts that result from better collaboration within the province, and the expanded overall programme effort likely to occur in a province where both an RCDC and a PPHO are active, increase the programme's ability to convince sex workers to use condoms with their regular clients, while RCDCs are effective in providing technical support and follow up.

IPSR made a further analysis of the effect of the different inputs on condom use with regular clients at different types of establishments. This analysis found that different inputs were important at different types of establishments. In particular:

1. Accessibility and availability of condoms were more important in brothels than in massage parlours and hotels. This is probably because brothel workers depend largely on government-supplied condoms, while massage parlour and hotel workers also obtain condoms through private sources such as drug stores.
2. In restaurants, the quality of the management of the provincial programme and the provincial staffing levels were found to be more important to an effective programme than in the brothels. This most likely is related to the greater difficulty of reaching the indirect establishments in the provinces. Only with good and effective management can the programme hope to reach these more challenging sites. Moreover, more staffing implies more capacity at the provincial level to reach the sites that were more difficult to access.

The most important lesson to be taken from these findings is that the specific needs of different types of sex establishments may vary and that programmes must adapt to these needs in order to maximize effectiveness.

## ***Considerations for Strengthening the Programme***

### ***Improving access to indirect sites***

In analysing these findings, it is important to keep in mind the limitations of this study, because they relate to areas in which the 100% Condom Programme might be strengthened. This study reached those sites where the government already had the greatest access. It had difficulty recruiting sex workers to interview at many indirect establishments, and it had difficulty locating other indirect establishments. Furthermore, many women at indirect sites did not self-identify as sex workers, making it impossible for the research team to interview many of them.

These same difficulties apply to prevention programmes in some indirect sites. Although the resolution making the programme national policy called for condom use in all commercial sex acts, the emphasis in implementation of the programme has been on those establishments known to the local health officials, although sex workers at some of the other establishments have doubtless been reached through clinic-based efforts and NGO outreach programmes. Sites on the government lists were seen as the source of most HIV transmission since many were detected from STD case reports among sex workers and STD clinic attendees. They were also more accessible to local authorities than were those not on the list. They thus naturally received the bulk of the programme effort. In some indirect sites known to be sex establishments, lack of cooperation was often a problem. Because the owners, managers, and sex workers themselves were often unwilling to admit that sex was sold through these sites, they were not open to prevention activities. Many even refused to distribute condoms to their workers. Thus, while some indirect sites have been reached by the programme, these efforts were less extensive and intensive than those in the direct sites.

---

### ***Lower levels of condom use in indirect sites***

Had more indirect sites been included in this study, it is likely that the disparities in condom use between direct and indirect sites would have been somewhat higher. The Multisite Intervention Research Project on Sex Workers and HIV Transmission (MIRP, see Komatsu *et al*, 1996), implemented by the Thai Red Cross Society, obtained a more complete sample of indirect sites in Bangkok and one northeastern province by conducting a geographic mapping. Geographic mapping is a process in which every street, alley, and walkway is checked for sex establishments, and other sex establishments in the area are located by talking to local clients of sex workers, staff at sex establishments, and other key informants. Overall the project found twice as many sites as were on the government lists at the time. This project also found greater variation in overall levels of condom use among the types of establishments than was found in this study. Condom use with sex workers' last three clients varied from a high of 99 per cent in brothels to only 73 per cent in restaurant-type establishments, with disparities in consistent use rates being even higher. This difference in the two studies' findings was expected: the current study was known to be biased towards more accessible sites. However, it should be noted that even given the limitations of the programme, levels of condom use in even the most indirect types of establishments studied are still very high. The 100 per cent condom programme and other condom promotion activities in Thailand have produced extremely high rates of condom use in commercial sex and the impact of this high level of usage is clear in the rapid decline in STDs and HIV incidence across the kingdom.

### ***Adapting the programme to the changing balance of direct and indirect sites***

For prevention purposes, it is important to note that the balance of direct and indirect establishments is shifting. From both the Venereal Disease Division listings of sites and repeat mappings by the MIRP in Bangkok (see Sittitrai *et al*, 1996), there is evidence that during the early 1990s the number of indirect establishments is increasing, while direct establishments are decreasing (for a discussion see Hanenberg

and Rojanapithayakorn 1998). With the high levels of success seen in direct establishments, the indirect establishments are likely to assume even greater importance in future prevention efforts in Thailand. The 100% Condom Programme will need to strengthen its efforts to locate and work productively with all indirect sites to deal with this changing trend. Alternatively, a new, more comprehensively designed programme is needed, one that puts greater levels of emphasis on working with the harder to reach indirect sites while maintaining the success of efforts in the direct sites.

## ***Lessons Learned***

The following important lessons can be drawn from experiences with the 100% Condom Programme in Thailand and its success in producing high rates of condom use in commercial sex.

1. Political commitment at both the national and local level is important to the success of this programme. The strong and high level national commitment by the Prime Minister, the Minister of Public Health and the Minister of the Interior increased programme participation by local government officers and offices, and they subsequently were able to engage the owners and managers of sex establishments in the programme. The adoption of a national policy regarding the 100% Condom Programme, coupled with aggressive efforts to enlist the aid of provincial governors, set the framework for active programmes at the local level and for using existing health and police infrastructures to ensure participation by sex establishments throughout the provinces. The political commitment is also translated into a consistent supply of good quality condoms for distribution free of charge to sex establishments. This is a crucial feature of the 100% Condom Programme.
2. STD care and 100% condom programme support one another in such a programme. The 100% Condom Programme had a demonstrable effect on the incidence of STDs in almost every province in the country. At the same time, using existing sources of STD care to evaluate the 100% Condom Programme provided positive feedback indicating that the efforts were making a difference. These synergistic interactions contributed to the expansion of both 100% condom programme and STD care efforts in the provinces and helped to build support for the two programmes. They also served to maintain regular contact between sex workers and health workers, improving the relevance of prevention efforts. In future attempts to replicate this pro-

---

gramme elsewhere, careful attention should be paid to using STD treatment sources as both an avenue for 100% condom programme and a means of evaluating the impacts of those efforts.

3. While some enforcement may be helpful in launching a 100% condom programme, in the long run cooperation is the more effective approach. Although, in the early stages of the programme, the governor's backing and police cooperation clearly moved some establishment owners to participate, it is interesting that most RCDCs and PPHOs believed in applying police pressure sparingly. Many expressed the concern that such pressure would either damage the relationships they had built with owners or create negative feelings that would impede future prevention efforts. Similarly, many PPHOs opposed police closings of establishments because they felt it made the sex workers less accessible for prevention.
4. Measurable positive results can be achieved quickly with such a programme. During the pilot phases of this programme, individual provinces would typically start to see declines in STD rates with three to four months of implementation. National rates fell noticeably each year. In situations like Thailand's, where much of the HIV transmission is occurring through commercial sex, focused efforts to reach sex workers and clients can return major benefits quickly and can significantly slow the epidemic.
5. Close collaboration of all the actors is essential to the programme's success. Because each major actor had a different role to play, the programme could not have been successful without their combined assistance. The governors and police helped to open the doors, the owners provided the access, the sex workers convinced the clients to use condoms, the clients recognized the need for condoms. This demonstrates that the most effective prevention efforts are those that involve multisectoral efforts.

6. Sex work is quite varied and takes many forms; programmes must take this into account to design the most effective prevention efforts. The variations by type of establishment in condom use and the factors influencing it seen in this study are likely to be much more pronounced in the early stages of the programme and will become more apparent as efforts expand to more extensive coverage of indirect sites. If programme managers recognize this, watch for the difference, and adapt their programmes flexibly, they will be more effective.
7. When possible, existing health and government infrastructures should be used to keep costs low and increase sustainability. The programme in its current form in Thailand is quite sustainable because it has been well integrated into existing health structures, with a division of responsibility to avoid overburdening any one unit. This has also reduced the need for extensive special budgeting for the PPHOs beyond the provision of free condoms.
8. A 100% condom programme requires complementary efforts to reach the clients. The young men interviewed for this study received little of their AIDS information or knowledge of the 100% Condom Programme from the programme staff or directly as part of this programme. Instead, they received AIDS information, learned their skills and developed norms of condom use in commercial sex through complementary mass media, workplace education, and other prevention programmes (see Phoolcharoen *et al*, 1998). Such simultaneous efforts are essential to the 100% Condom Programme and should be considered part of the overall package. The findings here indicate that future prevention efforts must also strongly promote condom use with non-commercial partners for both clients and sex workers.
9. The programme needs to adapt to the shifting balance of direct and indirect sites in sex work. While condom use has risen greatly at indirect sites over the last several years, the increase has not been as dramatic as at direct sites. With increased condom use, the role of direct sites in HIV transmission has greatly decreased.

This makes efforts to reach all of the indirect sites increasingly important. New and innovative approaches need to be designed and implemented to access the harder to reach indirect sites effectively, a significant challenge given their more clandestine nature.

### **Best Practice Criteria**

This programme meets four of the UNAIDS best practice criteria:

#### **Effectiveness**

The 100% Condom Programme has contributed to substantial and well-documented increases in condom use in sex work throughout Thailand. While use rates are not 100 per cent, they do exceed 90 per cent in many direct and some indirect sex establishments. The programme has had somewhat less success in some harder to reach indirect sites, but condom use rates in these sites are still substantially higher than they were before the start of the programme. Given the role of sex work in HIV transmission in Thailand, and how well the increases in condom use in sex work mirror the major reductions in STDs and HIV incidence observed in the country, this programme has clearly assisted in efforts to control the HIV/AIDS epidemic (UNAIDS 1998). In concert with the National AIDS Education and Condom Promotion Campaign, this programme has also contributed to observed prevalence declines of HIV among young Thai men, pregnant women, and sex workers on a national scale.

Other complementary programmes aimed at young people and the general population also increased condom use in non-commercial sexual relationships. This is especially important because of a shift in sexual behaviour away from commercial sex towards more casual sex.

In 1997, a survey showed that condom use with girlfriends had risen to 40% and with other women to more than 60% (see Table 1). In a survey in 1990 (Sittitrai et al. 1992), consistent condom use with non-commercial female partners was closer to 20%, rising to roughly 30% in

**Table 1** Percentage of men using condoms every time by type of partner in the past 12 months, 1997.

<b>Partner</b>	<b>Percentage of use every time*</b>	
<b>Wife</b> .....	<b>11.5</b>	<i>* compared with all those who ever used condoms</i>
<b>Minor wife</b> .....	<b>66.7</b>	
<b>Fiancée</b> .....	<b>37.9</b>	
<b>Girl friend</b> .....	<b>40.3</b>	
<b>Friend</b> .....	<b>66.2</b>	
<b>Other woman</b> .....	<b>78.4</b>	
<b>Direct regular SW</b> .....	<b>89.0</b>	
<b>Indirect regular SW</b> .....	<b>84.6</b>	
<b>Direct temporary SW</b> .....	<b>94.3</b>	
<b>Indirect temporary SW</b> .....	<b>93.9</b>	
<b>Male</b> .....	<b>57.1</b>	
<b>Male SW</b> .....	<b>2 of 3</b>	

a survey in 1993 (Thongthai and Guest 1995). That represents a major change in behaviour between 1990 and 1997.

### ***Relevance***

The 100% Condom Programme was designed and implemented with a good understanding of both the context and importance of sex work in Thai sexual culture. Rather than trying to eliminate sex work, it chose a pragmatic and cooperative approach of working within the existing institutions to prevent HIV and STD infection. This was strongly in keeping with the traditional non-confrontational nature of Thai society. The programme made good use of existing governmental structures of more than one ministry to enlist the active participation of various sectors of society. Finally, it was aimed at the source of most new infections in the Thai epidemic, as determined from careful epidemiological and behavioural monitoring in the country, making it directly relevant to the local situation. Over time, the shift to indirect forms of sex work has lessened its relevance to the current state of the Thai epidemic, and the

programme needs to make greater efforts to find effective approaches for those sites.

### ***Efficiency***

Good use was made of existing public health and authority structures and personnel within the country to produce rapid increases in condom use on a national scale and rapid expansion of the programme to national coverage. The activities were implemented according to locally developed strategies, with good monitoring and evaluation of behavioural and epidemiological outcomes using existing sources of STD and HIV data, and in accordance with policies laid out at the national level. While considerable resources went into expanding STD care and promoting and delivering condoms as part of this programme, the benefits in infections averted vastly outweigh the resources invested.

### ***Sustainability***

The programme has contributed to changes in norms regarding condom use in sex work and visits to sex workers, changes that are likely to persist. Among young males, condom use in commercial sex is now expected, and reductions have already been seen in the percentage of men visiting sex workers. The programme is sustainable because it was institutionalized within existing national policy, national plan and health infrastructures with strong involvement of people at all levels (national, regional, provincial, and district). In fact, it encourages stronger links between the national, regional, and local efforts because of the technical assistance efforts between the national programme, the RCDCs, and the PPHOs. A strong sense of ownership of the programme was expressed in interviews in almost all provinces, along with a belief that the activities being undertaken were making a difference. The improved relationships among health workers and owners and managers of establishments have made ongoing activities easier. Finally, the national policy and implementation of the 100% Condom Programme have been functioning since the early 1990s. However, in terms of future sustainability, new strategies need to be developed that can be effective in indirect sites.

## ***For more information***

The Mahidol Institute for Population and Social Research has produced two detailed reports describing the research and findings on the evolution of the 100% Condom Programme. These are available from Mahidol University. The full references are:

1. Aphichat Chamratrithirong, Varachai Thongthai, Wathinee Boonchalaksi, Philip Guest, Churnrurtai Kanchanachitra, and Anchalee Varangrat. The Success of the 100% Condom Promotion Programme in Thailand: Survey Results of the Evaluation of the 100% Condom Promotion Programme. IPSR Publication No. 238. Institute for Population and Social Research, Mahidol University, 1999.
2. Aphichat Chamratrithirong, Wathinee Boonchalaksi, and Philip Guest. 100 Percent Condom Programme and the Decline of Sexually Transmitted Diseases (STDs) in Thailand. Unpublished Report. Institute for Population and Social Research, Mahidol University, 1999.

### **For more details contact:**

Dr. Varachai Thongthai  
Deputy Director  
Institute for Population and Social Research  
Mahidol University  
Salaya, Phuthamonthon  
Nakhon Pathom 73170  
Thailand

For more information on the 100% Condom Programme contact:

1. Director, AIDS Division  
Department of Communicable Disease Control  
Ministry of Public Health  
Tiwanont Road  
Nonthaburi 11000  
Thailand
  
2. Dr. Wiwat Rojanapithayakorn  
UNAIDS Asia-Pacific Intercountry Team  
Rajadamnern Nok Avenue  
Bangkok 10200  
Thailand

## **References**

Celentano DD *et al.* Decreasing incidence of HIV and sexually transmitted diseases in young Thai men: evidence for success of the HIV/AIDS control and prevention program. *AIDS*, 1998, 12:F29-F36.

Chamrathirong A *et al.* *The success of the 100% Condom Promotion Programme in Thailand: survey results of the evaluation of the 100% Condom Promotion Programme.* IPSR Publication No. 238. Institute for Population and Social Research, Mahidol University, 1999a.

Chamrathirong A *et al.* *100 Percent Condom Programme and the decline of sexually transmitted diseases (STDs) in Thailand.* 1999b (unpublished report. Institute for Population and Social Research, Mahidol University).

Hanenberg R, Rojanapithayakorn W. Changes in prostitution and the AIDS epidemic in Thailand. *AIDS Care*, 1998, 10:69-79.

Komatsu R *et al.* *Diversity in the Commercial Sex Industry in Bangkok, Thailand.* Presented at the XI<sup>th</sup> International Conference on AIDS, July 1996, Vancouver [abstract no. Tu.C.2661].

Nelson K *et al.* *HIV infection in young men in northern Thailand, 1991-1997: increasing role of injecting drug use.* Presented at the 12<sup>th</sup> International Conference on AIDS, June 1998, Geneva [abstract no. 517/43555].

Phoolcharoen W *et al.* Thailand: lessons from a strong national response to HIV/AIDS. *AIDS*, 1998, 12 (suppl B):S123-S135.

Rojanapithayakorn W, Hanenberg R. The 100% condom program in Thailand. *AIDS*, 1996, 10:1-7.

Sittitrai W *et al.* *Changes in the Distribution of Sex Work Settings Over Time in Bangkok, Thailand* Presented at the XI<sup>th</sup> International Conference on AIDS, July 1996, Vancouver [abstract no. Tu.C.2642].

Sittitrai W *et al.* *Thai sexual behaviour: a report on the 1990 survey of partner relations and risk of HIV infection in Thailand.* Thai Red Cross Society, Bangkok, 1992.

Thongthai V, Guest P. *Thai sexual attitudes and behaviour: results from a recent national survey.* Presented at the Conference on Gender & Sexuality in Modern Thailand, July 1995, Australian National University, Canberra.

Joint United Nations Programme on AIDS (UNAIDS). *Relationships of HIV and STD declines in Thailand to behavioural change: a synthesis of existing studies.* Geneva, Joint United Nations Programme on AIDS, 1998.

The Joint United Nations Programme on HIV/AIDS (UNAIDS) is the leading advocate for global action on HIV/AIDS. It brings together seven UN agencies in a common effort to fight the epidemic: the United Nations Children's Fund (UNICEF), the United Nations Development Programme (UNDP), the United Nations Population Fund (UNFPA), the United Nations International Drug Control Programme (UNDCP), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the World Health Organization (WHO) and the World Bank.

UNAIDS both mobilizes the responses to the epidemic of its seven cosponsoring organizations and supplements these efforts with special initiatives. Its purpose is to lead and assist an expansion of the international response to HIV on all fronts: medical, public health, socioeconomic, cultural, political and human rights. UNAIDS works with a broad range of partners - governmental and NGO, business, scientific and lay - to share knowledge, skill and best practice across boundaries.



Joint United Nations Programme on HIV/AIDS

**UNAIDS**

UNICEF • UNDP • UNFPA • UNDCP  
UNESCO • WHO • WORLD BANK

Joint United Nations Programme on HIV/AIDS (UNAIDS)  
UNAIDS - 20 avenue Appia - 1211 Geneva 27 - Switzerland  
Telephone: (+41 22) 791 46 51 - Fax: (+41 22) 791 41 87  
E-mail: [unaids@unaids.org](mailto:unaids@unaids.org) - Internet: <http://www.unaids.org>