

## How Well Prepared are Doctors and Nurses in Khon Kaen Province to Care for HIV/AIDS Patients at District Level?

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## ความพร้อมของแพทย์ พยาบาลระดับอำเภอ ในการดูแลรักษาพยาบาลผู้ป่วยเอดส์

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### บทคัดย่อ

ภาคตะวันออกเฉียงเหนือของประเทศไทยเป็นภาคหนึ่งที่ประสบปัญหาการระบาดของโรคเอดส์ โดยเฉพาะในประชาชนชาวชนบท จึงมีนโยบายและโครงการต่าง ๆ ระดับชาติที่เกี่ยวข้องกับปัญหานี้ เพื่อการศึกษาครั้งนี้นำการเตรียมพร้อมของแพทย์และพยาบาลในโรงพยาบาลชุมชน และสถานีอนามัยตำบลจังหวัดขอนแก่น ในการดูแลรักษาพยาบาลผู้ป่วยเอดส์ โดยการประเมิน ความรู้ ทักษะ และ การปฏิบัติของบุคลากรสาธารณสุข ตลอดจนนโยบายการบริหารจัดการและผลกระทบต่อค่าใช้จ่ายของข้อควรระวังสากลการปฏิบัติและการป้องกัน โดยการทำการส่งแบบสอบถามไปยังพยาบาลทั้งหมด 120 คนในระดับอำเภอ และใช้การตรวจสอบสังเกตการณ์ในโรงพยาบาลชุมชน และสถานีอนามัยตำบล จ.ขอนแก่น ตลอดจนใช้การสัมภาษณ์แบบเจาะลึกกับแพทย์ หัวหน้าพยาบาล หัวหน้างานพัสดุยาและเวชภัณฑ์ และจัดการประชุมพยาบาลเพื่อการสนทนากลุ่มย่อยในการประเมินด้านทัศนคติ

ผลการศึกษาแสดงให้เห็นว่าแพทย์และพยาบาลมีความรู้ทั่วไปเกี่ยวกับสาเหตุการติดเชื้อโรคเอดส์ และข้อควรระวังสากลการปฏิบัติและการป้องกันเป็นอย่างดี แต่การปฏิบัติไม่เป็นไปตามความรู้ที่มีอยู่เสมอไป ตัวอย่างเช่น พบเข็มฉีดยาที่ใช้แล้วมีปลอกสวมปิดคั่น และอุบัติเหตุจากเข็มทิ่มแทงก็มีอัตราสูง (ร้อยละ 64 ในระยะเวลา 2 ปีที่ผ่านมา) ซึ่งก็ไม่มีรายงานอย่างเป็นทางการและขาดระบบติดตามอุบัติเหตุจากเข็มทิ่มแทงนั้น ๆ ด้วย นอกจากนี้ยังพบว่าหลายคนไม่เข้าใจในการใช้สารละลายฆ่าเชื้อโรค และการทิ้งขยะติดเชื้ออีกด้วย

พยาบาลหลายคนมีความกลัวในการที่อาจจะติดเชื้อโรคเอดส์ และกลัวสังคมรังเกียจ แต่ความกลัวนี้ไม่ได้นำไปสู่การหลีกเลี่ยงหน้าที่ของการดูแลรักษาพยาบาลผู้ป่วยเอดส์เลย อย่างไรก็ตาม แพทย์และพยาบาลบางคนมีความเชื่อมั่นมากขึ้นหากรู้สถานการณ์ของผู้ป่วยเอดส์นั้นๆ ในการเพิ่มความระมัดระวังตัวเองมากขึ้น ซึ่งบางคนก็ทำให้เกิดความมั่นใจได้ แต่ก็ทำให้เกิดความรู้สึกในแง่ลบต่อพยาบาลได้เช่นกัน

การจัดการฝึกอบรมให้บริการต่างๆ ยังขาดการวางแผนล่วงหน้าของการให้บริการในผู้ป่วยเรื้อรังและการดูแลรักษาการติดเชื้อ สำหรับด้านค่าใช้จ่ายต่างๆ ที่เกี่ยวข้องพบว่ายังไม่บรรลุประโยชน์เท่าที่ควร ซึ่งอาจเป็นผลจากการขาดการวางแผนที่ดีพอตนเอง โดยสรุปทั่วไปทั้งแพทย์และพยาบาลทำงานกันอย่างน่าเชื่อถือแม้ในสถานการณ์ที่ยุ้งยากและลำบาก อย่างไรก็ตามในสภาพการณ์เร่งด่วน และอำนาจการจัดการต่าง ๆ ต้องพิจารณาในประเด็นของการปรับปรุงและเพิ่มการฝึกอบรมของการให้บริการ การจัดการเกี่ยวกับอุบัติเหตุเข็มทิ่มแทง การทิ้งขยะติดเชื้อ และการวางแผนติดตามอย่างต่อเนื่อง

## Abstract

The northeast region of Thailand is suffering from an early but rapidly growing HIV/AIDS epidemic, particularly among rural people.

Policies and programmes have been implemented at national level to deal with the country-wide problem. This case study examines the situation at district level, and considers how well prepared doctors and nurses in district hospitals and health centres are to deal with the burgeoning epidemic.

It assesses the knowledge, attitudes and practices of these health workers, and also local management policies and the cost impact of implementing universal precautions.

A self-administered questionnaire was given to all 120 nurses in the district, and formal observations, using a check-list, were made of the hospitals and health centres. In-depth interviews were held with the directors of nursing, supply officers, nurse counsellors, and doctors. The attitudes and feelings of nurses were explored in focus group discussions.

Results showed that though general knowledge about transmission of HIV and universal precautions was reasonably good, practices did not always reflect that knowledge. For example, needles were frequently recapped, and the rate of needlestick injury was extremely high (64% in the previous two years). Other gaps in some areas included confusion about disinfectant solutions, and proper disposal of infectious waste. There was no proper reporting and follow-up system for needlestick injuries.

Nurses had a great fear of becoming infected in the workplace, and of being themselves stigmatised. In general this did not lead them to avoid caring for infected patients. Rather, they showed great compassion for them. However, some nurses and doctors placed great reliance on knowing their patients HIV status, in the belief that it would enable them to better protect themselves. This sometimes

led to compromise in the area of confidentiality. There is a keenly felt lack of support systems for nurses.

While inservice training has taken place, nurse counsellors trained, and some homecare services in operation, there appears to be a lack of forward planning for the inevitable increase in demand on services for chronically ill patients and treatment of opportunistic infections. A clear picture of the cost impact could not be gained, and this also reflects a lack of planning capacity.

Nurses and doctors in general perform very creditably in difficult circumstances. However, as a matter of urgency, authorities need to address a number of issues such as improved inservice training, implementation of proper procedures for needlestick injuries and waste disposal, and forward planning.

## Introduction

Since the first case of AIDS was recognised in San Francisco in 1981, an epidemic involving almost every country has swept the world. In southeast Asia, numbers are increasing more rapidly than any where else, and it is the only area of the world where the WHO has not predicted any plateauing of the incidence (Dwyer, 1993).

The Thai authorities face a massive task to control the epidemic. Despite a late start, the country now has a multisectoral control programme which, on paper at least, is arguably as good as any in the world, and is acclaimed by the World Bank (1993).

In the northeast province of Khon Kaen, 105 cases of AIDS or ARC had been reported by November 1993. At the end of that year, 25% of prostitutes in brothels and 5.5% of Sexually Transmitted Disease (STD) Clinic attenders were HIV positive. Perhaps more worrying was the 2.22% prevalence in antenatal women, higher than the national average of 1.93% (figures supplied by the Khon Kaen Provincial Health Office). Although the

number of HIV/AIDS cases is lower in Northeast than in other regions, it is now rapidly increasing, especially among the rural population, which has limited access to tertiary health facilities. There is therefore increasing pressure on district level facilities to provide services for people with AIDS. Doctors and nurses at district hospitals and health centres will become the first line of care for most of these people.

Health workers face a risk, though small, of becoming infected with HIV in their workplace. Despite strict application of universal precautions and care with sharp instruments, accidental exposure to blood or their body fluids is always a risk.

A number of health workers, particularly surgeons, have expressed the desire to know the HIV status of their patients prior to treating them. Some feel it is their right to know (Kippax *et al*, 1994).

The question for the study is 'how well prepared are doctors and nurses in Khon Kaen province to care for HIV/AIDS patients at district level?'. The objectives of the study were :-

(1) To examine the current policies and protocols regarding universal precautions and the management of patients with HIV/AIDS.

(2) To assess the knowledge, attitudes and practices of doctors and nurses, and

(3) To examine the cost impact felt by hospitals and health centres since the implementation of universal precautions.

## Methodology

One district of Khon Kaen province was selected for a case study of how well doctors and nurses, at this level, are prepared to deal with the burgeoning epidemic. The district contains a 60 bed district hospital, and also a mother and child (M&C) hospital of 60 beds, besides 11 health centres. Staff included 87 nurses and nine doctors in the two

hospitals, and 33 nurses in the health centres. Both quantitative and qualitative methods were used to evaluate the situation. All doctors and nurses of the district were included in the study. A self-administered questionnaire was distributed to the nurses, and of 120 distributed, 118 (98.3%) were completed and returned. In-depth interviews were held with six of the nine doctors, the two heads of nursing, the director of the District Health Office, supply officers and nurse counsellors. Formal and informal observations of hospitals and health centres were made, and further question asked of some of the nurses. Nurses attitudes were explored in more detail during five focus group discussions.

## Results and discussion

When assessing knowledge and practice, a standard for comparison must be defined. We accepted the Centres for Disease Control, (1987a, 1987b, 1988, 1989) recommendations for universal precautions, and the WHO (1988a, 1988b, 1988c, 1988d, 1990) as the international gold standard. However, for this study of Thai health workers, it was considered more appropriate to use Thai standard rather than international ones. The Thai standard defined was working group for universal precautions, (1993).

## Aspects of Management

Ministry of Public Health (MOPH) policy dictates that all hospitals, including those at district level, be capable of diagnosis and service provision for HIV/AIDS patients and that medical practices maintain confidentiality. It advocates human dignity and rights for those infected.

In the hospitals of this study, the management of HIV/AIDS patients was sometimes different to that of other patients. At times these patients were isolated in single rooms or in separate parts of the wards. Staff used more protective clothing when

attending them and at one hospital at least, the HIV/AIDS patients waste (e.g. used needles, dressing and placentas) were burnt while waste from patients whose status was unknown was sometimes handled differently.

Some staff attempted to give holistic care to patients, but despite counselling services having been set up, hospitals were not able to meet all of the patients' needs. They did not appear to have protocols for management of long term chronically ill patients, patients with multiple readmissions, or patients suffering with altered mental states resulting from their AIDS.

All attempts were made to maintain confidentiality of the patients' HIV status from relatives and other patients. However, if a patient was diagnosed HIV positive, most staff who cared for that patient knew their status. Patients were usually informed of the diagnosis by the doctor and pre-discharge counselling was given. However it appeared that sometimes in one hospital women were told only that they should not breast feed.

Some of the nurses and doctors said that they would feel more comfortable in their work if they knew their patients HIV status. They believed that they could better protect themselves if they had this information. According to Gerberding *et al*, (1990) this is not a valid belief, and is certainly not in keeping with current MOPH policy.

## Knowledge

Interviews with medical staff indicated that the experienced doctors had a good knowledge of AIDS although they considered they needed to know a lot more about the disease. However the younger doctors (all of whom were in their first postgraduate year) considered that they were well informed, but in fact their knowledge about management of HIV/AIDS patients was sometimes limited because they had little experience of the situation.

Nurses had a good knowledge about HIV/AIDS transmission and risk behaviours. Student nurses and those nurses who had recently graduated scored better on these questions but those who had recently undergone inservice training did not. Nurses who worked in the M&C hospital were most familiar with the vertical route of transmission (mother to foetus/infant).

Staff generally had a good understanding of the concept of universal precautions and how to protect themselves and others. They also believed that they had a responsibility to deliver health care messages.

These findings of good knowledge among health workers differed from other studies (Preec-hanont and Poomarporn, 1992; Burintramart *et al*, 1992) which found 'inadequate knowledge about AIDS'.

## Practices

Practices were generally in accordance with the Thai standard recommendations on universal precautions. However, there were some lapses.

The standard of hand washing facilities in the health centres varied considerably. Health centres relied on tank water, and 59% of these nurses considered their facilities were inadequate 21% of these said they had water shortages, and 26% needed extra handbasins.

Many of the hand washing facilities were located outside the health centres, but as they were always a very short distance from the nurses' work area, this itself was not inappropriate. Nurses were often able to surmount their limited facilities. For example in one centre, where washing had to be done at the tap on the tank, a container with soap was kept on the tank stand and the surrounding area was clean and dry. In contrast, another health centre had its only tap, with a hose attached, in the

graden. Nurses would have found it very difficult to clean their hands in this situation.

In the hospitals, hand washing facilities were adequate, and hand washing techniques generally appeared appropriate. There was one serious aberration observed. A doctor performing two operations wore three pairs of gloves, gown and other appropriate protective clothing. After the first operation, he merely discarded the first layer of gloves, did not wash his hands or change his gown, and proceeded to operate on the second patient. This same doctor claimed, at interview, to be 'always careful with a full scrub - two washes and brush'.

There was one other practice that was questionable. After their hands were contaminated by blood, a number of nurses said they washed or soaked their hands in alcohol. This is in fact recommended by the Thai manual, but does not take into account the drying and damaging effect that alcohol has on the skin. Ayliffe *et al*, (1992) recommended that an emollient be added if it is to be used on the hands.

Disinfection and sterilisation procedures were also less than adequate in some of the health centres. A wide variety of disinfectant solutions were available, the main ones being cetavlon, sodium hypochlorite, lysol, alcohol and glutaraldehyde, and there was some confusion about their appropriate use. Metal instruments were soaked in sodium hypochlorite and subsequently rusted, some solutions were not diluted correctly, and in a few centres, cetavlon was used as a high-level disinfectant (instruments were soaked in it as the only method of disinfection). Dental instruments were soaked in glutaraldehyde, sometimes for only two or three minutes instead of the prescribed 15-20 (Thomas, 1993). The Thai manual does not specify a time.

There is an urgent need to standardise solutions and disinfection procedures in the health centres. Solutions provided need to be accompanied

by clear instructions for their use. These should be reinforced with inservice training for all health centre nurses.

The rate of needlestick injury was were high 64% of nurses and 67% of doctors during the last two years, and 90% of nurses in one ward of one hospital. This was a very busy ward, and nurses frequently claimed that a heavy workload and shortage of staff were major factors associated with accidental exposure to blood.

With the high rate of needlestick injury, there was a lack of adequate care in the use and disposal of needles and other sharp instruments (sharps). In the hospitals and most health centres there were designated sharps containers, but the practice of re-capping needles was widespread. One health centre disposed of needles into a plastic bag which was then burned.

Only 39% of nurse who sustained a needlestick injury reported it, and the directors of nursing were unaware of the number of incidents among their staff. Those who did not report the injury gave reasons such as 'the patient was not likely to have AIDS' (28%), or that they had treated the wound by washing, squeezing or soaking in alcohol (38%).

In the hospitals, needles were frequently soaked in disinfectant prior to disposal, in the hope of reducing the risk of infecting others. However, as most needles were first recapped, the solution did not actually come in contact with the needles, so the procedure was ineffective. The procedure would not be necessary at all if sharps containers were incinerated. One hospital and several of the health centres did have incinerators, but the other hospital left most of its infectious waste outside the hospital for collection by the regular municipal garbage service.

Disposal of placentas was not always appropriate. There was a practice in one hospital of

freezing placentas and selling them to a cosmetic company. Placentas of known HIV positive patients were burned in the hospital grounds, but that would not remove the risk. This hospital has approximately 2,700 deliveries per year. About 40% of these women consent to being tested for HIV, which means that there are about 1,620 deliveries of women of unknown HIV status. This would create a considerable risk for the people who transport and handle the placentas after they leave the hospital.

Nurses in general claimed to have confidence in universal precautions, but in interviews with doctors and focus groups with nurses, a few confessions of poor compliance with universal precautions were elicited.

## Attitudes

This study explored in detail the three aspects of health workers' attitudes that were described in international literature, namely fear of contagion, stigmatisation and attachment and loss.

Sixty-five percent of nurses considered that they had a 'big risk' of contracting infection from their workplace. They cited many instances of their own potential and actual exposure to blood and other body fluids, some from known HIV positive patients, especially in areas like the operating room, labour ward and emergency room.

Nurses attempted to protect themselves from infection, and 88% said that they had made changes to their own behaviour. Of these, 79% identified change in their work practices.

In focus groups, nurses spoke at length of their risk of exposure in the workplace and how they felt about facing such a risk:

'Sometimes I think I chose the wrong job. Other jobs don't face high risk. If I have the chance I want to change jobs. It's not fair for human being. We work hard and also face high risk... But I still love to give service to the sick.'

In general health centre nurses had less fear and higher morale than their counterparts in the hospital.

There was a widely held belief among the nurses that financial compensation should be given for this increase risk, and that there should be assurance that in the event of their contracting HIV, both they and their families would be supported for life. They also felt that compensation would give them some emotional support.

Nurses were very concerned that if they became infected and lost their jobs or became ill, they would no longer be able to support or care for their families. Many of them had young children and some were caring for elderly parents. They worried too about taking the infection home to their families, and that they or their children might be stigmatised.

The issue a social stigmatisation was a big one, and nurses and doctors told many stories of infected people being rejected by their families and communities, and being sent away from their villages.

Despite nurses fears, this study found very little evidence to suggest that they avoided caring for infected patients. Though patients were sometimes isolated in separate wards, there appeared to be no other form of discrimination against those with or suspected of having HIV, and nurses identification of risk groups was epidemiologically sound.

Nurses, however, were not immune to their patients suffering, and showed a lot of compassion towards them.

To help deal with their fears and the stresses of the job, nurses need opportunities to debrief, particularly after an exposure to blood. Such support should be available within the system.

### Cost Impact

It proved impossible to get a clear picture of the cost impact of HIV/AIDS in this district, as few figures were available. However, all areas have identified an increase in demand for disposable equipment- for example there has been a fourfold increase in the use of gloves in health centres since the implementation of universal precautions. At present, supplies seem to be adequate, and no extra staff have been appointed. It is not clear just who is bearing the extra costs - the patients, the hospitals, or the provincial or national governments, or what will happen as costs escalate further.

### Summary

Despite considerable effort having been made to address the current HIV/AIDS situation, the doctors and nurses in this district are not yet adequately prepared to deal with the burgeoning epidemic. There is an urgent need to address shortcomings in the areas of inservice training, staffing levels, support for nurses, protocols for a variety of situations such as clinical management, disinfection and sterilisation, disposal of infectious waste, and needlestick injuries, and to strengthen planning and management capabilities.

In Thailand, as in developing countries, it is important to remember that while energy and resources are rightly being put into national AIDS programmes, the needs of health workers at grass roots level must be met. They need acknowledgement, training and logistic support if national programmes are to have a firm foundation.

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