

Quality assessment on care of Sexually Transmitted Infections in AIDS-STD clinics at the district level

Soe Myint, Aye Moe Moe Lwin & Kyawt Sann Lwin

Department of Health Planning

Quality assurance of care on Sexually Transmitted Infections (STI) is an important measure to control the spread of HIV/AIDS in Myanmar. In order to improve it, quality assessment of STI case management at the AIDS-STD clinics was carried out. The study employed a cross-sectional design with observation on patient-provider encounters, interviewing of health staff and patients, reviewing records and registers from seven AIDS-STD clinics for measuring STI service indicators 1, 2 and 3. Myanmar National Standard Treatment Guidelines for Management of STI was used as standard for treatment of STI cases. The study reveals that achievement for STI Service Indicator 1 is 2.1%, for STI Service Indicator 2 is 8.5% and for STI Service Indicator 3 is 0% out of seven AIDS-STD clinics. The study recommends that STI diagnosis and treatment, counseling and advice, and essential STI drug supply should be improved by proper training, supervision and management.

INTRODUCTION

An estimated 340 million new cases of largely treatable sexually transmitted bacterial infections occur annually around the world and more than 100 million new cases are young people aged 15 to 24 years [1]. Many of them remain untreated because they are either unable to diagnose or lack competent and affordable treatment services. In addition, millions of cases of incurable viral infections occur annually including five million new HIV infections, half of which affecting young people and 600,000 affecting infants owing to mother to child transmission. Sexually Transmitted Infection is 14th priority disease designated in National Health Plan for introducing prevention and control measures in Myanmar because 150,000 cases of STIs including 23 % of Commercial Sex Workers (CSWs) and 35 % of Men Sex with Men (MSM) were estimated to be treated in the country [2]. As there is a huge caseload for STIs, National AIDS Program (NAP) is

taking responsibility for prevention and control of HIV/AIDS and Sexually Transmitted Infections (STI) since 1990. The fundamental goal of the HIV/AIDS and STI control program is early detection and treatment of the disease, preferably at the point of the patient's first contact with the health system. Currently, forty-five AIDS/ STD prevention and control teams are able to achieve this goal throughout the country because staff is well trained and teams are strategically located in all States and Divisions of Myanmar [3]. In STI prevention and care, one important task is adequate case management of patients with STI. This includes diagnosis, treatment, individual health education, counseling and partner notification [4]. Therefore, National Standard Treatment Guidelines for Management of STIs was developed and health workers were trained according to the guidelines [5].

Since the mid-1980, there have been a number of external quality assessments that examine the degree to which care in

developing country programs corresponds to program standards. The studies emphasized on direct observation of service delivery process usually supplemented by interviews and inventory of resources. With remarkable consistency, these studies have documented large, widespread discrepancies between care programs planning to provide and the actual care being provided. The overall interpretation of the studies produces priority areas of research as setting priority for compliance rather than simply attempting to raise average levels, measuring outcome of care which are free of predetermined ideas and have high face validity. Quality Assessment (QA) of STI case management is an effort to upgrade quality of STI diagnosis and treatment services delivered by the AIDS-STD clinics in the country. Furthermore, quality STI services can promote utilization of STI services provided by the clinics. In addition, the use of STI services can be either an entry point for prevention of further sexual risk behavior or a point of access (through partner referral) to other people at risk of HIV and STIs. In order to achieve these objectives quality assessment studies are introduced and the results are documented. Quality assessment of STI care is the first attempt to gain experiences on assessment methods and clues for improvement of actual STI case management services. Objectives of the study were;

- To measure the percentage of patients with STIs at selected health care facilities who were appropriately diagnosed and treated according to national guidelines, of all STI patients at those centers (STI Service Indicator 1)
- To estimate percentage of patients with STIs who were given advise on condom use and partner notification and who were referred for HIV testing (STI Service Indicator 2)
- To assess adequacy of drugs and equipment in STI care facilities currently providing care (STI Service Indicator 3)

MATERIALS AND METHODS

Cross-sectional study design was used. The assessment methods and tools included direct observation on patient-provider interactions, reviewing patients' records and registers for essential STI drugs available at the clinics and facility inspection by using observation checklist. Face-to-face and exit interviews were conducted with healthcare providers (HCP) and patients by using pretested unstructured and structured questionnaire. Myanmar Standard Treatment Guidelines for the Management of STIs and draft UNAIDS/WHO methods package for STI care and prevention assessment in evaluation of NAP were used as standards for assessing quality of STI case management. STI service indicators 1, 2 and 3 were measured to assess quality of STI case management [5, 6]. Enumerator training was conducted for obtaining informed consent, inter-personal interviewing and observation skills; recording observations on a standard sheet. Data collection started in December 2006 and ended in February 2007.

With the consultation of the NAP, a sample of seven clinics was drawn from 45 clinics all over the country by stratification. AIDS-STD clinics included in the sample were Lashio, Chanayethazan (Mandalay), Monywa, Pakokku, Kyimyindaing (Yangon), Patheingyi and Mawlamyaing. The reasons for selection of these clinics were: (1) they are strategically located in the country (2) STI patient volume is fairly large and (3) facilities are fully staffed and equipped according to national standards. As a total number of STI patients with genital symptoms attending the facilities daily were around five, all were included in the sample according to the guidelines of Health Facility Survey [6]. Study populations were management of 47 STI cases conducted by 14 health care providers including doctors (STD team leaders), nurses and health assistants from study clinics. All drug stores were selected from seven AIDS-STD clinics to measure the availability of essential STI

drugs. After checking consistency and completeness of the questionnaire and checklists, data entry, processing and analysis were done by using EPI-INFO and SPSS software.

RESULTS

A total of 47 STI case managements in seven AIDS-STD clinics were observed. It was found that 75% of case managements were done by doctors, 19% were done by nurses and 6% were done by health assistants. Mean age of STI patients was 30 years with standard deviation of 10 years. The youngest patient was 18 years old and the oldest patient was 55 years old. Forty-three percent of patients were males and others were females. Forty-five percent of patients were married and 68% of patients had history of commercial sex.

History taking

Regarding the STI case management, quality assessment was done on proper history taking, physical examination, diagnosis, treatment, educational counseling and follow-up. Interrogation about the illness was an important step taken by HCP during the patients' visit to the clinic. According to the national guidelines of the STI case management, a particular provider should ask three important items to the patients, i.e. nature of presenting symptoms, onset or duration and recent sexual contact. In the study, it was found that HCP asked nature of presenting symptoms in all case managements, onset or duration of symptoms in 94% of case managements and history of recent sexual contacts in 70.2% of case managements. Therefore, it was estimated that only 33 patients (70.2%) received adequate history taking. Main STI symptoms presented by patients were genital discharge (47%) and ulcer/warts (36.5%). Male STI patients mostly presented with genital ulcer, urethral discharge and female patients mainly presented with white discharge per vagina.

Physical examination

Physical examination was second step taken by the providers in the STI clinics and it was found that 11 patients (23.4%) received proper physical examination. As some patients had double or triple pathology, there were 57 diagnoses made by HCPs. Out of 57 diagnoses, 44 (77.2%) were diagnosed by etiologic basis and 13 (22.8%) were diagnosed by syndromic basis. Detailed findings are shown in Table 1. Laboratory investigations done to obtain etiologic diagnosis were Gram stain smears, dark field microscopy, VDRL tests and HIV test. Gram stain smear examinations were done for 16 patients (34%) and only one patient received results on the day of examination. VDRL test was done for 39 patients (83%) and 8 patients (17%) received results on the day of consultation. Eleven STI patients (23.4%) also carried out HIV testing.

Table 1. Number and percentage distribution of STIs diagnoses made by service providers

Type of STIs diagnosed (n=57)	Number	Percentage
<i>Etiologic diagnosis</i> (n = 44) (77.2%)		
Gonorrhoea	8	14
Syphilis	12	21.1
Genital warts	6	10.5
Chancroid	4	5.3
Herpes simplex virus	2	3.5
Candidiasis	10	17.5
Genital scabies	2	3.5
Genital ring worm	1	1.8
<i>Syndromic diagnosis</i> (n = 13) (22.8%)		
Urethral discharge	6	10.5
Vaginal/cervical discharge	6	10.5
Genital ulcerative disease	1	1.8
Total	57	100

Effective treatment

Out of 57 diagnoses, it was found that 32 patients (56.2%) received appropriate treatment for the diagnoses. Types of treatment given by providers are shown in Table 2.

STI service indicators

STI service indicator 1 measures appropriate diagnosis and treatment of STI. It is defined

Table 2. Types of treatment given by providers

No.	Type of treatment (n=57)	Number	Percentage
1	Effective syndromic treatment	3	5.3
2	Effective etiologic treatment	29	50.9
3	Syndromic treatment given to etiologic diagnosis	15	26.3
4	Ineffective etiologic treatment	1	1.8
5	Ineffective syndromic treatment	9	15.7
6	Received appropriate treatment	32	56.2

as percentage of patients with STIs or STI symptoms at selected health care facilities who are appropriately diagnosed and treated according to national guidelines, among all STI patients seeking care [6]. Assessment was done by giving scores to the case management of STIs if HCP followed each component of national treatment guidelines as score 1 and for those where HCP did not follow were given score 0. Therefore, a case of STI where an HCP conducted the adequate history taking, proper physical examination and providing correct diagnosis and treatment received a total of score 3. In this study, it was found that only one case management (2.1%) received score 3, 51% of case managements received score 2 as HCP did not meet the criteria for proper physical examination, 36% received score 1 and 11% received score 0. Direct observation of patient-provider interactions revealed the reasons for failure to practice proper physical examinations: low privacy of examination rooms, inadequate use of equipment such as spot lights and speculums etc., lack of interest of some providers and assigning inappropriate provider to do physical examinations e.g. assigning female provider to male STI patients.

STI service indicator 2 measures providing advices to STI patients for prevention and referral to voluntary testing services. It is defined as percentage of patients with STIs or STI symptoms who are given advice on condom use, partner notification and who are referred for HIV testing, among all STI patients seeking STI care [6]. In this study it was observed that out of 47 patients, 25 patients (53%) received explanation for risk

of HIV infection, 28 (60%) received advice on condom use and 12 (30%) received advice on partner notification. Out of 42 patients who needed referral for HIV testing only 18 patients (43%) received referral for HIV testing. It was also found that 21 STI patients (45%) received condoms free of charge and 17 patients (36%) received instructions on how to use condom.

In actual assessment, score 1 was given to the STI case management where an HCP provides each item of service according to the National Standards. Therefore, each case management where HCP provides all three advices will receive a total of score 3. In this study, it was found that 8.5% of STI case management received score 3, 34% received score 2, another 34% received score 1 and 23% received score 0. Detailed findings of scores obtained for STI service indicator 1 and 2 are shown in Table 3.

Table 3. Scores for STI service indicator 1 & 2

No.	Type of score	STI service indicator			
		STI service indicator1		STI service indicator2	
		Case management		Case management	
		Number	Percent	No.	Percent
1	Score 0	5	10.6	11	23.4
2	Score 1	17	36.2	16	34.0
3	Score 2	24	51.1	16	34.0
4	Score 3	1	2.1	4	8.5
		47	100	47	100

STI service indicator 3 measures the adequacy of drug supply at STI clinics. It is defined as percentage of clients served by STI facilities that have a current supply of all essential STI drugs and report no stock-outs lasting longer than one week in the preceding 12 months, among all STI patients seeking care [6]. It was found that no single clinic had all 13 items of essential STI drugs. Doxycycline was the only essential drug available in all clinics with no stock-outs during the last 12 months. All other essential drugs were having stock-outs lasting longer than one week in the preceding 12 months. Therefore, all STI facilities could not accomplish the criteria set by STI service indicator 3.

Availability of drugs

Ensuring adequate supply of essential drugs used for STI case management is important for effective treatment of STIs and to have positive impact on reducing the likelihood of HIV infection. It was observed that no clinics had all essential STI drugs (13 items) and ten essential STI drugs were available at 3 (43%) clinics only. The least available drugs that were unexpired in the clinics were meconazole tablet, ceftriaxone injection, nystatin vaginal tablet and podophylline lotion. Regarding management of STI drugs, it was found that AIDS-STD team leader took responsibility for procurement and use of drugs and supplies in all studied clinics. Number and percent of clinics where essential STI drugs available are shown in Table 4.

Table 4. Availability of essential STI drugs in AIDS-STD clinics

No.	Name of drug	Clinics*		Clinics**		Clinics***	
		No	%	No	%	No	%
1	Inj. Ceftriaxone	2	28.6	5	71.4	2	28.6
2	Cefixine	6	85.7	2	28.6	5	71.4
3	Azithromycin	5	71.4	3	42.9	4	57.1
4	Doxycycline	7	100	0	0	7	100.0
5	Erythromycin	6	85.7	1	14.3	5	71.4
6	Ciprofloxacin	4	57.1	3	42.9	3	42.9
7	Metronidazole	6	85.7	1	14.3	6	85.7
8	Meconazole	2	28.6	5	71.4	1	14.3
9	Inj. Benzathine Penicillin	6	85.7	2	28.6	6	85.7
10	Nystatin Vag. Tab	3	42.9	4	57.1	2	28.6
11	Clotrimazole	5	71.4	3	42.9	4	57.1
12	Acyclovir	7	100.0	2	28.6	7	100.0
13	Podophylline	3	42.9	5	71.4	2	28.6

* where STI drugs are available at the time of observation

** where STI drugs are not available for at least one week in the last 12 months

*** where unexpired drugs were observed

DISCUSSION

The study on quality assessment of care of STIs in the AIDS-STD clinics was aimed to improve quality of services provided at these centers and to control the spread of STIs in the general population. As there

were limited resources to conduct the study, the number of facilities and subjects in the sample was smaller than other studies [7]. However, seven STI clinics were selected in the sample to reflect the situation of STI in hilly, central dry zone and delta regions. Furthermore, AIDS-STD clinics from cities as well as from states and divisions were selected in the sample to represent the real country situation as much as possible. In this study, STI indicators 1 to 3 developed by UNAIDS were used for assessment of STI case management services [4, 6]. These indicators are very similar to the original WHO indicators PI6 and PI7 [1] with the addition of referral for voluntary counseling and testing (VCT) and STI indicator 3 measuring STI drug stock-outs. Furthermore, study design, data collection methods, instruments and sampling methods were developed according to the UNAIDS guidelines of protocol developed for assessment of STI case management through health facility survey [6]. Only "Mystery client interviews" could not be carried out due to technical and resource constraints.

Assessment of STI indicator 1 focused on the proper history taking, physical examination, diagnosis and treatment. According to the study findings, a considerable number of patients did not receive proper physical examination resulting more than half of the case managements received score 2 during assessment. The reasons of failure to practice proper physical examinations were mentioned as observation findings. Therefore, quality of physical examination is questionable especially in the case of male patients consulting to female provider. One remarkable finding of the study was majority of providers made etiologic diagnosis in spite of doing only a few laboratory investigations. The reason of this situation might be low availability of laboratory services or HCPs making empirical diagnoses mostly. Another finding was providers could give more effective etiologic treatment than more effective syndromic treatment. Some providers gave syndromic treatment to the patients with

etiologic diagnosis. This might be due to the providers' behavior that tended to over-treat the STI cases. As a result of these flaws, HCPs who could make appropriate diagnosis and treatment of STIs were very low.

STI service indicator 2 was assessed by observing the consultations with HCPs. We found that only 4 patients (8.5%) received adequate advices and referral to VCT. Major areas of advice that did not touch by HCPs were explaining risk of HIV infection, explaining how to use condom and advice on partner notification. Drug stock-outs in the STI clinics are also a problem. It was observed that more than a half of clinics had shortages of three or more items of drugs and surprisingly only three drugs were available in one clinic. Therefore, it is important to find the causes of stock-outs and correct swiftly because frequent stock-outs of drugs may lead to under-utilization of STI services. Based on the findings of the study the following recommendations are made:

- (1) As appropriate diagnosis and treatment are the keys to the achievement of STI case management objectives, HCPs in the STI clinics should do systematic history taking, physical examination, diagnosis and treatment. The study also highlights the factors that lead to low quality of services such as low privacy of examination rooms, inadequate use of equipments, lack of interest in physical examinations by some HCPs and assigning inappropriate HCP to the STI patients. The causes or contributing factors of these conditions should be thoroughly analyzed and prompt actions should be taken.
- (2) Inappropriate treatment of STIs by HCPs should be corrected by training and supervision. Trainings of STI case management should be supported by regular supervision of health care providers whether they are following the National Standard Treatment Guidelines for the Management of Sexually Trans-

mitted Infections or not. As etiologic treatment is more effective than syndromic treatment, provision of etiologic treatment should be strengthened with adequate support of laboratory facilities.

- (3) Advice on condom use should be targeted to all STI patients. Further more, effective strategies should be developed to upgrade partner notification and referral for VCT.
- (4) The study also indicates frequent STI drug stock-outs and expiries in the clinics, which impedes the achievement of STI case management objectives. This problem should be solved by reviewing drug procurement, supply and distributing systems and taking appropriate actions.

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