Treated with Care: Nurse-led STI Management in Manipur and Nagaland
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# Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
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<tr>
<td>AIHI</td>
<td>Australian International Health Institute</td>
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<tr>
<td>ANMs</td>
<td>Auxiliary nurse midwives</td>
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<td>BCC</td>
<td>Behavioral change communication</td>
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<td>COGs</td>
<td>Clinic Operational Guidelines and Standards</td>
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<tr>
<td>DIC</td>
<td>Drop-in-centre</td>
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<td>EHA</td>
<td>Emmanuel Hospital Association</td>
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<td>FHI</td>
<td>Family Health International</td>
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<tr>
<td>FSWs</td>
<td>Female sex workers</td>
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<td>GNM</td>
<td>General nurse midwives</td>
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<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<td>HRGs</td>
<td>High-risk groups</td>
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<tr>
<td>ICST</td>
<td>Immuno-chromatographic Spot Test</td>
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<tr>
<td>ICTC</td>
<td>Integrated Counselling and Testing Centres</td>
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<tr>
<td>IDUs</td>
<td>Injecting drug users</td>
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<tr>
<td>IEC</td>
<td>Information, education, communication</td>
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<tr>
<td>IPC</td>
<td>Interpersonal communication</td>
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<tr>
<td>MBBS</td>
<td>Bachelor of Medicine and Bachelor of Surgery</td>
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<td>MSM</td>
<td>Men who have sex with men</td>
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<tr>
<td>NACO</td>
<td>National AIDS Control Organization</td>
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<tr>
<td>NGOs</td>
<td>Non-governmental organizations</td>
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<td>OIs</td>
<td>Opportunistic infections</td>
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<td>ORWs</td>
<td>Outreach workers</td>
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<td>OST</td>
<td>Opioid substitution therapy</td>
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<td>PEs</td>
<td>Peer educators</td>
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<tr>
<td>Project ORCHID</td>
<td>Organized Response for Comprehensive HIV Interventions in selected high-prevalence Districts of Manipur and Nagaland</td>
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<tr>
<td>RNTCP</td>
<td>Revised National Tuberculosis Control Programme</td>
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<td>SACS</td>
<td>State AIDS Control Society</td>
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<tr>
<td>SCM</td>
<td>Syndromic case management</td>
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<tr>
<td>STDs</td>
<td>Sexually transmitted diseases</td>
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<tr>
<td>STIs</td>
<td>Sexually transmitted infections</td>
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<tr>
<td>TB</td>
<td>Tuberculosis</td>
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<tr>
<td>WHO</td>
<td>World Health Organization</td>
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<td>WHO-SEARO</td>
<td>World Health Organization-South East Asia Regional Office</td>
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* For information on the Northeast India Knowledge Network go to http://www.ni.unimelb.edu.au/regional_activity/southasia/knowledge_network
1. Introduction to Nurse-led STI Management

1.1 What is Nurse-led STI Management?

Nurse-led STI management involves syndromic treatment of sexually transmitted infections (STIs) by nurses. It is based on the assumptions that identifying the causative organisms of STIs is not essential for successful treatment, and that non-physicians are able to treat and communicate with patients. Syndromic STI treatment involves identification of syndromes based on groups of specific symptoms and signs and subsequent treatment of all common organisms likely to produce that syndrome. Syndromic treatment of STIs is particularly suitable in places where laboratory diagnosis is difficult. The advantages of syndromic treatment of STIs include the following:

- Most of the likely causes of the STI will be treated.
- It encourages standardized evidence-based practice with known effectiveness.
- Treatment is dispensed immediately and does not depend on the patient returning for a laboratory result before treatment can begin, thus increasing adherence.
- No delay in treatment reduces the risk of transmission to others and the development of complications.
- It can be implemented by medical staff other than doctors, such as nurses.

The disadvantages of syndromic treatment of STIs include the following:

- It can result in over-treatment and exposes some patients to potential side-effects of drugs that may not be essential for their health.
- It is unsuitable for asymptomatic patients, which is often the case for women with STIs.

About Project ORCHID

Project ORCHID is a 10-year (2004-14) Bill & Melinda Gates Foundation funded project under the Avahan initiative that provides HIV prevention in seven districts of Manipur and six districts of Nagaland, in Northeast India. The Project is a joint initiative of the Emmanuel Hospital Association and the Australian International Health Institute from the University of Melbourne. Project ORCHID programs are implemented by a network of local non-government organizations and complement those of the State AIDS Control Societies. The goal is to reduce transmission of HIV and STIs among injecting drug users, female sex workers, men who have sex with men and their sexual partners, through a response of increased scale and coverage in selected high prevalence districts and townships in Manipur and Nagaland. The Project ORCHID target population for 2011-12 is 10,550 injecting drug users, 3000 female sex workers, and 1450 men who have sex with men. The Project has 23 implementing partner organizations (11 in Manipur and 12 in Nagaland) and supports 65 drop-in centres (30 in Manipur and 35 in Nagaland) and 50 clinics located in the drop-in-centres. The services delivered include distribution of condoms and needle and syringes, STI management, opioid substitution therapy, Information-Education-Communication, advocacy, community mobilization, and referrals to other services such as integrated counselling and testing centres and tuberculosis testing.
Nurse-led STI management is used in many resource constrained contexts both in developed and developing countries.\(^2\)-\(^9\) The model aligns with an international movement to scale up HIV treatment in resource poor settings known as “task shifting.” According to the World Health Organisation (WHO), task shifting involves the rational redistribution of tasks among health workforce teams. Specific tasks are moved, where appropriate, from highly qualified health workers to health workers with more basic training and fewer qualifications in order to make more efficient use of the available human resources for health.\(^1\) While often discussed in relation to the HIV epidemic, task shifting is noted as a possible response to issues of scale and efficiency for other essential health services, including STI treatment and care.

1.2 Project ORCHID’s Nurse-led STI Management Programme

As a partner NGO of the Avahan HIV prevention initiative funded by the Bill & Melinda Gates Foundation, Project ORCHID works with high-risk populations in the Northeast Indian states of Nagaland and Manipur. STI treatment and prevention is an important component of Avahan’s HIV prevention work, and between 2003 and 2005 Avahan partners across India developed standardized clinical programmes to inform the scale up of their STI prevention and treatment interventions. Acknowledging that the context in the Northeast was different from the rest of India, Avahan clinical teams customized a programme that would: (1) address the overlap between injecting drug use and sexual transmission, and (2) address the shortage of doctors, especially in rural areas of Manipur and Nagaland. The Avahan clinical team in the Northeast included representatives from the Emmanuel Hospital Association (EHA) and Project ORCHID who were familiar with the unique context and challenges of the Northeast. They argued that services should be provided “on the door-step” of the clients in order to effectively reach them. A consultant from WHO helped the Avahan/Project ORCHID clinical team explore and ultimately adapt a model of nurse-led service delivery.

At the end of 2004, EHA developed an initial training programme for nurses and programme managers that was based on the newly revised WHO Guidelines for the Management of Sexually Transmitted Infections,\(^1\) and drew on EHA’s extensive experience delivering healthcare in remote rural hospitals in India. In 2005, Family Health International (FHI) and Avahan jointly developed protocols for STI management that form the basis for all Avahan funded STI management programmes in India, both doctor and nurse-led programmes. The guidelines, Clinic Operational Guidelines and Standards (COGS), were adapted specifically to meet the needs of the programmes in Manipur and Nagaland (e.g., a section on injection abscess management was included, and the training modules were revised to make them more suitable for nurses).\(^1\)\(^1\)

In 2005, the Nurse-led STI Management Programme began delivering services at drop-in centre (DIC)* clinics in rural Manipur and Nagaland. This included syndromic STI treatment for injecting drug users (IDUs), female sex workers (FSWs), men who have sex with men (MSM) and their sexual partners, and working in

* Drop-in centres are safe spaces where members of high-risk communities come to interact with each other, take part in education sessions, and access other NGO services. They consist of one or two rooms large enough to accommodate group meetings, and are often co-located with the NGO office, clinic and counseling room. The space is designed to be as attractive and comfortable as possible, and includes facilities such as guitars, television, carom board and other means of entertainment, as well as teaching materials for community mobilization.
Delivering HIV prevention services in a challenging environment

Manipur and Nagaland are adjacent to the “Golden Triangle” (Myanmar, the Lao People’s Democratic Republic, and Thailand), where drug smuggling is widespread, particularly across the porous borders with Myanmar. HIV is a major public health problem in both states, and injecting drug use is an important route of HIV transmission. The geographic, social and political environments in Manipur and Nagaland create difficulties when providing HIV prevention services to high-risk groups. Many areas are difficult to access due to mountainous terrain and poor roads, as well as longstanding inter-ethnic conflict and armed insurgency movements that limit travel. Decades of strained politics have severely affected the local economy and employment opportunities are limited. This situation has deterred development, leading to high levels of unemployment and poverty, as well as migration within and out of the states. Factors such as these combine to create a situation where few doctors are available to a significant proportion of the population. Additionally, access to the health services that do exist, including STI treatment, can be difficult for vulnerable groups such as injecting drug users, female sex workers, and men who have sex with men. Structural barriers to access include poor local health infrastructure, unavailability of doctors at clinics and hospitals, fear of discrimination, and lack of confidentiality.

The Nurse-led STI Management Programme has been successful enough to influence India’s National AIDS Control Organisation (NACO), which issued guidelines in 2010 that stipulate that nurses can provide syndromic management of STIs in some circumstances for high-risk groups (HRGs). They specify that, “In exceptional circumstances, where qualified providers are not available, non-MBBS [Bachelor of Medicine, Bachelor of Surgery] providers can provide services under the supervision of a MBBS provider/STI focal person. The non-MBBS provider selection must be based on competency assessment and he/she should be rigorously trained on syndromic case management.”

1.3 About this document

This document describes Project ORCHID’s Nurse-led STI Management Programme. This programme provides STI services in remote, resource-constrained settings in Northeast India to populations at high risk of acquiring HIV. The nurse-led model is described in detail, including the package of services, staffing, training, program management, and monitoring and evaluation. Program managers interested in implementing similar nurse-led STI services should find this information useful.

Figure 1: Project ORCHID intervention districts
2. The Nurse-led STI Management Model

2.1 The package of services

Project ORCHID’s Nurse-led STI Management Programme offers a comprehensive range of STI services to patients including the following:

- Syndromic STI case management including presumptive treatment of asymptomatic infections
- Regular screening for STIs (monthly for FSWs and MSM, and six monthly for IDUs)
- Biannual syphilis screening and treatment
- Patient follow-up in conjunction with the outreach team
- IDU harm reduction, where the importance of safe injecting is stressed
- Abscess management
- Overdose management
- Condom promotion
- Distribution of free commodities (condoms and needles and syringes)
- Treatment of regular sexual partners of FSWs, IDUs and MSM
- Referral for HIV testing and counselling (ICTC programmes), HIV treatment and care, and TB diagnosis and treatment (RNTCP, the national TB programme)
- Referral of complicated STI cases and opportunistic infections (OIs) to secondary referral centres for laboratory testing and clinical management
- Health education and counselling following the “four Cs” – condom demonstration and promotion, ensuring compliance with treatment, counselling, and contact treatment/partner management
- Management of common illnesses and general health ailments.

2.2 Staff roles

The Nurse-led STI Management Programme includes both static and outreach services. The static STI clinics are most commonly situated alongside Project ORCHID DICs that are located in places convenient for the clients, and usually open six or seven days a week from 9 am to 5 pm. The STI clinics are staffed directly by nurses and counsellors, with the support of the outreach team and supervised by the Project ORCHID state clinical coordinators who are medical doctors. A typical STI clinic is staffed by a nurse and a counsellor. The clinics have a visiting doctor, and a few clinics have nurse attendants as well.

Since 2010, the Nurse-led STI Management Programme has considerably increased the number of clients it reaches by the addition of a nurse-led mobile outreach component that focuses on field identification of people with STIs and abscesses who are either treated in the field or referred to the static STI clinic for treatment. The clinic nurse, counsellor, outreach worker and peer educators travel to remote locations and spend a day...
providing locally based STI clinic services. This occurs three times each month, and is often organized to coincide with visits from the State AIDS Control Society (SACS) sponsored mobile HIV testing unit.

**Nurse’s role:** The STI clinic nurses are mostly registered auxiliary nurse midwives (ANMs) or general nurse midwives (GNMs). They are responsible for:

- Clinic administration
- Patient registration
- Record-keeping
- Sexual history-taking
- Clinical examination
- Medication dispensing
- Infection control
- Syphilis testing
- Liaison with the outreach team
- Procurement and storage of drugs and other clinic supplies.

Patients are referred to other clinics for: STI laboratory tests other than syphilis; HIV testing; TB diagnosis and treatment; antiretroviral therapy; and for more complex medical problems such as opportunistic infections. Because HIV prevention programmes in Manipur and Nagaland include a high proportion of IDUs, the STI clinic nurses are also trained in harm reduction for IDUs, and can manage injection abscesses and drug overdoses. The nurses are encouraged to allow enough time with each patient to take an adequate history, perform a physical examination (speculum or proctoscopic examination when indicated), diagnose the problem, prescribe treatment, and explain the treatment to the patient.

**Counsellor’s role:** The STI clinic counsellors are mostly university graduates who are trained to provide counselling to high-risk populations. Their role involves one-on-one and group sessions with clients. They are responsible for:

- Assisting individual clients to make positive changes in their life
- Pre-and post-HIV test counselling
- Patient follow-up
- Partner notification
- Patient referrals
- Conducting behaviour change communication (BCC)
- Interpersonal communication (IPC) sessions
- Maintaining patient records.

**Visiting doctor’s role:** The NGO clinics are supported by a visiting doctor who attends twice a week for two or three hours per visit. Their role is to see some patients and provide supervision for the nurses.

**Outreach team’s role:** Attendance at the DICs and clinic services depends on the efforts of outreach workers, peer educators and peer volunteers who play a central role in the delivery of effective STI prevention and treatment by encouraging their clients to access STI services, promoting condom use, and facilitating patient follow-up and partner treatment.

Additionally, clinic committees are formed with membership from the affected communities. These committees provide advice regarding the operations of the clinic, and how best to promote the clinic services to clients.
2.3 The training programme

New clinic staff (nurses and doctors) attend a three-day training programme conducted by Project ORCHID and FHI staff. The training materials are based on the content of the COGS and aim to produce STI clinic staff who are technically competent, able to efficiently administer an STI clinic, and able to communicate effectively with vulnerable groups.

The nurses training programme is delivered on site and covers:

- Syndromic case management of STIs
- History-taking
- STI diagnosis and treatment
- Clinical examination
- Patient education (including condom skills and partner management)
- Infection control
- Routine care for FSWs
- Clinic documentation and record keeping
- Syphilis screening
- Abscess management
- Making referrals
- HIV and opportunistic infections
- Overdose management.

The visiting doctors receive the same training as the nurses, and are expected to follow the protocols outlined in the COGS.

The counsellors attend a two-day training programme that covers:

- STIs
- Communication skills
- Sexual history-taking
• Risk assessment and risk reduction planning
• Condom negotiation skills
• Partner notification and treatment
• HIV pre- and post-test counselling.

Project ORCHID State Clinical Coordinators conduct regular training updates twice per year that cover topics such as STI management, abscess management, infection control, documentation and reporting, advocacy and communication, and monitoring and evaluation.

2.4 Supportive supervision

Project ORCHID State Clinical Coordinators (who are medical doctors) regularly visit all static STI clinics for regular monitoring and provision of on-site support. The Clinical Coordinator assesses the STI clinic operations to ensure that quality standards are maintained with respect to the following:

• Accessibility of services
• Coordination with outreach services
• Relationships with target community
• Adequacy of staffing numbers and staff knowledge, skills and performance
• Adequacy and cleanliness of clinic structure and equipment
• Safe and effective clinical examination, diagnosis and management
• Laboratory quality assurance
• Storage of drugs and consumables
• Infection control and waste disposal
• Documentation, record-keeping and confidentiality

The nature and quality of this supportive supervision are clearly defined in the STI Clinic Supervisory Handbook developed by FHI and Avahan. Clinical Coordinators also serve as mentors to nurses and are readily available to consult on more complicated cases or provide support when needed. The Project ORCHID State Clinical Coordinators are in turn supported by quarterly visits from FHI, which has been an important component of the Programme.

2.5 Clinical structure and guidelines

In order to deliver standardized STI treatment and management of an acceptable quality, the nurses are trained to adhere to the COGS, which defines the approach for STI prevention, diagnosis and treatment, and standards of service. The COGS covers the following:

• Clinic operations
• Clinical management of STIs
• Laboratory services
• Infection control
• Education and counselling
• Ethical standards, confidentiality and right of refusal
• Monitoring, evaluation and reporting

To ensure physical and auditory privacy and confidentiality during patient interviews, most of the Project ORCHID nurse-based clinics include a waiting and registration area, a counselling room, and a nurse's
consultation and examination room (equipped with general medical instruments, sterilization equipment and consumable medical supplies).

Patient rights and confidentiality are ensured through the following mechanisms:

- Clinic staff sign a confidentiality agreement
- All clinical files are kept in a locked cabinet
- Clients are usually identified only by ID and nickname (although if full name is given this is used in the file)
- Clients are made aware of their right to lodge a complaint for any breach of confidentiality
- All examination and treatment procedures are thoroughly explained to the client and clients are given the option to refuse any and all services
- Clients who are intoxicated are not considered capable of giving consent.

Infection control is assured by clinic staff adherence to Universal Precautions and the NACO waste management guidelines.  

Voices from the Field: Nurses’ Perspectives

Nurses employed in Project ORCHID’s nurse-led STI management clinics generally describe their experiences positively. Many of the nurses say their attitudes towards members of the high-risk groups have changed for the better after working closely with them.

Nurses in the DIC clinics are trained and equipped to handle a vast area of medical complaints like STIs, abscess, and TB screening. The DIC clinics treat ‘clients’ whereas the hospitals or doctors treat ‘patients.’ Clients can be open and comfortable with nurses and share their behaviour history and practices freely, without being scared of rejection or judgment. But patients in other treatment settings can only share their presently occurring symptoms that need to be dealt with and treated. (Nurse, Wokha, Nagaland)

Initially, when I first joined the TI [targeted intervention] project as a nurse, I was short-tempered and used to shout at the clients. But now I have lots of patience. The clients themselves are already sensitive and self-stigmatized. We have to have lots of patience because if we shout at them, the clients won’t feel comfortable sharing their problems. The effort should be from the side of the nurse to make the clients feel comfortable, let them speak out and share their problems. I feel good when I learn from the clients that the treatment was effective and when the clients share their satisfaction about the program and treatment. (Nurse, Ukhrul, Manipur)

Before getting involved with this programme, I had a different stance towards IDUs and FSWs. I thought they were useless, shameless people. I never thought reflectively about why they engage in such behaviours. After working with them, I started understanding and came to know that they didn’t willingly get into commercial sex work or get hooked on injecting. I feel privileged to have had the opportunity to serve the community through the nurse-led STI programme and I thank God for that. The programme aims at reaching the vulnerable people who otherwise would not access health services. This programme has played an important role in reaching out to hidden populations, linking them to wider networks of referral services including free treatment. (Nurse, Moreh, Manipur)

Working with MSM is a great advantage for me. I did not know anything beyond sissy and effeminate males. I never imagined there could be local MSM. With a year experience of working with MSM, I have learnt the different types among the MSM, and have gained knowledge about MSM. Because of the autonomy given in the nurse-led STI management clinic, I have learnt many things which I suppose I wouldn’t have learnt otherwise. There is quality treatment for STI through NGOs. After coming here I have learnt a lot. (Nurse, Dimapur, Nagaland)
Voices from the Field: Nurses’ Perspectives (cont.)

Nurses also report satisfaction with the responsibility of working more independently.

The nurse-led STI programme has boosted my confidence, because in the conventional hospital set-up nurses usually operate under doctor’s instruction and do not treat patients independently. Working in such a clinic set-up has given me the freedom and authority to attend and treat patients. I can also confidently administer and manage the clients and also give medicines for some general ailments. The nurse-led STI programme has helped me to interact with vulnerable groups and gain their confidence and learn from shared stories of the clients. Gaining the confidence of the key population has also instilled a sense of responsibility and motivates me to work earnestly for needy people. (Nurse, Dimapur, Nagaland)

Nurses describe increased capacity to diagnose and treat STIs compared with positions where nurses work under direct supervision of doctors.

Speculum examinations in general hospitals are done only by the doctors but in the nurse-led STI clinics, the nurses are well-trained to carry out the examination themselves. Testing for ICST [syphilis testing kit] is also a new area and a learning experience that otherwise is not available for nurses in other clinical sectors. (Nurse, Phek, Nagaland)

Working in the nurse-led STI clinic has enhanced my knowledge and skills in STI management. Earlier before becoming involved with the NGO, I didn’t know much about STIs beyond their definition. Reflecting back, I remember renowned doctors who were not well informed about STI management. I remember one instance where the doctors were ignorant about STIs. During my second year of nurse training, I was instructed by two renowned doctors to clean and dress a wound in the genital area, penis of a patient. The doctors declared that it was skin cancer due to its cauliflower like growth. The doctor, simply cut the outgrowth and finally cut off the patient’s penis. The patient died a month after being discharged from the hospital. Thinking about that patient, it pains my heart and I regret that I couldn’t help the patient as I was ignorant about STI management then. Now, after being involved in the NGO and having hands on experience in STI management, I confidently can say that the patient was suffering from genital warts and not skin cancer. (Nurse, Dimapur, Nagaland)

The nurse-led STI programme aims at reducing barriers to accessing health services. We make all possible efforts to take the services to the clients. Reaching out to community members is an ongoing challenge. Conducting mobile clinics is one strategy to reach out and achieve service coverage in remote areas. We also visit the clients at home if they are sick or do not turn up to the clinic for follow-up. The clinic staff accompany the clients to other private or government health centres for necessary treatments. Sometimes it is frustrating dealing with IDUs or FSWs, when they do not adhere to strict treatment regimes or do not pay heed to what we say. However, working with such groups of people has helped us to have patience. (Nurse, Bishnupur, Manipur)
2.6 Drug procurement and supply

Most medications are locally procured by the NGOs from the local pharmacy and stored onsite. The NGOs receive an annual budget for medications, and a minimum re-order level is established for each drug (i.e., when stock drops below a certain level the nurse reorders the drug). A few items such as the syphilis testing kits (ICST), injectable penicillin and naloxone are centrally procured from the manufacturer because local supply is unreliable or of poor quality. Centrally procured items are delivered by local transport, usually accompanied by a staff member. After the nurse has examined the patient and diagnosed the STI, she/he assembles the relevant pack of medication according to the syndromic management guidelines, and dispenses them to the patient with detailed information about the correct regime for administration.
2.7 Monitoring and evaluation

A range of data are routinely collected and recorded for each patient visit including the following:

- Individual client ID and date of visit
- Sex and age
- Source of referral
- Purpose of visit
- Duration of symptoms
- Condom use
- Internal examination performed
- STI syndrome diagnosis (if any)
- Treatment prescribed
- Abscess diagnosis, severity and management
- TB screening
- HIV status
- Referral for HIV and other testing
- Syphilis screening and treatment
- Type of counselling
- Condoms and needles and syringes provided.

From these data it is possible to generate simple analyses as well as create more complex variables by combining indicators (e.g., the percentage of people diagnosed with syphilis who completed treatment).
3. Results

Project ORCHID’s Nurse-led STI Management Programme in Nagaland currently consists of around 18 clinics (including sub-clinics), 20 nurses, and 15 counsellors. In Manipur, the programme has 32 clinics (including sub-clinics), 25 nurses, and 16 counsellors. The programme has achieved excellent coverage of the high-risk groups it serves. The Project routinely collects data for each consultation (see above), and these data are collated in the Computerised Management Information System (CMIS). Over the last two years, approximately 20% of the FSW population has attended the nurse-run clinics each month (Figure 2). In Manipur, over 55% of the FSW population attends a clinic at least once a quarter, while in Nagaland it is over 25%. Among IDUs, who are significantly more difficult to reach with clinic services, over 60% attended a clinic at least once a year in Manipur, and over 40% in Nagaland.

Figure 2 Percentage of FSWs attending clinic

![Figure 2](image)

Figure 3 Number of STI consultations per month (all HRGs)

![Figure 3](image)
Since its introduction in 2004, the Nurse-led STI Management Programme has reached an impressive number of patients each month. During short and targeted “push” periods, staff coordinate intensive efforts to maximise coverage by encouraging clients to attend both the mobile and static clinics, with an emphasis on HIV and STI testing and treatment. For example, during the first quarter of 2010, nurse-led clinics counselled 1,124 clients in Manipur and 863 patients in Nagaland (Figure 3). This demonstrates the programme’s accessibility and its capacity to mobilize the community through coordinated outreach efforts. Figure 4 shows increases in STI treatment in both states following the increase in consultations in early 2010. Additionally, both states have seen a consistent increase in numbers of HRGs who have ever visited a nurse-led STI clinic (Figure 5).

**Figure 4** Number of STI syndromes treated per month (all HRGs)

![Figure 4](image)

**Figure 5** Number of HRGs ever visited the clinic at least once

![Figure 5](image)
The quality of services provided has been consistently high. In the past two years, 100% of patients diagnosed with an STI syndrome were given the appropriate treatment, as were 100% of those with injection abscesses. In the same two years, a mean 48% of all FSWs and 28% of all IDUs were tested for syphilis during each half-year period. Internal examination is a clinically important procedure that is recommended for MSM and FSW clients every three months, but as this type of examination is often embarrassing for clients, it tends to be omitted by many doctors and nurses in other settings. Among FSWs attending the Manipur clinics, over 90% received an internal examination during their visit because the nurses have established it as a routine part of the consultation, even when presentation is for non-STI-reasons. Figure 6 shows that sustained numbers of internal examinations are being performed in both Manipur and Nagaland, demonstrating the programme’s ability to provide high quality treatment over time. Numbers in Manipur are higher than those in Nagaland due to faster nurse turnover in Nagaland – new nurses tend to be less confident about performing internal examinations.

**Figure 6** Number of clients receiving STI consultations who underwent an internal examination

![Graph showing number of clients receiving STI consultations who underwent an internal examination](image)

**Figure 7** Percentage of IDU population tested for syphilis each month

![Graph showing percentage of IDU population tested for syphilis each month](image)

The introduction of the mobile nurse-run clinics in 2010 improved the reach of services even further, demonstrating the effectiveness of this model for achieving coverage in difficult-to-access areas. In particular, both syphilis testing (Figure 7) and successful referrals to ICTCs from the clinics (Figure 8) rose markedly in...
According to the Integrated Biological and Behavioural Assessment undertaken in 2006 and 2009, the prevalence of syphilis among FSWs in Dimapur decreased from 22.1% to 12.7% between the two time points, and HIV prevalence did not increase at all (11.6% in 2006 and 11.4% in 2009).  

Figure 8 Percentage of IDU population successfully referred to ICTC from clinic
4. Successes and Challenges

The implementation of the Nurse-led STI Management Programme by Project ORCHID has resulted in a relatively high level of service coverage for Project ORCHID clients that would not have been achieved if the programme were staffed only by the small number of available doctors. It is important to acknowledge that the Programme has encountered a number of substantial challenges, some of which have been overcome, and some that still persist:

- Health infrastructure for supporting referrals is limited
- Some of the clients are challenging to work with, especially for young and inexperienced nurses, and it can take time for mutual trust to develop
- The turnover of nursing staff is relatively high, so new nurses need to be trained regularly
- Police raids on FSW and IDU hotspots drive the clients underground, further distancing them from health services and compromising treatment adherence
- Pressure group activities also drive the clients underground — the pressure groups include the insurgent groups as well as church, women’s and youth organizations that sometimes aggressively target IDUs and FSWs
- Frequent bandhs (strikes) and blockades, poor road connectivity, power outages, and degraded communication systems all substantially hamper the delivery of an effective programme
Clients are sometimes reluctant to consent to regular internal examination

It is difficult to reach FSWs who are not working out of known hotspot areas and those who do not identify as FSWs (common in Nagaland).

The Nurse-led STI Management Programme’s successes are attributed to a number of critical components in addition to the strategic recruitment of nurses to staff the STI services:

- Outreach team members actively encourage clients to attend the services and assist with patient follow-up
- The establishment of clinic committees with community membership helps to promote the acceptability of the clinic services to potential clients
- Alignment with the DICs provides an accessible, safe, non-threatening and confidential space where clients can relax and meet people facing similar challenges
- The programme distributes free commodities such as condoms and needles and syringes, and provides free STI treatment
- The provision of free care and treatment for simple general health problems attracts clients to the clinics
- The use of ICST kits for syphilis screening at the clinic helps overcome the barriers of limited laboratory capacity for syphilis screening, the logistical difficulties of blood transport, and patients’ fears of blood drawing
- The introduction of the mobile component of the programme has made an important contribution to increased coverage
- Feedback from clients shows that nurses are approachable and friendly.

The Nurse-led STI Management Programme developed and implemented by Project ORCHID in the states of Manipur and Nagaland has successfully managed to deliver effective STI services to hard-to-reach clients in a high HIV prevalence region of the country over a sustained period of time.
References
