SUMMARY REPORT

Health Care Provider Survey in Gujarat, India
This report is part of a series of baseline surveys conducted to monitor the impact of HIV/STI prevention programmes in five states of India: Andhra Pradesh, Gujarat, Kerala, Orissa, West Bengal and in the Healthy Highways Project. The surveys conducted include behavioural surveillance surveys (BSS), STI/HIV prevalence surveys and health care providers surveys. Together these surveys follow the methods outlined by UNAIDS/WHO for evaluation and monitoring of large scale HIV/STI prevention programmes.

Surveys in each state were implemented by a variety of research organizations, NGOs, medical colleges and laboratories, in collaboration with the respective State AIDS Control Societies. Family Health International provided technical assistance in the implementation of these surveys with funding from the UK Department for International Development.

This report was compiled in 2001

For more information on the HCP Survey in Gujarat, contact:

Gujarat State AIDS Control Society
0-1, New Mental Hospital Campus
Meghaninagar,
Ahmedabad 380 016

Department for International Development
B-28, Tara Crescent,
Qutub Institutional Area
New Delhi 110 016

Family Health International
Opposite Convention Hall
Hotel Ashok, Chanakyapuri
New Delhi 110 021

“This document is an output from a project funded by UK Department for International Development for the benefit of developing countries. The views expressed are not necessarily those of DFID or FHI.”
SUMMARY REPORT
Health Care Provider Survey in Gujarat, India

A study Implemented by COHESION under the guidance of Gujarat State AIDS Control Society with technical assistance from Family Health International

Funded by UK Department for International Development
I am glad to note that the Impact Assessment Project is drawing to a close and is now ready to disseminate the findings of its work. The Impact Assessment Project, supported by DFID was carried out under the guidance of NACO and the State AIDS Control Societies in the states of Orissa, West Bengal, Kerala, Gujarat, Andhra Pradesh and among highway populations. The studies, which include behavioural surveillance surveys, STI prevalence studies and health care provider survey’s, provide a mine of information for the planning, design, implementation and monitoring and evaluation of HIV/AIDS control programmes.

I must record here my appreciation for the technical support provided by the Family Health International and their constant efforts to maintain very high standards of quality. I would also like to thank NACO and the State AIDS Control Societies for their ungrudging support throughout this exercise. I hope this report will be a valuable source of information for all people working in the field of HIV/AIDS prevention in India and the world at large.

Tim Martineau
Senior Health Adviser

http://www.dfid.gov.uk

DFID is responsible for the British Government’s contribution to international development
FOREWORD

Sexually Transmitted Infections (STIs) have been a major public health problem in all the developing countries. India had a National STD Control Programme even before we got our independence. The issue of STI control, however, did not receive the due attention till the programme was merged with the National AIDS Control Programme developed after the emergence of HIV/AIDS as a significant public health problem. HIV/AIDS has now, very rightly, been recognised as an important developmental challenge with a potential to adversely affect the entire socio-economic infrastructure of the nation.

A number of activities are being implemented as a part of the National AIDS Control Programme under the leadership of National AIDS Control Organization in the state of Gujarat for the prevention of HIV/STI. Activities include awareness generation, behaviour change communication, condom promotion, management of STIs including the training of health care providers etc. Activities are also directed towards monitoring and evaluation (including impact assessment) of the programme.

Impact Assessment Project implemented in the state under the overall guidance of Gujarat State AIDS Control Society (GSACS) with technical assistance of Family Health International (FHI) and funding from Department for International Development (DFID) is an important step for tracking the trend of sexual behaviour (behavioural surveillance survey), STI prevalence studies and STI case management practices of health care providers [health care providers survey (HCPS)]. BSS was implemented by ORG MARG (a market research firm), STI prevalence studies were implemented among female sex workers (FSWs) in Ahmedabad by Jyoti Sangh and in Surat by Department of Community Medicine of Government Medical College, Surat and HCPS was implemented by COHESION (a private research firm) in the whole state and by PSM Department of M. P. Shah Medical College in Jamnagar district.

All these surveys have provided useful insight into the prevalence of STIs among FSWs, the behaviour of some of the important groups in the state (like FSWs and clients, slum...
dwellers etc.) and the way STI patients are managed in the health care settings. For instance, STI prevalence studies among the female sex workers revealed very high prevalence of curable STIs among them, which prompted initiation of additional measures (like organizing regular camps for screening sex workers, who are asymptomatic for STI) for control of STIs. Following the STI prevalence studies, efforts were also made to try and test alternate methods of STI control among them.

It will be important to repeat these studies at periodic interval to see the change in these parameters over time.

We thank DFID for providing the financial support to this project.

It is expected that these reports will also be useful for agencies and individuals involved in the fight against STI/ HIV/ AIDS elsewhere in the country.

Dr. D. M. Saxena
Project Director
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<td>Ayur-homeo (Cat 3) Doctors trained in</td>
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<td>indigenous medical systems (Homeopathy,</td>
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<td>Ayurveda, Unani or Sidha)</td>
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<td>BCC Behavior Change Communication</td>
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<td>CHC Community Health Center</td>
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<td>CSW Commercial Sex Worker</td>
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<td>DFID Department for International</td>
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<td>Development</td>
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<td>EI Exit interviewers</td>
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<td>FHI Family Health International</td>
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<td>Govt. Government</td>
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<td>Allo-Govt (Cat 1) Allopathic doctors</td>
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<td>employed in Government health care settings</td>
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<td>GSACS Gujarat State AIDS Control Society</td>
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<td>HCP Health Care Provider</td>
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<td>HCPS Health Care Provider Survey</td>
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<td>HCPs Health Care Providers</td>
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<td>HIV Human Immuno Deficiency Syndrome</td>
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<td>IEC Information, Education and Communication</td>
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<td>IMA Indian Medical Association</td>
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<td>NACO National AIDS Control Organization</td>
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<td>NGU Non Gonococcal Urethritis</td>
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<td>PHC Primary Health Center</td>
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<td>PSU Project Support Unit</td>
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<td>Allo-pvt (Cat 2) Allopathic doctors</td>
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<td>employed either in private institutions</td>
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<tr>
<td>or engaged in own private practice</td>
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<tr>
<td>RMP(Cat 4) Registered Medical Practitioner</td>
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<td>SACS State AIDS Control Society</td>
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<td>SCM Syndromic Case Management</td>
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<td>SP Simulated Patient</td>
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<td>STI Sexually Transmitted Infection</td>
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Executive summary

The Health Care Provider Survey (HCPS), Gujarat – 2000 was conducted during November 1999 – September 2000. The purpose of this study was to collect baseline information on the quality of STI case management provided by health care providers (HCPs) in Gujarat. This study was implemented for Gujarat State AIDS Control Society (GSACS) by COHESION, Ahmedabad, which was identified through a competitive bidding process. It was financially supported by Department for International Development (DFID) and technically supported by the Family Health International (FHI).

For this study, six districts, representing a cross section of Gujarat, were identified through purposive sampling and in consultation with the GSACS. The health care providers (HCPs) in these districts were grouped into four categories based on their qualification and settings of their practice. Category 1 included allopathic doctors employed in government health care settings and Category 2 included allopathic practitioners employed either in private institutions or engaged in own private practice. Doctors trained in indigenous medical systems such as Ayurveda, Homoeopathy, Unani or Siddha were grouped in Category 3 and Registered Medical Practitioners were grouped in Category 4.

The study methodology included two approaches: (a) visit to a doctor by a Simulated Patient (SP) followed by an exit interview of the SP by a social researcher, and (b) a structured interview of a sub-sample of above HCPs by a social researcher. In-depth discussions with a few HCPs on issues related to STI case management were also conducted. The SP methodology was designed to observe actual practice of STI care by HCPs and interviews were designed to find out if the doctors’ knowledge about STI care matched with the NACO guidelines.

A total of 126 SP visits, 66 structured interviews and 12 in-depth discussions were conducted in each category of HCPs. Thus the total sample size for all four categories of HCPs for this study was 504 SP visits, 264 interviews and 48 in-depth discussions. All the survey tools were pre-tested and then finalized. The investigators were adequately trained before the survey in order to ensure uniform data collection practices.
Major findings of this study

Data was analyzed separately for simulated patient visits and structured interview of the HCPs. Gaps, if any, between the practice of the HCPs as observed by the SP visits and their knowledge as indicated through structured interviews were identified. Detailed below are the major findings related to history taking, physical examination, diagnosis and treatment, medical prescription practices and patient education of the HCPs in response to the SP’s complaint of urethral discharge and the structured interviews.

Major findings of simulated patient (SP) visits

History taking: Analysis of data from SPs visits indicated that 89% to 99% of HCPs in all 4 categories asked questions related ‘present symptoms’ and ‘duration of symptoms’ and 31% to 53% HCPs asked history of ‘recent sexual contact’.

Physical examination: Less than 40% of HCPs in any category had examined the patients as per NACO guidelines. The percentage of allopathic practitioners in private settings who examined the SPs was higher than those working in government settings.

Diagnosis and treatment: HCPs in all the four categories had recommended urine tests more often than VDRL and HIV tests. Allopathic doctors in government settings had recommended more laboratory tests as compared to HCPs in any other category. 21% recommended urine test, 3.2% HIV test and 2.4% had recommended VDRL test.

Medicines prescribed: Less than 28% of HCPs in any category had prescribed medicines as per NACO guidelines. Prescription practices of allopathic practitioners in government settings as per NACO guidelines was higher than among HCPs in other categories.

Patient education: More than 41% HCPs in every category had advised SPs about ‘treatment compliance’ whereas less than 6% HCPs in any category had advised partner treatment and less than 18% HCPs of any category had advised condom use. About three times more non-allopathic HCPs had advised condom use to SPs as compared to HCPs in government settings.
Major Findings of HCPs interviews

History taking: More than 90% or more HCPs from all categories said that they would enquire about ‘present symptoms’, ‘duration of symptoms’ and ‘recent sexual contact’ as part of history taking of patients with complaints related to STIs.

Physical examination: Over 86% of allopathic practitioners in both government and private settings stated that they would insist on a detailed physical examination of STI male patients. The knowledge of other two categories of HCPs regarding ‘physical examination’ has also been found to be high.

Diagnosis and treatment: In response to a question regarding the preferred method of diagnosis, 53% allopathic HCPs in government setting indicated that ‘history and clinical examination’ was their choice and 48.5% preferred ‘clinical examination and lab tests’. Two-thirds of allopathic practitioners in private settings preferred making a diagnosis on the basis of history and clinical examination while the rest said that they relied on ‘clinical examination and lab tests’.

Opinion of HCPs on syndromic case management: About 38% HCPs in government setting said that syndromic case management had a better follow up. Risk of over treatment was the concern expressed by HCPs in all categories. Some allopathic HCPs in private setting said that syndromic case management was ‘ideal for current infra structure’.

Patient education: Majority of allopathic doctors said that they would counsel STI patients about ‘treatment compliance’, ‘condom use’ and ‘partner treatment’. More than 74% HCPs in other two categories had also stated that they gave advice on these three aspects to all their STI patients. However, there was a significant difference between the probed and spontaneous responses of HCPs from different categories.

About 71% allopathic HCPs in government setting had stated spontaneously that they would recommend ‘condom use’ and 4% had said they would advice ‘partner treatment’. The ‘spontaneous response’ of allopathic HCPs in private settings was 48% for ‘condom use’ and 46% for ‘partner treatment’. The ‘spontaneous response’ regarding ‘treatment compliance’ was 55% in both these categories.

Executive summary
Differences in observed practices and the responses in interviews

Gap between knowledge and practice of allopathic practitioners in government settings (Category-1) related to ‘history taking’: The gap between ‘practice’ and ‘knowledge’ of HCPs in this Category was widest with regard to ‘recent sexual contact’ where 69% ‘spontaneously’ mentioned that they would enquire about this aspect and up to 91% on probing (‘spontaneous’ + ‘probed’) whereas in practice about 31% HCPs in this category had asked the SPs about history of recent sexual exposure. The gap was much less with regard to responses related to ‘present symptoms’ and ‘onset / duration of symptoms’.

Gap between knowledge and practice of allopathic practitioners in private settings (Category 2) related to ‘physical examination’: Although 86% to 91% HCPs in this category had stated that they would conduct physical examination as per recommended guidelines on all STI patients, only 36% to 40% HCPs had actually examined the SPs.

Gap between knowledge and practice of HCPs with regard to treatment of Gonorrhoea: About 28% HCPs in government setting had prescribed medicines to the SPs as per the NACO guidelines, whereas 77.3% of them had stated the recommended drugs during the structured interview. Similarly, 25% allopathic HCPs in private settings had prescribed medicines as per the NACO guidelines, whereas 77.3% of them were able to list the recommended drugs as per national guidelines. Thus the ‘practice’ was about one-third of the ‘cumulative knowledge’ of HCPs among allopathic practitioners irrespective of their setting with regard to treatment of Gonorrhea.

Advice on ‘proper and consistent condom use’: A total of 40 to 70% HCPs in all categories had ‘spontaneously’ stated that they would advice consistent and correct use of condoms to all their STI patients. Upon probing, more than 75% HCPs had indicated that they would provide such advice. However, during SP’s visits, only 6 to 17% of HCPs in various categories had advised SPs condom use.
Despite major advances in health care, some infectious diseases continue to be a cause of major concern. HIV/AIDS is perhaps the most significant of these emerging disease concerns all over the world. In India, the infection is no more limited to high-risk groups in some specific geographic areas in the cities and is now prevalent all over the country.

More than 75% of HIV infections in the country are reported to occur, like any other sexually transmitted infection (STI), through sexual contact. The preventive strategies commonly adopted for STIs are also applicable for prevention and control of HIV infections. Successful strategies include improvement in the treatment seeking behaviour of STI patients, improvement in the practices of health care providers in providing STI care and support, early detection and treatment of STIs and promoting safer sex practices.

The Health Care Provider Survey (HCPS) in Gujarat was implemented by COHESION, a private research firm in Ahmedabad. COHESION was identified for implementation of the survey through a competitive bidding process by a panel comprising of GSACS, AMC ACS and FHI. HCPS had provided baseline information about quality of STI care provided by various categories of HCPs. Repeated rounds of such studies can measure effectiveness of training programmes to HCPs to provide quality STI care and support.

This survey was designed to gather information about health care providers’ actual practice and knowledge about the recommended STI case management. This mainly included specific aspects of ‘history taking’, ‘physical examination’, ‘diagnosis and treatment’ and ‘patient counseling’. All the HCPs who were the first point of contact for STI patients, irrespective of their qualification and place of work, were included in this study.

The government has set up Sentinel Surveillance system in order to monitor trends of HIV infection in specific high-risk groups and low-risk groups. In the year 2000, Gujarat
had six sentinel centres for high-risk groups where prevalence of HIV was measured among patients attending STI clinics. It had six other sentinel centers for low-risk group where women attending antenatal clinics were tested for HIV infection. Sentinel survey reports had indicated that the HIV prevalence among women attending antenatal clinics was 0.50 and 4.65 among patients of STI clinics.

The main purpose of the HIV prevention activities in Gujarat is to arrest the spread of HIV infection and reduce its prevalence further. The Gujarat State AIDS Control Society has contracted several NGOs and institutions to work with high-risk groups such as female sex workers (FSWs) in order to promote, among others, safer sex practices and health seeking behaviour.

**Objectives of the survey**

The main objectives of the Gujarat Health Care Provider Survey were:

1. To gather information on knowledge and practice of STI case management among various categories of HCPs, and
2. To generate a baseline data on quality of STI case management by HCPs in Gujarat, which could be used to compare data from subsequent rounds of similar studies and thereby determine the impact of STI training programmes for HCPs.

**Indicators for gathering information**

The sub-indicators for gathering information were ‘history taking’, ‘physical examination’, ‘diagnosis/treatment’ and ‘risk reduction counseling’ (which mainly included advice on treatment compliance, condom use and partner treatment).

**Methodology**

Methods for data collection

The method for the study was designed jointly by Gujarat State AIDS Control Society (GSACS) and Family Health International (FHI). It included collection of information through two major components: (1) Simulated Patient (SP) visit to HCPs to be followed
by exit interview of these SPs immediately and (2) interview of HCPs using a structured interview schedule along with in-depth discussion with a few HCPs on various issues related to STI’s case management.

SP method: In this method, a male, who was well-trained to simulate as a STI patient, visited an HCP for consultation and complained of urethral discharge for two to three days. The SP did not volunteer more information, but answered all questions asked by the HCP. He complied with instructions for physical examination, but refused injections or taking oral medicines in the clinic itself. The SP observed all details about HCP’s queries and practices regarding total STI care with special emphasis on history taking, physical examination, diagnosis / treatment and counseling related to condom use and partner treatment. As soon as the SP had concluded his visit, the exit interviewer conducted his exit interview using a pre-tested, structured questionnaire and documented the SP’s experiences. This questionnaire provided a detailed description of the HCP’s actual practice of STI case management.

Interview method: The HCPs were interviewed after a gap of at least one week of the SP’s visit to their clinic. A trained social scientist interviewed a sub sample of HCPs, who were visited by the SPs, using a structured interview schedule. In case the doctors did not respond spontaneously to certain queries, the interviewers had probed further in order to elicit responses. These responses were recorded separately as ‘spontaneous’ and ‘probed’ responses of HCPs. In-depth discussions were also held with HCPs who were willing to discuss more about various aspects related to case management of STIs. Compilation of the data collected from the structured interviews of the HCPs provided information on their knowledge of STI case management.

Sampling

Selection of districts: There were six main indicators for selecting a representative sample of districts. These included (a) metro city, (b) medium city, (c) average size industrial city from Saurashtra region, (d) prominent agricultural district, (e) resource poor, tribal area bordering other States, and (f) resource poor, desert area with high migratory population. Based on these criteria, the six districts that were selected for the survey were Ahmedabad, Baroda, Rajkot, Mehsana (old), Panchmahals (old) and Kutch.
Sample groups The HCPs were selected from four major categories:

1. Allopathic doctors employed in Government health care settings (Allo-govt: category 1);
2. Allopathic doctors either employed in private institutions or engaged in own private practice (Allo-pvt: category 2);
3. Doctors trained in indigenous medical systems (Ayur-Homeo) (Homeopathy, Ayurveda, Unani and Siddha: category 3);
4. Non-qualified, traditional health care providers (RMPs: category 4);

Though NACO guidelines for STI case management were more relevant to Categories 1 and 2, categories 3 and 4 were included in the study at the request of the GSACS, because of the fact that many patients access care for STIs from these HCPs.

Sample universe: Sample universe was finalized based on experience of pilot study. About one-third talukas/wards per district/city were identified through purposive sampling. This was followed by a comprehensive listing of all eligible HCPs in these areas. The only exception was Rajkot where the entire district was mapped because sufficient number of HCPs for sampling were not available from the list of HCPs in smaller talukas/wards. The universe of HCPs included all allopathic doctors, doctors qualified in indigenous system of medicine and non-qualified RMPs who were the first point of contact for STI patients. In addition to mapping techniques, the listing of HCPs was done using information from published material such as Indian Medical Association directory, telephone directories and records of pharmaceutical companies.

Sample size: A total of 504 HCPs were visited by SPs, a sub-sample of 264 HCPs interviewed by interviewers and in-depth discussions were held with 48 HCPs as shown in Table 1.

Survey instruments

Three types of survey instruments were designed for assessing the HCPs’ practice and knowledge about STI case management. These included: (i) structured interview schedule for exit interview of SPs, (ii) structured interview schedule for HCPs and (iii) guidelines
for in-depth discussion with HCPs. All the instruments were finalized for the main survey after field-test during the pilot study and technical review by experts.

<table>
<thead>
<tr>
<th>HCPs Category</th>
<th>SP visits</th>
<th>HCPs’ Interview</th>
<th>In-depth Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Allopathic doctors in Government service settings (Allo-govt)</td>
<td>126</td>
<td>66</td>
<td>12</td>
</tr>
<tr>
<td>2. Doctors either employed in private institutions or engaged in own private practice (Allo-pvt)</td>
<td>126</td>
<td>66</td>
<td>12</td>
</tr>
<tr>
<td>3. Doctors trained in indigenous medical systems (Homeopathy, Ayurveda, Unani and Sidha) (Ayur-Homeo)</td>
<td>126</td>
<td>66</td>
<td>12</td>
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<tr>
<td>4. Non-qualified, traditional health care providers (RMPs)</td>
<td>126</td>
<td>66</td>
<td>12</td>
</tr>
<tr>
<td>Total 4 categories of HCPs and 6 districts</td>
<td>504</td>
<td>264</td>
<td>48</td>
</tr>
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</table>

**Training**

Training was conducted for all the investigators including simulated patients, exit interviewers, and interviewers of HCPs before the pilot study. The main aim of the training was to sensitize them to STIs/ HIV issues and enhance skills related to their role in the survey. The SP’s training focused on developing skills for narrating a STI complaint - urethral discharge - convincingly and handling sensitive or problem situations, if any, during his visit to HCPs. The Exit interviewer’s (EI) training focused on interviewing skills and documenting SP’s experiences accurately in the structured questionnaire without influence of their personal biases and assumptions. The training of interview team focused on interview techniques, non-threatening and culturally sensitive ways of probing and eliciting information on STI case management and related advice to patients.

**Pilot study**

The pilot survey was conducted in two talukas - Nadiad and Kapadwanj of Kheda District - under the direct supervision and support of the supervisors. The purposes of the pilot
study were to: (a) to pre-test the tools for data collection, (b) to field test the skills of the research team, and (c) to assess the appropriateness of field plan to implement the major study.

Based on the experience of the pilot study, the following changes were made in the survey design:

- All Talukas/wards in a district/city were classified into about 3 to 4 zones based on distinct parameters and of these, about one-third of the district/city was identified for the major study;
- During fieldwork, the teams were divided into smaller groups in order to escape being noticed, especially in rural areas, and
- Daily meetings of the field team were conducted in order to review the day’s accomplishments, ensure quality of data collection and review plans for the next day.

**Main survey**

The major study was conducted in cities of Ahmedabad, Baroda and Rajkot, and Mehsana (old), Panchmahals (old) and Kutch districts. The sample of allopathic practitioners working in government settings in Ahmedabad was obtained from the entire city including the suburbs and HCPs from remaining categories were selected from 13 of the 43 (about one-third) wards. In Baroda, the whole city and the neighboring PHCs were selected for government allopathic doctors, whereas the entire city was covered for RMPs. In Rajkot, neighboring primary health centers (PH Cs) were also covered for allopathic government HCPs as adequate number of HCPs in this category were not available from within in the District. In Mehsana District, four of the eleven taluks including Mehsana, Visnagar, Patan and Kheralu were covered for the study. Four of the eleven taluks of Panchmahals district including Kalol, Dahod, Jhalod and Lunawada were covered. In Kutch District, three of the nine taluks were covered. These included Bhuj, Anjar and Nakhatrana.

**Data analysis**

Data entry and analysis of the data were done using SPSS.
Report

A detailed report on the study was prepared and submitted by COHESION. Based on that detailed report, this summary report was prepared which contain the salient findings of the study.
Major findings of SP visits

History taking

The minimum recommended standards of practice for history taking of a STI patient include inquiring about (a) present symptoms and nature of symptoms, (b) onset and duration of symptoms, and (c) recent sexual contacts.

Analysis of data of SP’s visits on ‘history taking’ indicated that 89% to 99% HCPs in all 4 categories asked questions related to ‘present symptoms’ and ‘duration of symptoms’ as compared to 31% to 53% HCPs who asked about history of ‘recent sexual contact’. Figure 1 shows ‘history taking’ practice by HCPs in Categories 1 to 4.
**Physical examination**

Minimum recommended standards of practice for physical examination of male STI patients required that the HCPs (a) ask the patients to undress so that the genitals are fully exposed, (b) examine patients for penile discharge and (c) examine for genital lesions after retracting foreskin in uncircumcised males.

This study indicated that about 36% to 40% of allopathic doctors practicing in private settings had physically examined the SPs covering all the three quality aspects of physical examination as per NACO guidelines, whereas only 4% to 7% of allopathic doctors in government settings carried out detailed physical examination (Figure 2).

![Figure 2. Practice of physical examination during SP visits among HCPs](image)

**Diagnosis and treatment**

Urine tests were the most common investigation recommended by HCPs in all four categories. Allopathic doctors in government settings had recommended more laboratory tests as compared to HCPs in other categories. In total 20.6%, 3.2% and 2.4% HCPs in this category had recommended urine test, HIV test and VDRL test respectively (Figure 3).
The number of HCPs who had not prescribed drugs as per NACO guidelines exceeded those who had in all the four categories. Less than 1.5% HCPs had prescribed ‘acceptable alternative drugs’ and about one-third of allopathic practitioners had prescribed drugs which were not clearly identifiable (Figure 4).
Patient education

Minimum recommended guidelines for patient education related to STIs included counseling on (a) treatment compliance, (b) consistent and correct use of condoms, and (c) simultaneous treatment of sexual partner(s).

Study findings indicated that about 41% to 75% HCPs in the four categories had advised SPs to complete the full course of treatment and about 6% to 18% HCPs in various categories recommended condom use for subsequent sexual acts, only about 1% to 6% HCPs had asked the SP to get his partner treated. The number of non-allopathic HCPs who had advised SPs to use condoms in future was three times more than the number of allopathic doctors in government settings who had given the same advice (Figure 5).

It was observed that the important components of STI / HIV prevention counseling on consistent and proper condom use and simultaneous partner treatment were not provided by majority of the HCPs.
Major findings of HCPs interviews

Two hundred and sixty HCPs, a sub-sample of 504 HCPs visited by SPs, were interviewed using a structured interview schedule to assess their knowledge about STI case management as per the NACO guidelines. Assessment was made for knowledge of history taking, physical examination, diagnosis/treatment and patient education on condom use and partner treatment. In this section, the ‘spontaneous’ and ‘probed’ responses are shown separately, which together give the total response related to specific sub indicator. It was presumed that the ‘spontaneous responses’ were more likely to determine the ‘practice’ than the ‘probed responses’.

History taking

The HCPs were asked to list the questions that they would ask during history taking of a patient with symptoms suggestive of STI. Majority of HCPs from all categories had said
that they would enquire about ‘present symptoms’, ‘duration of symptoms’ and ‘recent sexual contact’ as part of history taking of patients with complaints related to STIs (Figure 6).

**Physical examination**

When both the ‘spontaneous’ and ‘probed’ responses were grouped together, it was observed that more than 86% HCPs from both the allopathic categories (in government and private settings) had stated the recommended guidelines for physical examination of STI male patients. The knowledge of other two categories of HCPs regarding ‘physical examination’ was also high (Figure 7).

![Figure 7. HCPs’ reported practice of physical examination](image)

**Diagnosis & treatment**

About 53% allopathic practitioners in government settings (Category 1) had stated preference for ‘history and clinical examination’ for arriving at a diagnosis of STI, 48.5% HCPs in the same category had expressed preference for ‘clinical examination and lab tests’. Two-third allopathic HCPs in private settings (Category-2) had said that they normally arrived at a diagnosis on the basis of ‘history and clinical examination’ while 36.4% had stated preference for ‘clinical examination and lab tests’ (Table 2).
Opinion of HCPs on syndromic case management: Practice of syndromic case management of STIs was presumed to be dependent on the HCPs' individual opinion and attitude towards syndromic case management. Table 3 shows the opinion of HCPs with regard to syndromic case management for STIs.

A total of 38.5% HCPs from Category - 1 (allopathic practitioners in government setting) had said that syndromic case management had a better follow up. More than one fourth of allopathic HCPs expressed that risk of over treatment was one of the limitations of SCM.

Table 2: HCPs reported preferences for methods of diagnosis of STIs

<table>
<thead>
<tr>
<th>Preferences for diagnosis</th>
<th>% of HCPs in Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>By history only</td>
<td>37.9 33.3 33.3 25.8</td>
</tr>
<tr>
<td>By history and clinical examination</td>
<td>53.0 66.7 78.9 68.2</td>
</tr>
<tr>
<td>By clinical examination only</td>
<td>7.6 7.6 6.1 16.7</td>
</tr>
<tr>
<td>By clinical examination and lab tests</td>
<td>48.5 36.4 30.3 22.7</td>
</tr>
</tbody>
</table>

Preference for drugs for treatment of urethral discharge: About 77% allopathic HCPs in private and government settings had listed drugs that were known to be ‘effective for treatment of gonorrhoea’, 18.2% and 12.1% allopathic HCPs in government and private settings respectively were able to state the recommended ‘drug for treatment of NGU’ (Table 4).
More than 88% of allopathic doctors had said that they would counsel STI patients for ‘treatment compliance’, ‘condom use’ and ‘partner treatment’. Over 74% non-allopathic HCPs had also said that they would give the same advice. However, there was a difference between the probed and spontaneous responses of HCPs from different categories (Figure 8).

About 71% allopathic practitioners in government settings gave a spontaneous response regarding advice on condom use and 4% had spontaneously stated that they gave advice...
on partner treatment. In comparison, 47% and 45.5% allopathic HCPs in private setting had spontaneously said that they gave advice on ‘condom use’ and ‘partner treatment’ respectively.

**Gaps between practice and knowledge of HCPs in STI case management**

The study findings indicated that there were significant gaps between the knowledge (as revealed by HCPs’ interview) and practice (as revealed by SP visits) of all categories of HCPs for treatment of STI cases.

**History taking:** The gap between practice and knowledge of allopathic HCPs in government settings was widest for taking history of recent sexual contact. About 68% HCPs in this category had spontaneously listed this as one of the questions they would ask a patient with symptoms suggestive of STIs. The cumulative response upon probing for this aspect of history taking was 93.9%. However, only 31% HCPs in the same category had asked the SPs about their history of recent sexual contact (Figure 9).

![Figure 9. Gap between practice and knowledge of HCPs in government settings for history taking of STI patients](image)

Physical examination: The gap between practice and cumulative response to ‘indicators of physical examination’ among allopathic practitioners in private settings is shown in Figure 10.
Basis for diagnosis / treatment: There were significant differences between practice and knowledge of treatment of STIs among allopathic HCPs. For example, although 77.3% allopathic HCPs in government settings listed the drugs for treatment of urethral discharge as per NACO guidelines, only 28% of them had actually prescribed them to the SP. Similarly, 25% allopathic HCPs in private settings had prescribed medicines that met with NACO guidelines, whereas 77.3% of them had stated the drugs as per national guidelines during the interview (Figure 10).
Patient education: About 71% HCPs in government setting had spontaneously responded and in total 98.5% HCPs in the same category (spontaneous and probed) had responded that they would advise their patients about proper and consistent use of condom. However, only 6.3% HCPs actually advised SPs on the same (Figure 12).

Figure 12. Gap between practice and knowledge of HCPs related to advice on consistent use of condoms for STI patients

About 47% allopathic HCPs in private settings had spontaneously responded and in total 89.4% (spontaneous and probed) had said that they would advise their patients about proper and consistent use of condoms. Only 14.3% of them had actually advised the SPs on the same.

Among HCPs qualified in alternative systems of medicine, 54.5% had spontaneously responded and in total 90.9% (spontaneous and probed) had said that they would advise their patients about condom use but only 17.5% of them had actually advised the SPs.

A total of 40.9% registered medical practitioners had spontaneously responded and in total 75.8% (spontaneous and probed) had responded that they would advise their patients about using condom while 11.9% HCPs in this category had actually given the advice to the SPs.
Major findings and recommendations

Finding - 1

- About 36% to 40% allopathic doctors practicing in private settings had physically examined the SPs by covering all the three aspects of standard guidelines for physical examination of STI patients whereas only 4% to 7% allopathic doctors practicing in government settings had done so. Lack of adequate infrastructure for providing privacy to the patients during physical examination was stated to be a major reason for this difference during in-depth interview.

Recommendation

- To create adequate infrastructure in Government settings in order to ensure privacy to do proper physical examination.

Finding - 2

- A total of 28%, 27%, 21% & 15% HCPs from government, private allopathic, homeopathic/ ayurvedic and RMPs respectively had prescribed effective drugs as per NACO guidelines. However, the number of HCPs providing STI case management as per NACO guidelines needed to be higher in order to reduce prevalence of STIs and thereby sexual transmission of HIV/ AIDS.

Recommendation

- Appropriate mechanisms needed to be put in place to improve practice of STI case management by all categories of HCPs.
Finding - 3

- There was a wide gap between the measurements of ‘practice’ and ‘knowledge’ of H CPs with regard to ‘recent sexual contact’ in ‘history taking’ (Category 1), all aspects of physical examination (‘exposing genital area fully’, ‘retracting foreskin’ and ‘milking the penis to examine for white discharge’) (Category 2), ‘actual prescription of medicine’ and ‘knowledge about correct medicines to be prescribed’ (treatment) (Categories 1 & 2) and all aspects of ‘patient counseling’ (‘treatment compliance’, ‘condom use’ and ‘partner treatment’) (Categories 1, 2, 3 & 4).

- H CPs had indicated during the in-depth interviews that there was a dire need to improve the attitudes and skills of most of the H CPs and other related staff members for imparting the recommended STI case management.

Recommendation

- Training programs (hands on, clinic based) for H CPs needed to be organized with emphasis on their ‘improvement of actual practices of STI case management and care’ rather than merely increasing their knowledge.