

Can the Private and Public Sectors Collaborate for Effective Management of TB, HIV and Co-infection?

A Situational Analysis in Hyderabad City, Andhra Pradesh

Conducted by

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Introduction

The TB-HIV Dual Epidemic and the Public Sector Response

Epidemiologically, HIV and TB tend to fuel each other. HIV is the most powerful risk factor for the progression of TB infection to TB disease. An HIV positive person has a 50-60% lifetime risk of developing TB disease as compared to an HIV negative person who has a risk of just 10% of developing the TB disease in a lifetime. TB accelerates the progression of HIV into AIDS, thus shortening the survival of patients with HIV infection.

HIV/AIDS is already posing a major threat to TB control in India, increasing TB case rates and case-loads. It is estimated that there are about two million co-infected persons currently living in India. This epidemiological scenario demands coordination and concerted control efforts between the Central TB Division and the National AIDS Control Organisation, the policy framing and implementing bodies of the Revised National TB Control Programme and the National AIDS Control Programme. These two bodies have together developed joint guidelines for a HIV/TB co-ordination programme in 2001, which is currently being operationalised in high prevalence states.

The Private Sector and the TB-HIV Dual Epidemic

The private health sector in India, which exists as a parallel system to the public sector, has also been managing TB and HIV/AIDS patients. The private sector alone is estimated to manage more than 60% of TB patients in India. Such research evidence has led to policy recommendations around creating partnerships between the public and private sectors leading to piloting of various Public-Private Mix (PPM) models.

Recent studies carried out in Pune district have documented the significant role played by the private sector in the management of HIV/AIDS. These studies have also raised concerns about the quality of tests, counseling, informed consent, confidentiality and possible use of anti-retroviral (ARV) drugs by private medical practitioners particularly in urban settings, where private medical practitioners and their clients have access to sophisticated investigation tests and facilities. There have, however, been very few attempts to initiate public private partnerships for managing HIV/AIDS.



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The Situation in Andhra Pradesh

Andhra Pradesh, one of the high HIV prevalence states in India has put in substantial efforts to implement both the Revised National TB Control Programme and the National AIDS Control Programme. The Andhra Pradesh State AIDS Control Society (APSACS) and the State TB Office have also been coordinating their efforts. HIV/TB coordination is being implemented at all 205 Voluntary Counseling and Confidential Testing Centers (VCCTC) operational in the state and also at the other intervention sites under the National AIDS Control Programme and the Revised National TB Control Programme.

The private sector in AP also manages a substantially high number of patients for TB and Sexually Transmitted Diseases. There is a model for a successful public-private mix initiative for TB, operating in the city since 1995. Under a Global Funds to Fight AIDS, TB and Malaria (GFATM)-funded Urban DOTS Project, efforts are being made to establish contact with private medical practitioners practicing in slum areas and involve them in the Revised National TB Control Programme. LEPRAs Society has also had some success with involving private medical practitioners in the TB programme in their project area. The Clinton Foundation is implementing the 'Physicians Training Initiative in HIV/AIDS' in the state since May 2006. Nine thousand five hundred private medical practitioners have been trained so far and the target is to train 20,000 physicians in the private sector.

The Study in Hyderabad City

Justification: Programme managers need to adapt, develop and pilot locally suitable strategies for public-private partnerships for better management of TB, HIV and co-infection as well as for other national programmes. Results from the public private mix initiatives in TB and the attempts made by the public sector to combat the HIV-TB co-infection suggest the need for a public-private partnership to ensure continuity of care for patients suffering from TB, HIV and co-infection and facilitate access to TB treatment and anti-retroviral therapy (ART).

It is hence important to generate evidence and document current TB and HIV management practices across public and private sectors, and assess readiness of both for implementing a HIV-TB coordination programme in partnership.

Objectives of the Study

1. To assess the management practices of private medical practitioners with regard to HIV, TB and co-infection.
2. To identify the felt needs of private sector providers regarding probable interventions with respect to HIV, TB and co-infection management.
3. To assess the feasibility of coordination between the public and private sectors for management of HIV, TB and co-infection.

Methodology

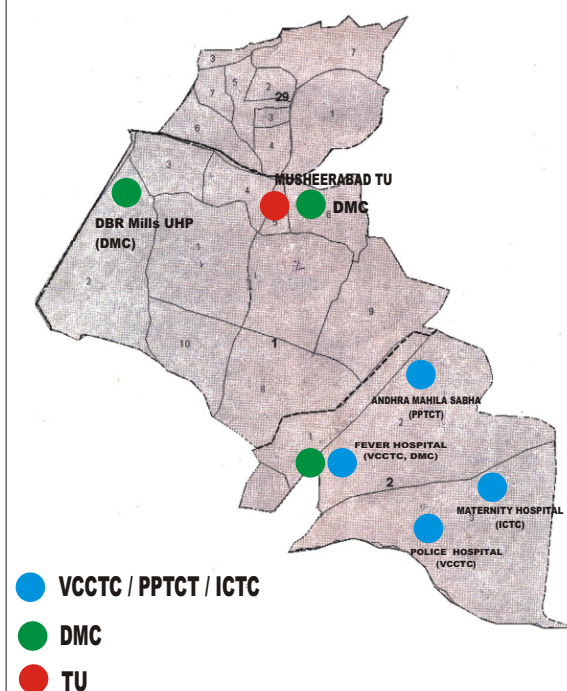
Study Setting: The present study was carried out in Musheerabad Tuberculosis Unit (TU), one of the eight TUs in Hyderabad city of Andhra Pradesh. This TU was selected for its large number of private medical practitioners, large slum population and adequate presence of public health sector facilities

Population: 5, 21,769 (2001 census)

Slum population: 1,97,748

Number of municipal wards: 3 (1, 2 and 6 of Secunderabad)

Area Map of Musheerabad TU, Hyderabad



Number of private medical practitioners: 397

Public Health Facilities: 6 Urban Health Posts, 9 Government Dispensaries (Unani/ Ayurvedic / Homeo), 2 Civil Dispensaries, 2 ESI, 1 APSRTC and 3 CGHS.

Facilities for TB and HIV/AIDS: 3 Designated Microscopy Centers, 2 Voluntary Counselling and Confidential Testing Centers, 1 Prevention of Parent to Child Transmission Centre and 1 Integrated Counseling and Testing Centre.

Study Design: The study was descriptive and cross-sectional in nature and was conducted in two phases as follows:

- Phase I: Rapid Assessment Survey
- Phase II: Stakeholder Analysis

Rapid Assessment Survey: All private medical practitioners and private diagnostic centers having display boards and practicing in the study area were mapped and listed irrespective of their qualifications. The mapping and listing was done on foot and on bike. A total of 397 private medical practitioners and 67 diagnostic centers were mapped. Three hundred and eleven private medical practitioners and 61 diagnostic centers, available and willing to be interviewed, were included in the study. Trained investigators conducted the interviews between June and September 2006, using a semi-structured interview schedule.

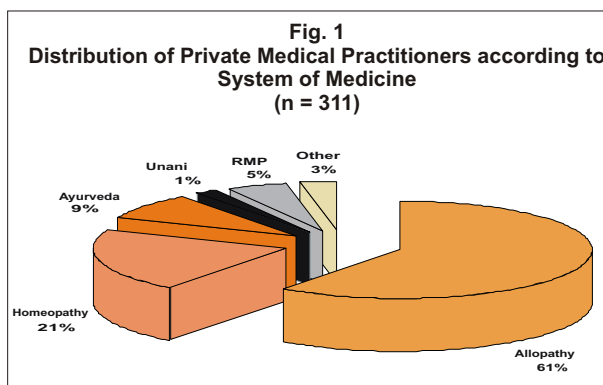
Stakeholder Analysis: Twenty-three frontline workers (7 TB supervisors and 4 counselors from voluntary counseling and confidential testing centres (VCCTC) and 12 medical officers holding responsibilities under the National AIDS Control Programme and the Revised National TB Control Programme were interviewed using an interview guide, between November 2006 and January 2007. The objectives were to understand their knowledge regarding the ongoing public-private mix in the TB programme and their perceptions regarding the usefulness and the need for public-private partnerships for the management of co-infection.

Key Findings

Profile of Private Medical Practitioners

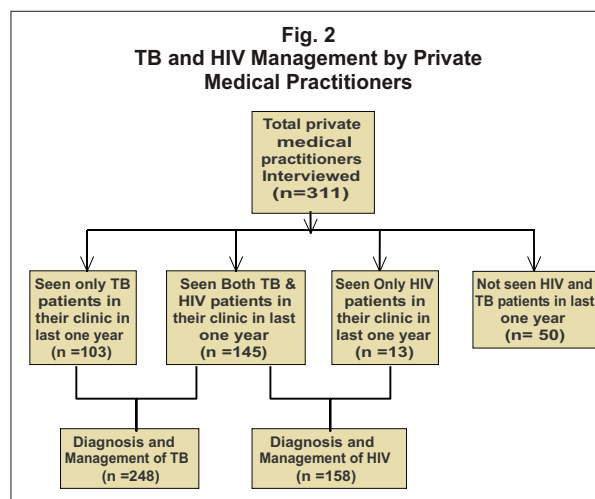
- Seventy-two percent of the 311 private medical practitioners interviewed were males.
- A third (35%) of them practiced in slum areas.
- Allopaths constituted 61% of the sample (Fig 1).
- Their average number of years of practice was 19 years (range 1 - 50).

- More than half (55%) of the private medical practitioners were members of some medical association, predominantly Indian Medical Association and Andhra Pradesh Homeopathic Association.



Extent of TB and HIV Management

- In their daily clinical practice, more (80%) private medical practitioners had seen TB cases compared to HIV cases (51%) (Fig.2)
- Private medical practitioners had seen an average of 9 TB patients (range 1-300) and 4 HIV patients (range 1-500) in their clinics in the last year.



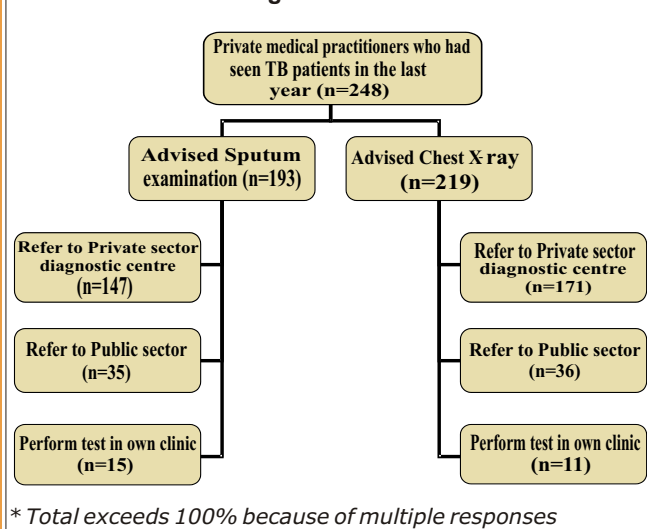
Diagnosis of TB (Fig. 3)

- Most (88%) of the 248 private medical practitioners who had seen TB patients advised chest X-ray as the diagnostic test while 78% advised sputum examination.
- Close to three-quarters (73%) of them preferred to refer the patients to the private sector facilities for these tests

☞ *Most of them referred patients to diagnostic centres, which were close to their clinics.*

- While a majority (89%) of the 61 surveyed private diagnostic centers in the study area offered sputum examination, more than half (57) offered chest X-ray.
- Just over a half (57%) of the diagnostic centers reported sputum examination results (positive/negative) based on three samples of sputum.
- The average costs of sputum examination and chest X-ray for patients was Rs. 100 (range 40-300) and Rs. 100 (range 70-150) respectively.

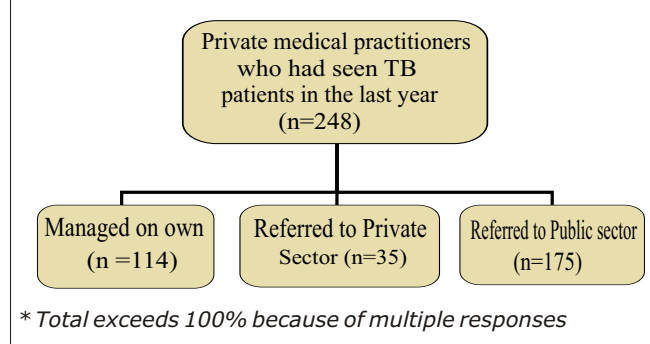
**Fig. 3
TB Diagnosis Practices**



Treatment of TB (Fig. 4)

- Seventy one percent of the private medical practitioners referred their TB patients to public sector facilities.
 - ☞ Availability of free medicines followed by availability of chest specialists at the government facilities were the predominant reasons for referral to the public sector.
- Less than half (46%) of the private medical practitioners managed TB patients at their own clinic.
 - ☞ The treatment duration for TB was 6 to 12 months. A majority of them prescribed AKT-3 and AKT-4 and none of them gave single drug regimen. All of them followed up their patients at least once a month. Most of them (88%) advised follow up investigations at least once in three months.
- The average cost borne by patients for the entire course of treatment as reported by doctors, was Rs. 2000 (range 400-15000).

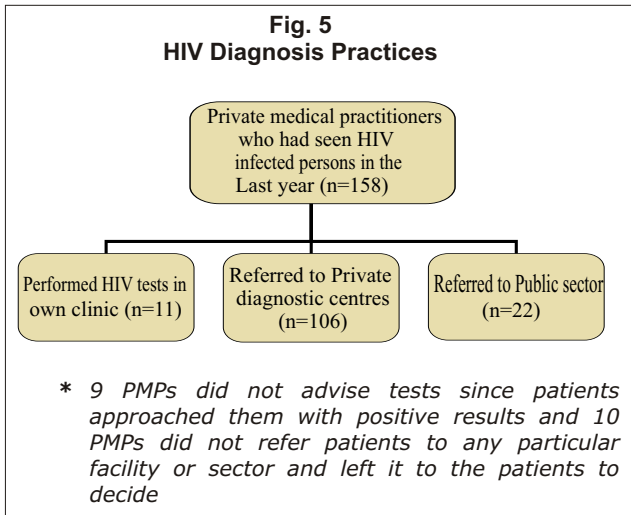
**Fig. 4
TB Treatment Practices**



Diagnosis of HIV (Fig. 5)

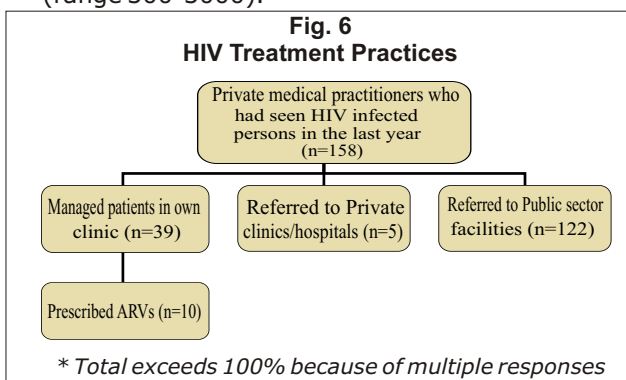
- The 158 private medical practitioners, who had seen HIV, advised ELISA, Rapid tests and Western Blot for diagnosing HIV.
- More than a third (37%) advised a repeat test to patients who came to them with a positive HIV test result for confirmation.
- Almost three-quarters (74%) of the private medical practitioners referred their patients to private sector facilities for testing.
 - ☞ Location of the diagnostic centre close to their clinics and accuracy of the results were important reasons for referring to these private diagnostic centres.
- More than half (57%) of the diagnostic centers reported HIV test results (positive/negative) based on a single test
- More than half (56%) of the diagnostic centers received clients who come voluntarily for HIV testing without being referred by any doctor.
- Less than two-thirds (61%) of the diagnostic centers handed over HIV test reports only to the patients, to ensure confidentiality
- The average cost of HIV tests for patients was as follows: Rs. 250 for ELISA (range 150-1000), Rs. 250 for Rapid test (range 100-350), Rs. 1450 for Western blot (range 1000-2000) and Rs. 800 for CD4 (range 150-2000).
- Only half of the private medical practitioners gave pre-test information to the patients.
 - ☞ The emphasis was on need / necessity to do an HIV test and the prevention aspects of HIV.
- A little more than half (54%) of the private medical practitioners gave post-test information.
 - ☞ This information focused on proper diet, partner testing, how to cope with HIV/AIDS and prevention aspects of HIV.

- Very few (21%) diagnostic centers took consent, provided pre-test information (8%) or post-test information (13%)



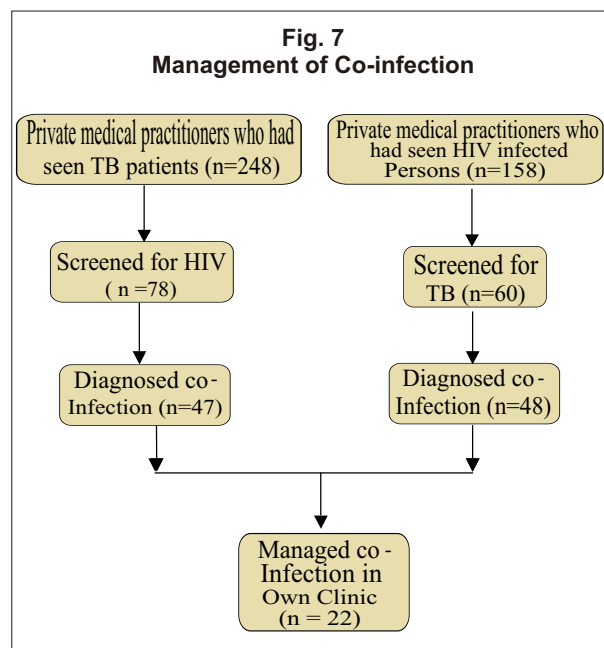
Treatment of HIV (Fig. 6)

- Most (77%) of the private medical practitioners preferred to refer patients to public sector facilities for treatment of HIV.
 - ☞ Availability of HIV specialists at public sector facilities was the prime reason for referring patients, followed by availability of free medicines under the nation-wide anti-retroviral rollout programme.
- A quarter of the private medical practitioners managed HIV patients in their own clinics
 - ☞ This management usually consisted of giving symptomatic treatment. Only 10 private medical practitioners prescribed anti-retroviral drugs, all of them used at least two-drug regimens. All of them who prescribed anti-retroviral drugs monitored their patients mostly by doing CD4 test (on an average once in 3 months), followed by clinical examination.
- The average cost of anti-retroviral therapy reported by them was Rs. 2400 (range 1000-5000) per month and that for CD4 was Rs.800 (range 300-3000).



Suspecting and Diagnosing Co-infection (Fig. 7)

- Less than a third (31%) of the 248 private medical practitioners, who had seen TB, had screened their TB patients for HIV with ELISA.
- Less than two-thirds (60%) of the 78 private medical practitioners, who had screened their TB patients, had diagnosed HIV in TB patients.
- In the case of 158 private medical practitioners who had seen HIV patients, more than a third (38%) had screened their HIV infected patients for TB with a chest X-ray.
- Most (80%) of the 60 private medical practitioners, who had screened their HIV patients for TB had diagnosed TB in HIV patients.
- A third of those diagnosing co-infection managed co-infected patients in their clinics.



Awareness of the National TB and HIV Control Programmes

- Close to three-quarters (74%) of the private medical practitioners and less than half (41%) of the private diagnostic centers were aware about the Revised National TB Control Programme
- A majority (90%) of the private medical practitioners and almost three-quarters (74%) of the diagnostic centers were aware about the National AIDS Control Programme.
- More than a third (39%) of the private medical practitioners were aware about the attempts made by the government to involve private medical practitioners in the TB control programme.

- ☞ *Almost a quarter (23%) of them had been approached by somebody, in order to involve them in the TB programme.*
- ☞ *Very few (12%) were presently involved in the public-private mix for TB control and referred patients and/or acted as DOT provider*
- Almost all of them (97%) agreed on the importance of getting involved in the TB programme to ensure that their patients received better treatment.
 - ☞ *Of the 36 private medical practitioners participating in the public-private mix, less than half (44%) reported that ever since they had started participating, patient referrals to the programme had increased*
 - ☞ *None of them faced any problems with the partnership.*
- Almost equal number of private medical practitioners were aware about voluntary counseling and confidential testing centers (54%) and the availability of free anti-retroviral drugs (56%) in the public sector
 - ☞ *Out of those who were aware about these services, slightly less than a third referred their patients to the voluntary counseling and confidential testing centres (29%) and for receiving anti-retroviral drugs (31%)*
- Less than half of the diagnostic centers were willing to partner either the TB programme (43%) or the HIV programme (41%).

Public-Private Partnerships in Health

- Apart from participation in the TB and HIV programmes, most of the private medical practitioners felt that private medical practitioners and the public health sector could work together to tackle any health problem.
- According to them, the essential things needed to initiate such partnerships were: Maintaining regular contacts, building relationships with a mutual understanding of needs, provision of free medicines for poor patients consulting private medical practitioners
 - ☞ *Emphasis was placed on the importance of open information and communication channels through orientation meetings, seminars, and awareness programmes.*
- While almost all private medical practitioners felt a public-private partnership was feasible, a few felt that sustainable partnerships were contingent on the public sector maintaining referral records and incentivising them for the referrals.
- Being familiar with the public-private mix in TB control, most of the public health staff engaged with the Revised National TB Control Programme felt it would be feasible and useful to build partnerships with the private sector to manage HIV and co-infection. The staff working with the HIV/AIDS programme, however was not so familiar with the operational aspects of the ongoing public - private mix, and expressed some caution.

National guidelines for Diagnosis and Treatment for TB Based on Evidence-based Policy of the World Health Organisation

- Diagnosis of TB should be based on sputum smear examination of three samples in order to help identify smear positive TB patients who are actively transmitting infection in the community.
- Treatment regimens:
 - ☞ Four drug regimen (2 months of HRZE followed by 2 months of HR) for all newly diagnosed smear positive patients and seriously ill patients
 - ☞ Five drug regimen (2 months of SHRZE followed by 1 month of HRZE followed by 5 months of HRE) for all re-treatment cases
 - ☞ Three drug regimen (2 months of HRZ followed by 4 months of HR) for all newly diagnosed smear negative patients and extra-pulmonary cases
- All the drugs are given on a thrice-weekly basis under the programme. Both diagnosis and treatment for TB are freely available through all government health facilities.
- Patients should be educated about the need for regularity of treatment and receive the treatment under direct observation.
- Treatment should be monitored every 2 months with sputum smear examination during the course of treatment and treatment outcome should be recorded carefully for every case of TB

National guidelines for Diagnosis and Treatment for HIV Based on Evidence-based Policy of the World Health Organisation and UNAIDS

- HIV testing should be carried out on a voluntary basis with appropriate pre-test and post-test counselling. Facilities for counselling are freely available at Voluntary Counseling and Confidential Testing Centres (VCCTC) and Integrated Counseling and Testing Centres (ICTC) in most cities and district places.
- The report of an HIV test should be based on three ELISA of different antigen types in combination with a rapid test for diagnosis of a patient with symptomatic or asymptomatic HIV
- The results of the test result should be kept confidential and not furnished to any other person without the individual's explicit consent. This information, should however, be disclosed to the spouse of the person by taking the client into confidence.
- Three-drug ARV combination regimens are recommended and single or dual ARV drug regimen are not recommended since they are less effective and pose the risk of widespread emergence of resistant strains of viruses.
- The government provides free ART and monitoring with free CD4 count test through several centres at the district level.
- Since ART is a long-term and life long treatment, obtaining patient commitment before treatment initiation should be mandatory to ensure treatment adherence..

Summary Points

- ☞ The typical private medical practitioner is male, more likely to be an allopath than non-allopath, with roughly 20 years of practice. He is as likely to belong to a medical association as not.
- ☞ Private medical practitioners tend to see more TB cases than HIV cases in their clinics and subsequently diagnose and manage more TB than HIV.

Management of TB

- ☞ Private medical practitioners tend to use sputum examination almost as much as chest X-rays for diagnosis of TB.
- ☞ They prefer to refer their TB suspects to private diagnostic centers, a majority of which offer sputum examination.
- ☞ Just over half the diagnostic centres use three sputum samples to reach the diagnosis of TB.
- ☞ Nearly three-quarters of the private medical practitioners refer patients to the public sector for TB treatment.
- ☞ Of the private medical practitioners who manage TB patients in their own clinic, a majority use multiple-drug regimens and follow up their patients at least once a month.

Management of HIV

- ☞ Private medical practitioners tend not to advise confirmatory tests for the patients who come to them with a positive HIV test result.
- ☞ Private medical practitioners refer their patients to private diagnostic centers for HIV tests.
- ☞ About half of these diagnostic centres report a diagnosis based on a single HIV test.
- ☞ Very few diagnostic centres follow procedures related to consent, pre and post-test counseling.
- ☞ Roughly half the private medical practitioners provide some form of pre or post-test information.
- ☞ Three-quarters of the private medical practitioners refer patients to the public sector for HIV treatment.
- ☞ Private medical practitioners who manage HIV patients in their clinics tend to provide symptomatic treatment; very few prescribe ARVs.

Management of Co-infection

- ☞ Screening TB and HIV patients for co-infection is mostly reported as a routine practice rather than based on suspicion.
- ☞ Only a third of the private medical practitioners advise HIV tests in TB patients; slightly more screen HIV patients for TB with chest X-rays.

Awareness of National TB and AIDS Programmes

- ☞ Awareness about the services offered by the National AIDS Control Programme is much higher compared to that about the Revised National TB Control Programme among private medical practitioners as well as diagnostic centers.

Conclusions

- The study in Hyderabad city confirms findings from earlier studies that the private sector plays significant role in the management of TB and HIV.
- Studies on access to care on TB and HIV confirm these findings and indicate that building partnerships with the private sector help in ensuring early referrals and minimizing costs for patients.
- In the study setting, the Revised National TB Control Programme has initiated such partnerships, which have resulted in increased referrals of TB patients to the public sector.
- Building on this initiative and the experience and lessons learnt from public private mix initiatives for TB in Hyderabad city, partnership model(s) could be developed and implemented for management of TB, HIV and co-infected patients.

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