

# **Title: Capacity building in HIV/AIDS care in Anti Retroviral Therapy Centre through Open and Distance Learning**

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## **Abstract**

India has the third largest number of people living with HIV/AIDS. As per HIV Sentinel Surveillance 2008-09, there are an estimated 23.9 lakh people living with HIV/AIDS in India with an adult prevalence of 0.31 percent in 2009. Currently nearly 9.6 lakh patients registered for ART and 2,70,000 eligible patients are on treatment at 346 Anti Retroviral Therapy (ART) Centres. National AIDS Control Organization (NACO), Govt. of India has nearly 346 ART centres with 650 Link ART Centers and 250 Community Care Centres which are being scaled up further. About 2000 trained doctors would be needed to these facilities. The qualification for Senior Medical Officer (SMO) ART centers is MD while for Medical Officer it is MBBS. It is planned that MBBS doctors with PG Diploma in HIV Medicine shall be considered for the post of SMO at ART centers. The PG Diploma in HIV Medicine will help to standardize HIV Medicine training and also help to bridge the gap in trained man power for ART centre. There are two doctors in each Anti-Retroviral Therapy (ART) facility, One doctor in each Community Care Centre and one doctor as In-charge of link ART centre (ICTC) are directly involved in patient care and are potential candidates for one-year training programme in 'HIV Medicine'.

With the above background School of Health Sciences (SOHS), Indira Gandhi National Open University (IGNOU) has developed a one year programme on HIV Medicine for MBBS doctors, which will be offered through Open and Distance Learning (ODL) mode in collaboration with National AIDS Control Organization (NACO), Ministry of Health and Family Welfare (MOHFW), Govt. of India with the objectives of imbibe comprehensive knowledge on basic of HIV as related to details of management of HIV/AIDS in tertiary care set up, management all complications as well as opportunistic infections due to HIV/AIDS at time of need; and recognize and handle emergencies related to HIV/AIDS and its complication and take bedside decision for management whenever is required.

Centre of Excellence (COE) as designated by NACO had been identified as training centre for this programme. Master trainer as designated by NACO has been identified as academic counselors for this programme. All necessary skills have been incorporated in this training programme so that the successful candidate can manage independently ART centre of NACO. There are 28 days training in the COE for hands on skill training and 30 days training in the ART centre. This programme comprised of 36 credits (1 credit = 30 study hours), which is divided into 4 theory and 2 practical courses. All learners have been provided a total of 20 block/module having 76 units/chapters along with 3 practical log books as learning materials in this programme. Besides, live interactive teleconference and interactive radio counseling also been integrated as teaching learning methods in this programme. A total 120 learners have been enrolled in 6 COEs in 2012.

**Key words:** HIV/AIDS training through ODL, Post Graduate Diploma in HIV Medicine, School of Health Sciences. Strengthening ART Centre through ODL mode

## **INTRODUCTION**

According to the Human Immunodeficiency Virus (HIV) estimations 2012, the estimated number of people living with HIV/AIDS (Acquired Immunodeficiency Disease Syndrome) in India was 20.89 lakh in 2011. The adult (15 - 49 age - group) HIV prevalence at the national level has continued its steady decline from an estimated level of 0.41% in 2001 to 0.27% in 2011. Even then, India is believed to have the third highest number of (estimated) people living with HIV/AIDS, after South Africa and Nigeria (UNAIDS Report on the Global AIDS epidemic 2010). Based on the HIV Estimation 2012, India has demonstrated an overall reduction of 57% in the annual new HIV infections (among the adult population) from 2.74 lakhs in 2000 to 1.16 lakhs in 2011, reflecting the impact of various interventions and scaled-up

prevention strategies under the National AIDS Control Programme. The adult HIV prevalence has decreased from 0.41% in 2001 to 0.27% in 2011. The estimated number of people living with HIV has decreased from 24.1 lakh in 2000 to 20.9 lakhs in 2011. Wider access to ART has resulted in 29% reduction in estimated annual deaths due to AIDS related causes between 2007 and 2011. It is estimated that around 1.5 lakhs lives have been saved due to Anti Retroviral Treatment (ART) till 2011. Care, Support and Treatment (CST) programme provides comprehensive management to People Living with HIV (PLHIV) which includes free Anti Retroviral Therapy (ART), psycho-social support, prevention and treatment of Opportunistic Infections (OIs) including tuberculosis, and facilitates home-based care. Ten Centres of Excellence (COE) and seven pediatric Centres of Excellence provide tertiary level specialist care and treatment (Second line and Alternative First Line ART, management of complicated Opportunistic Infections and specialized laboratory services). As of December 2012, nearly 17.36 lakh PLHIV have been registered at 380 ART centres of whom 6,04,987 clinically eligible patients (including 34,367 children) are receiving free ART in Government health facilities. 239 Community Care Centres provide psycho-social support, ensuring drug adherence, treatment of opportunistic infections and tracking lost to follow-up cases. Link ART centres and ART Plus Centres have also been established for the decentralisation of first line and second line treatment services.<sup>1</sup>

About 2000 trained doctors would be needed to manage and run these facilities. The qualification for Senior Medical Officer (SMO) ART centers is MD while for Medical Officer it is MBBS. It was planned that MBBS doctors with PG Diploma in HIV Medicine shall be considered for the post of SMO at ART centers. The PG Diploma in HIV Medicine will help to standardize HIV Medicine training and also help to bridge the gap in trained man power for ART centre. There are two doctors in each Anti-Retroviral Therapy (ART) facility, one doctor in each Community Care Centre and one doctor as In-charge of link ART centre (ICTC), directly involved in patient care and are potential candidates for the one-year training programme in 'HIV Medicine'.

With the above background the School of Health Sciences (SOHS), Indira Gandhi National Open University (IGNOU) has developed a one year programme on HIV Medicine for MBBS doctors, which will be offered through Open and Distance Learning (ODL) mode in collaboration with National AIDS Control Organization (NACO), Ministry of Health and Family Welfare (MOHFW), Govt. of India. The objectives of the programme is to impart comprehensive knowledge and skills on the basics of HIV as related to details of management of HIV/AIDS in tertiary care set up, management of all complications as well as opportunistic infections due to HIV/AIDS at the time of need; and recognition and ability to handle emergencies related to HIV/AIDS and its complication and take effective bedside decision for overall management as and when required.

### THE SKILLS TRAINING MODEL

The model for implementation of practical hands - on training components through Open and Distance Learning (ODL) mode is done in three steps at three levels. The tertiary level infrastructure (Medical College) where academicians could be involved as counselors conveys the second steps of learning process. Demonstration and discussion of all skills are carried out in the medical college. The involvement of secondary level health infrastructure (District Hospital/ ART centre) where the subject specialist could help the learners in repeatedly performing the skills and thus guide them in practicing the skills that are taught at the tertiary level. The students perform his/her job at the primary level health set up or any other set up where he/she is practising. This could be a clinic/health set up run by the student himself where the student tries to practice the skills learned without any supervision.

Table No 1: Hands on Skills Training Model for Health Sciences of IGNOU

Steps of Learning	Implementation Process	The Model
Text Reading	Self Learning Materials	Distance Education Set Up
↓	↓	↓
Demonstration with Discussion	Programme Study Centre	Tertiary Health Set Up
↓	↓	↓
Practice under Supervision	Skill Development Centre	Secondary Health Set Up
↓	↓	↓
Practice for Self Confidence	Work Place	Primary Health Set Up

In IGNOU parlance, these three levels are known as Programme Study Centre (PSC); Skills Development Centre (SDC) and Work Place (WP) respectively. For administrative purpose, the programme study centres are linked with Regional Centres (RCs) which are part of the IGNOU establishments. The PSC becomes the nucleus of the programme implementation process. The programme In-charge (PIC) is stationed at the PSC. He/she is a permanent faculty of the medical colleges with additional responsibilities of being the PIC. He/she will primarily be monitoring the learning process of all students enrolled in his/her institution. The students will be required to visit the PSC to attend the contact sessions for hands - on practical training. The end assessment examination will also be held here. Every student has an option to select his/her nearest SDC. Not more than 2 students are allowed in any SDC.

If we dissect out the entire skills training process then we observed that theory related to the practical training is provided in Self Learning Materials (SLM). Learners read all theory components which support to learn the particular skill at home. In Medical College hands on skill training is provided by medical college faculty. For example, palpation of liver is one skill need to be trained. Medical college faculty demonstrates the palpation of liver to a group of students and hold hands few of the students to teach how to palpate liver. Then, the faculty asked student to palpate the liver in front of him. If the student can palpate liver as per standard guidelines then teacher ask the same student to practice more this particular skill. In this skill training model the second steps is being done in the SDC/ART centres. All doctors are practice those skills which they have been trained in the medical college under supervision of Senior Medical Officer (SMO) of ART centre. In this step, learners practice those skills in resource constrain situation. Moreover, they are going to work in this same setting after completion of this programme. All these students will be visiting again for the subsequent contact session to the PSC or medical college so that they can learn further if they feel some skills which they have not learned properly. All students are already working and they practice the same skills in their work place.

## METHODOLOGY

The one year Post Graduate Diploma in HIV Medicine (PGDHVM) has been designed taking into consideration the needs of the learners and the model followed by IGNOU. This programme is for MBBS doctors. First of all, the skills that need to be imparted in this programme have been identified as listed in the table no 2. All activities and methodology of training as well as duration of training for acquiring each skill has also been identified. The total duration of hands - on skills training have been further divided into four contact session. All theory topics have been identified to support the learning of the identified skills in this programme. The weight-age given to the theory courses is 50 percent and that to practical courses is 50 percent. The duration of the programme is one year.

Table No 2: List of the Hands on Skills, Activities, Methodology of Training and Duration of contact sessions of PGDHVM Programme

Contact session	Skills to be imparted	Activities	Methodology of Training	Duration
<b>Contact 1</b>	1. When to suspect 2. Pre and Post-Test Counselling 3. Testing and interpretation 4. Clinical Approach ( History, Examination and lab testing) 5. Clinical staging	1. History taking, examination & counseling ( <b>3 days</b> ) 2. Lab & Diagnosis ( <b>1 day</b> ) 3. Visit to targeted intervention sites ( <b>1 day</b> ) 4. Community care centre ( <b>½ day</b> ) 5. Blood bank ( <b>½ day</b> )	Case work up & discussions, Didactics Observation & interaction with client & Counsellor at ICTC Demonstration of lab tests and interpretation of findings	<b>6 days</b>

<b>Contact 2</b>	<ol style="list-style-type: none"> <li>1. Identification of common OI in adults and children</li> <li>2. Diagnosis of common OI in adults and children</li> <li>3. Management of common OI in adults and children</li> <li>4. Diagnosis of TB in HIV patients</li> <li>5. Diagnosis of HIV in TB patients</li> <li>6. Management HIV/TB co infection</li> <li>7. Identification diagnosis management of STI and Dermatological manifestation</li> <li>8. Counseling</li> </ol>	<ol style="list-style-type: none"> <li>1. Case workup –adults and children <b>(4 days)</b></li> <li>2. DOTS centre visit <b>(1 day)</b></li> <li>3. STI clinic <b>(1 day)</b></li> </ol>	<p>Case work up &amp; discussions, Didactics Demonstration of Sputum microscopy and radiology at DOTS center Documentation HIV – TB linkages Demonstration of OI related lab tests- slides</p>	<b>6 days</b>
<b>Contact 3</b>	<ol style="list-style-type: none"> <li>1. Pre ART evaluation Work up</li> <li>2. ART preparatory counselling</li> <li>3. When to start,</li> <li>4. How to start,</li> <li>5. Monitoring (Adherence)</li> <li>6. Switch/ Substitution</li> <li>7. Management of occupational excuser (Blood Borne Pathogens)</li> <li>8. Importance of the case documentation</li> <li>9. Perform appropriate counselling for HIV testing in the ante natal setting</li> <li>10. Evaluate pregnant women with HIV infection and initiate appropriate ante natal, intra-partum and post partum measures to reduce MTCT</li> <li>11. Initiate ART in pregnancy</li> <li>12. Counsel the mother with HIV infections options for infant feeding</li> <li>13. Advice on nutrition and immunization in a parents of a HIV + child</li> <li>14. Diagnose and treat common OI in a HIV + Child</li> <li>15. Imitate ART (When to start, what to start, monitor, switch, substitute)</li> <li>16. <b>Children-</b> History &amp; examination ( including growth and nutritional assessment , monitoring, follow up, OIs, diagnosis – EID, CD4 count)</li> </ol>	<ol style="list-style-type: none"> <li>1. Case Work up <b>(2 days)</b></li> <li>2. Prescription writing <b>(1 day)</b></li> <li>3. Monitor and evaluation <b>(1 day)</b></li> <li>4. Post Exposure Prophylaxis ( ½ day)</li> <li>5. Treatment failure and switch and SACEP <b>(1 day)</b></li> <li>6. PPTCT ( ½ day)</li> <li>7. Children- all activities <b>(3 days)</b></li> <li>8. One day was kept on buffer to accommodate any one of the above activity</li> </ol>	<p>Case work up &amp; discussions, Didactics lectures Observation &amp; interaction with patient &amp; Counsellor at ARTC Demonstration of all Monitoring &amp;Evaluation tools at ART Centres Role plays/ EPT/ Case studies/ models SACEP</p>	<b>10 days</b>
<b>Contact 4</b>	Case workup and independent management	Posting to be made in batches of 5 students at a	Full day case work up and case	<b>6 days</b>

	under supervision of MO/ SMO ART centres	time	discussion at ART center (4 days).  Internal evaluation at the end of posting (2 days for 20 students)	
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Abbreviations: **ICTC** : Integrated Counselling and Testing Centre; **DOTS** : Directly Observed Treatment, Short Course; **STI** : sexually transmitted infections; **SACEP** : State AIDS Clinical Expert Panel; **PPTCT** : Prevention of Parent to Child Transmission; **EID** : early infant diagnosis; **MTCT** : Mother To Child HIV Transmission; **EPT** : Expedited Partner Therapy; **OI** : Opportunistic Infections

All necessary skills have been incorporated in this training programme so that the successful candidate can manage the ART centre of NACO independently. There are 28 days training in the COE or PSC for hands on skill training and 30 days training in the SDC/ART centre. The duration of the contact session in the PSC is 6 or 10 days. It is because all the doctors are working and the duration of leave to do hands on skill training for this programme has to be realistic. Location of the ART centre is near to the residence of the learners so that he/she can manage the SDC training from own residence. Hundred percent attendance in all contact sessions and training in SDC is mandatory. This programme comprised of 36 credits (1credit = 30 study hours), which is divided into 4 theory and 2 practical courses. This programme have a total of 20 block/module having 76 units/chapters along with 3 practical log books as Self Learning Materials (SLM) in this programme. All Self Learning Materials have been provided to the students. A live interactive teleconference has also been conducted every month for this programme. This is one way video and two way audio programme where students are interacting with the experts through telephone or SMS or Fax. The duration of interaction of each session is 45 minutes. We conduct two sessions every month for this programme.

Centre of Excellence (COE) as designated by NACO had been identified as training centre or Programme Study Centre (PSC) for this programme. Every training centre will have maximum 20 students to maintain learners' teachers ratio. Each PSC have minimum 9 master trainers as academic counselor as designate by NACO. Minimum nine master trainers comprise of four are Internal Medicine/ Physician, one is Microbiologist, one is Dermatologist, one is Paediatrics, one is Gynaecologist and one is Tuberculosis and lung disease.

After having third contact session in PSC learners need to do 30 working days training in the ART centre. This ART training centres are designated as skills development centre (SDC). Each SDC should be allotted only for maximum 2 students for SDC training purpose. It has decided that every candidate should be workup at least 30 cases and need to fill up log book which include, six adults case (3 cases of Pre-ART and 3 cases of ART), six cases of Paediatric (3 cases of Pre-ART and 3cases of ART), six cases of Gynae/pregnant women (3 cases of Pre-ART and 3cases of ART), three cases of HIV-TB, three cases of HIV-OIs. The above mentioned 24 cases are mandatory for every candidate. PEP case/s and 2<sup>nd</sup> lines ART cases are desirable if cases are available at ART centre. Remaining 6 cases, candidates select any case as they like from ART centre. All the cases work up need to be duly signed by nodal officer and SMO/OM of ART centre. Candidate need to report to Nodal officer of the ART centre and get a completion certificate from Nodal officer after completion of SDC training. This SDC posting is mandatory only an for non sponsored candidate who does not have experience working in ART centre. This SDC posting is not required for 70 candidates who have been sponsored by in the first batch since they were already working in ART centres. It is because they are already working in the ART centre.

The assessment strategy of the programme comprises of internal and term end evaluation. The weightage for internal examination for theory and practical is 30 percent and 50 percent respectively. Theory assignment is given by the University to all students. There are two assignment for first, second and third theory courses. However, there are three assignments for fourth theory course. The internal practical evaluation is conducted by the two internal examiners in the respective PSC. Proficiency certificate in all skills have to provide by the Programme In-charge (PIC) to make them eligible for term end practical examination. The theory term end evaluation is conducted by the University. The term end practical examination is conducted in the PSC with two internal examiners and two external examiners. Maximum of 10 candidates will be assessed in term end practical examination in one day. Details of the marking scheme and procedures of examination is standardized and followed in all centres.

## **QUALITY ASSURANCE**

Lots of measures have been taken to ensure the quality of the PGDHIVM programme. In the development phase, the curriculum has been standardized with involving experts. Orientation workshops have been conducted for all course writers and course editors to write and edit Self Learning Materials (SLM). All SLM have been written by experts of their own field. All training centres called Programme Study centres (PSC) have been activated with specific norms with minimum numbers of academic counselors and adequate infrastructure. IGNOU Regional Centre's Director visit to the proposed PSC and provide details report for the establishment of the PSC for the particular programme. An orientation training of all academic counsellors have been provided before conduction of the training. All students have been involved in induction meeting before starting this programme. A programme guide has been developed with all necessary information including curriculum, implementation and assessment of the programme. The same have been provided all learners as well as academic counselors. A constant feedback is provided by the PIC of each PSC for each contact sessions to the IGNOU. NACO is also monitoring the activity of the training of this programme specially the SDC training in the ART centres. A yearly PIC meeting will be conducted to monitor the all activity of the programme.

## **CONCLUSION**

A training programme to impart skills to manage HIV/AIDS patients in the Anti Retroviral Therapy (ART) Centre through Open and Distance Learning (ODL) is feasible. The training package has been already developed with the experts and NACO. A total 120 learners have been enrolled in 6 PSCs in 2012. Seventy students out of 120 students have been sponsored by NACO. We have very little percentage of dropouts in this programme since all students are well motivated learners. Hands on skill training have been imparted in these PSCs as per prescribed curriculum. One PSC have already conducted term end practical examination of the first batch of students. Student's satisfaction in this training programme will be studied soon after term end practical examination is over in all PSCs. A PIC review meeting will also be held to review this programme so that all the needful modification can be carried out.

## **REFERENCE**

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