

**SCHEME FOR**

# **PEDIATRIC CENTRES OF EXCELLENCE IN HIV care**



**National AIDS Control Organisation  
Ministry of Health & Family Welfare  
Government of India  
December 2011**

## **1. BACKGROUND**

India has the third highest estimated number of individuals infected by HIV/AIDS in the world after Nigeria and South Africa - an estimated 2.3 million PLWHA (National AIDS Control Organization and UNAIDS, 2010). Currently there are an estimated 115,000 children under the age of 15 years who are HIV infected (UNAIDS, 2009). The National AIDS Control Organization launched National Paediatric Initiative in November 2006 to rapidly scale up access to care, support, and treatment for paediatric patients across the country. Currently, approximately 79,719 of HIV infected children have been registered at an ART Centre and 22,858 are on treatment across the country (NACO CMIS Report, December 2010).

In addition, the Prevention of Parent to Child Transmission (PPTCT) programme has expanded to over 5000 integrated counseling and testing centres offering PPTCT services. However, PPTCT uptake is still limited amongst HIV positive women and there are an additional estimated 20,000 infants infected yearly through Mother to Child Transmission (MTCT) (NACO, 2009). NACO's recent launch of Early Infant Diagnosis for children and infants up to 18 months of age using DNA PCR testing and rapid scale up of the same is a huge step in addressing the disease, as these efforts will result in the identification of many more HIV positive children and an associated rise in the number of children requiring ART.

The limited number of children currently enrolled into care, as well as the anticipated influx of newly identified positive infants into the health care system means there is an urgent need to both evaluate current practices in paediatric HIV care and treatment and plan for the scaling up of services to reach all HIV positive children. Additionally, as HIV positive children survive longer, treatment strategies improve and second line drugs become available, there is an increasing level of complexity in clinical management, necessitating ongoing training of clinicians entrusted with the care of these patients.

With the exception of a few exclusively Paediatric Centres, the majority of ART centres are not staffed by paediatricians and often rely on a general paediatric department to provide paediatric expertise when needed. This referral system is dependent on the recognition that such expertise is required. Due to the relatively low burden of paediatric HIV in India, many general

paediatricians have not developed competency in dealing with HIV specific complications including recognition of HIV symptoms and the need for early testing and enrolment. Hence, it is a felt need to have “**Paediatric Centres of Excellence (pCoE) in HIV care**” that are model treatment and referral centres and at the same time impart quality training to other people involved in caring for paediatric HIV patients. These centres should be the primary sites for undertaking research, including operational research on a large scale. pCoEs are expected to conduct high quality research relating to different aspects of Paediatric HIV care and treatment. For this they need to actively seek collaborations with other departments and institutions.

## **2. BRIEF PROGRAMME DESCRIPTION**

To ensure provision of high quality Paediatric HIV care and capacity building activities in Paediatric HIV across the country, it is proposed that **7** reputed centres that are currently nominated as **Regional Paediatric Centres (RPCs)** would be developed and strengthened as ***Paediatric Centres of Excellence (pCoE)***. These centres will focus on building their own capacity in providing high quality care in Paediatric HIV and subsequently support the necessary capacity building related to Paediatric HIV for the staff being recruited for the ART scale up.

By equipping these centres for training and research, it is expected that the faculty from these pCoEs will carry out periodic site visits to the different ART centres to assess quality of care; monitor quality of care through a commonly agreed upon set of quality of care indicators for paediatric HIV; encourage operational research on paediatric HIV and related issues; support publication of research papers in reputed journals and present papers at research conferences and disseminate research findings to the different teaching medical institutions etc.

It is believed that by providing incentives such as a positive work environment, in addition to the capacity and scope for research etc., the programmes can attract some of the most talented to work in the programme. In establishing such Paediatric Centres of Excellence the stigma and discrimination that exists among the medical faculty in both the public and private sectors towards PLHA is expected to be broken down, as these centres will increase recognition that paediatric HIV patients require specialised care, support and follow up.

The goal of these institutions is to make all services essential to the package of comprehensive care of Children living with HIV/AIDS (CLHA) available under one roof, without the patient having to rely on referrals or travel from one centre to another.

### 3. RATIONALE FOR PAEDIATRIC CENTRES OF EXCELLENCE (PCOES)

The **Regional Paediatric Centres (RPCs)** were established with the vision of providing quality HIV care and treatment at tertiary level to support the ART centres in the region as part of National Paediatric Initiative in 2006. As part of NACP III midterm review, RPCs were evaluated. The key findings and recommendations included:

- Most ART Centres were not staffed by paediatricians or specialists in paediatric HIV; thus, a shift to an integrated patient management approach with the referral paediatric departments within each hospital is required.
- Constant training and upgrading of knowledge and skills among providers is required to address the need for skilled healthcare providers on quality paediatric HIV care, including knowledge of issues surrounding long term treatment adherence and HIV drug resistance.
- Paediatric Centres should provide vision, leadership and strategic direction on Paediatric HIV care & treatment for National programme

In 2006, **7 Regional Paediatric Centres (RPCs)** were selected by NACO with the expectation that they would directly provide quality care to HIV positive children and also work towards building capacity in their respective regions. These **7 RPCs** were selected in states with either high numbers of HIV positive children enrolled into care and/or paediatric expertise in the field of HIV medicine. It is these **7 RPCs** which are being upgraded to be **Paediatric Centres of Excellence (pCoEs)** as a part of this proposed scheme:

Sl. No	Name of the pCoE	States linked for Capacity Building and Mentoring
1	Indira Gandhi Institute of Child Health (IGICH), Bangalore, Karnataka	1. Karnataka 2. Kerala
2	Institute of Child Health (ICH), Chennai, Tamil Nadu	3. Tamil Nadu 4. Pondicherry 5. Andaman & Nicobar
3	Lokmanya Tilak Municipal General Hospital (Sion), Mumbai, Maharashtra	6. Maharashtra 7. Gujarat, 8. Goa 9. Daman & Diu 10. Madhya Pradesh

Sl. No	Name of the pCoE	States linked for Capacity Building and Mentoring
		11. Dadra Nagar & Haveli
4	Calcutta Medical College (CMC), Kolkata, West Bengal	12. West Bengal 13. Orissa 14. Assam 15. Bihar 16. Chhattisgarh 17. Jharkhand 18. Sikkim
5	Niloufer Children's Hospital, Hyderabad, Andhra Pradesh	19. Andhra Pradesh
6	Kalawati Saran Children's Hospital Lady Hardinge Medical College, Delhi	20. Delhi 21. Uttar Pradesh 22. Punjab 23. Himachal Pradesh 24. Haryana 25. Chandigarh 26. Rajasthan 27. Jammu & Kashmir 28. Uttarakhand
7	Jawaharlal Nehru Hospital (JN), Imphal, Manipur	29. Manipur 30. Mizoram 31. Arunachal Pradesh 32. Nagaland 33. Tripura

*Note: These linkages are dynamic and subject to change as more pCoEs are identified (after approval of NACO)*

In addition to these 7 RPCs chosen to become Paediatric CoEs, it is recognised that there are additional Regional Paediatric Centres with paediatricians highly trained in paediatric HIV care and with large numbers CLHA enrolled in care and treatment. However, a definitive decision on recognition as a Paediatric Centre of Excellence will depend on an assessment, which will look at the centre in its entirety to determine qualification. For example, such an assessment would consider the staff's commitment to and knowledge of paediatric HIV care and treatment, the existing infrastructure in place, and the quality of care provided to patients, in addition to other aspects. Should additional institutions meet the requirements set out during the evaluation and assessment period, they may be considered for recognition as a Paediatric Centre of Excellence.

Periodic assessment for all existing pCoEs would be conducted by an independent panel using standardised indicators to determine if they are continuing to uphold their expected roles, and meet the minimum standards as pCoEs. The ongoing status and support would therefore be subject to the performance of pCoEs.

#### 4. CRITERIA FOR SELECTING PAEDIATRIC CENTRE OF EXCELLENCE

The expectations for a Paediatric CoE are as follows:

- The ability to demonstrate quality care in the following areas (see Appendix A for further details in each area):
  - General Paediatric Care
  - HIV Awareness/Sensitivity/Stigma Reduction
  - HIV Diagnosis in Children (including clinical staging)
  - HIV Exposed Infant Care
  - Paediatric Counselling
  - Paediatric ART Management
  - Paediatric 2<sup>nd</sup> line
  - Management of Paediatric OI's/TB
  - Monitoring and Evaluation/Paediatric Cohort Analysis
  - HIV and Nutrition
- The capacity for Paediatric Care, which includes specialty faculty, strong linkages across departments and a lack of stigma in wards/departments with regards to treating CLHA.
- The space needed to create a child friendly, dedicated ART Centre; as well as the ability to provide primary ART care to parents of CLHAs.
- The potential to be **a referral centre for tertiary care** in paediatric HIV care support and treatment in the region.
- A strong academic inclination/track record of carrying out analysis and publications; in addition to a strong research tradition - basic and operational
- The laboratory facilities necessary for routine investigations and the diagnosis of opportunistic infections.
- Dedicated and experienced faculty with a commitment to providing high quality services to children affected, infected, or exposed by/to HIV and willingness to continually improve care through a process of quality monitoring and operational research.
- A commitment to providing the essential package of comprehensive services.
- The capacity and commitment needed to develop effective linkages with the other institutions e.g. for the training of medical and para-medical staff in the region.
- The willingness to be repositories of information related to care and support for paediatric HIV.
- The commitment to scaling up capacity in Pediatric HIV by actively engaging in training and mentoring activities within their regions.

## 5. RESOURCES AT THE PAEDIATRIC CENTRES OF EXCELLENCE

### 5.1 Human Resources:

Faculty members/ residents of the institution and the ART center staff will support the functioning of the CoE. Additional staff for the functioning of the CoE will be provided by NACO.

#### **Steering Committee**

A Steering Committee shall be constituted at CoE headed by the head of the institution and consisting of Programme Director, Deputy Director, APD/JD (CST) of concerned SACS and a NACO representative (RC to represent NACO in case NACO official cannot participate). This committee shall meet once in 3 months for review of functioning of pCoE / to sort out any issues related to its functioning.

One Programme Director and one Deputy Director of the CoE will be identified from the faculty at the institution. In the existing pCoEs, the Nodal Officer will be re-designated as Program Director, CoE. The Program Deputy Director will be selected by the Programme Director in consultation with the Head of the Institution and NACO. In newly designated CoEs, preference for the position of Programme Director will be given to faculty associated with the HIV program and in consultation with the Head of the Institution and NACO.

- ***Programme Director pCoE*** (existing Nodal Officer redesignated, who is already a faculty of the Institution) to oversee activities of the pCoE. This appointment will be the responsibility of the Head of the Institution. Programme Director pCoE's duties are to:
  - Provide strategic direction to the plans and activities of the CoE;
  - Set up the CoE as per NACO guidelines/ NACO approved PCoE scheme;
  - Devise work-plans and timelines for moving activities forward;
  - Ensure timely implementation of all activities related to CoE and ART centre including:
    - Comprehensive HIV care;
    - Training, mentoring, and research;
    - Other capacity building activities.



- Make frequent visits to the linked ART centres and provide feedback to the pCoE members based on the observations during the visits so that the action plan may be modified as required;
- Ensure concrete results for the successful implementation of the PCoE activities;
- Ensure contacts with ART centre personnel to elicit their cooperation and convergence with the pCoE activities;
- Manage all administrative issues related to pCoE and ART centre;
- Be the focal person for all communication and correspondence related to functioning and activities of CoE;
- Oversee monthly reports on pCoE activities, training and other critical issues, etc;
- Maintain financial control and monitors pCoE budgets on a periodic basis to make sure that budgets are spent according to approved allocation.

#### **Program Deputy Director CoE:**

S/he will:

- Be in charge of training and mentoring
  - Be a member of the SACEP
  - Deputize the Programme Director in his/her absence
- ART Staff as per NACO ART Operational Guidelines (*SMO/MO Nurse, Counsellor, Data Entry Operator, Pharmacist, Lab technician, Care Coordinator*). Number of ART Staff depends on load of the centre.
  - *Nutritionist* post under Regional Paediatric Centre will continue.

#### Additional Staff under pCoE Scheme:

Contractual appointments for the CoE will be carried out by the Steering Committee. The procedure for the selection of contractual staff for ART centres should be followed for P staff selection.

- ***One M&E and Research Officer:*** To analyse data, coordinate research activities, provide necessary technical assistance to Mentoring team on the performance of the ART Centres and quality of Paediatric care in the region. This position will:
  - Design and update the monitoring system, which includes drafting instructions for completing forms/formats and preparing computerised reporting formats;



- Contribute to planning and preparing research protocols;
  - Be involved in all other research activities of the pCoE;
  - Facilitate and monitor progress of the pCoE research projects;
  - Participate in training, mentoring and other capacity building activities of the pCoE;
  - Perform analysis of monthly reports and other data, as required of the ART centres;
  - Compile CoE reports for NACO;
  - Assist in conducting surveys, formative research, needs assessment and analysis of data generated within the pCoE;
  - Make monitoring visits to ART centres as directed by the Director pCoE;
  - Be involved in quality assurance of research projects;
  - Carry out data quality checks;
  - Assist in performance analysis and assist in presentation of findings to the other members of the pCoE team;
  - Be involved in managing the pCoE network website;
  - Assist in data compilation, analysis and preparation of presentations and publications under the supervision of the Director pCoE;
  - Support the impact evaluation of the projects undertaken by the pCoE;
  - Support the analysis of all quantitative and qualitative data from projects undertaken at the pCoE;
  - Perform any other job related to pCoE activities, as assigned by Director pCoE.
- ***One pCoE Programme Coordinator:*** Coordination of training, financial account keeping, and relationship management. This position will:
- Coordinate all training activities, pre-training preparations and logistics for trainings of pCoE;
  - Coordinate mentoring and post-mentoring activities and logistics for mentoring;
  - Assist the Director pCoE in managing and maintaining the relationships and communications within the pCoE team, as well as the ART centre personnel;
  - Assist the Director pCoE in managing correspondence related to the functioning and activities of CoE;
  - Assist in maintaining documentation and communication materials with respect to the pCoE activities;
  - Assist the Director pCoE in timely implementation of training, mentoring, research and other capacity building activities;
  - Assist in tracking budgets and spend on pCoE activities;
  - Make site visits to ART centres as directed by the Director pCoE;
  - Perform any other job related to pCoE activities as assigned by Director pCoE.

In addition, it is expected from the pCoE that there would be:

- Involvement and contribution of faculty from Paediatric sub-speciality departments within the institution on Paediatric HIV Care;

- Identified Paediatric experts as mentors for their region (regional linkages to be specified by NACO);
- Involvement of Postgraduate fellows. The post graduate students should be regularly posted to assist the functioning of the ART centre. Thesis relating to Paediatric HIV care by post graduate students should also be encouraged at these centres.
- Staff of the institution should be trained and/or sensitised in paediatric HIV service delivery as well as to reduce stigma and discrimination.

## 5.2 Infrastructure at pCoE:

These pCoEs should have adequate accommodations for an ART centre, as prescribed by NACO guidelines, which outline the need for adequate space, privacy, a waiting area, counseling rooms, a pharmacy, AV aids, dedicated drinking water and well maintained toilet facilities etc. The facility should provide a child-friendly space, including toys and a play area. In addition, as the institution is a teaching facility, the centre should provide auditorium/lecture facilities (including AV Equipment), a conference area/meeting room, IT equipment for data analysis and teleconferencing, an LCD projector and laptop computer for outreach activities and a library with internet facilities and access to key paediatric journals/textbooks.. Finally, the centre should have adequate space/facilities with signs in English and the local language for the following services listed below:

### 5.2.1 *Facilities at Paediatric Friendly ART Centre at pCoE:*

<i>Essential</i>	<i>Good to have but not essential</i>
<ul style="list-style-type: none"> <li>• 2 examination rooms</li> <li>• 2 counselling rooms</li> <li>• 1 sample collection room</li> <li>• 1 pharmacy cum store</li> <li>• 1 Separate room for data entry and documentation</li> <li>• 1 nursing station</li> <li>• 1 Play area &amp; play rack with toys for children</li> <li>• 2 wash rooms (one male, one female)</li> <li>• 1 Waiting area for 20 patients</li> <li>• 1 Patient education area for AV/IEC/ info display</li> <li>• Hygienic space-water dispensing (away from wash room)</li> </ul>	<ul style="list-style-type: none"> <li>• Pantry (can be used for demonstrating low cost high nutrition food preparation to mothers)</li> <li>• Some extra seating space near the pharmacy, registration, MOs rooms etc</li> <li>• More storage space for documents / registers / IEC / nutrition / drugs etc</li> <li>• Rooms connected by intercom facility</li> </ul>

Adequate infrastructure (furniture & equipments) has been provided to 7 Institutions under the RPC scheme and attention must be paid to the maintenance and upkeep of these facilities. Thus, special attention should be paid to ensure appropriate flooring, painting, lighting, and ventilation is maintained, as upkeep of the facility enhances the safety, functionality and aesthetic appeal of the centre.

### **5.2.2 Essential Facilities Accessible to the pCoE within the Institution:**

- 2 rooms for pCoE staff
- 1 room for documentation
- 1 Mini / Maxi Auditorium with required AV facilities
- AV conference room with internet facility for tele/video conference activities

### **5.2.3 Equipments to be Owned by pCoE:**

The pCoE will purchase and maintain the following equipments for exclusive use for Paediatric HIV care and treatment programme.

- 2 Desktop Computers
- 2 Laptops
- 1 Portable LCD projector with screen

It is expected that the pCoE has portable AV equipment to fulfill its training mandate in the region as required. The centre should have adequate IT equipment for data analysis, internet access, and teleconferencing abilities with the ART Centres .A library, with subscriptions to key Paediatric HIV related journals/textbooks, should also be maintained.

## **6. SERVICES AT THE PAEDIATRIC CENTRES OF EXCELLENCE**

### **6.1 Linkages to Diagnostic Services:**

The pCoE is expected to *have basic laboratory services*, including microbiology, pathology, haematology, bio chemistry, serology, radiology, X-ray, ultrasonography, CT and MRI (wherever available). The microbiological lab services should include diagnostics for Tuberculosis, Cryptococcal meningitis, Cryptosporidial and other parasitic diarrhoea, CNS

mass lesions like toxoplasmosis, and common fungal infections in immune-suppressed hosts, etc. The pCoE needs to *ensure efficient access* to CD4 testing, DNA-PCR, and RNA-PCR through well established linkages with nearest Reference Laboratories identified by NACO. The pCoE is also expected to treat any cases of Opportunistic Infections or side effects of ART and diagnostic facilities for the same should also be available with the pCoE. If the pCoE cannot treat these, then it should refer these cases for treatment. Additional diagnostics, like viral load measurements, can be reviewed on a case by case basis; if indicated, contingency funds can be used with the approval of the Programme Director of the pCoE.

### **6.2 Linkages and Referrals for Specialised Care:**

There should be appropriate adult and paediatric linkages and referral for care, *including inpatient care*, with all other specialty departments. Linkages and referrals to paediatric sub-specialty care should be emphasised and includes linkages to child psychology, dentistry, intensive care, pathology, paediatric surgery, pulmonology, cardiology, hematology and neurology. Adult referral level care should be available in those centres where adult services are not available. Formal linkages should also be established to PPTCT services, ICTC services, RNTCP services, community-based support services, social work department/organisations, nutritional rehabilitation services and PLHA networks.

### **6.3 Pharmacy at the pCoE:**

The centres will be provided with an essential list of drugs to be maintained, as well as stocks of the same. The Pharmacy at the pCoE will stock and dispense specialised Paediatric and adult formulations of ART, both first line and second line treatment regimens, Paediatric and adult formulations of cotrimoxazole and paediatric formulations OI drugs. On a case by case basis, with the approval of the Programme Director, the pCoE can authorise use of contingency funds for the purchase of drugs which are not included in the NACO approved list.

#### **6.4 Additional support :**

A small contingency fund of INR 1 lakh per annum will be set aside for contingencies related to specialised investigations, pharmaceuticals and other incidental expenses, which will be considered on a case by case basis. It is expected that the Programme Director of the pCoE will keep clear written notes of each case, which will detail the case and explain the decisions reached. Additional local support can be solicited by each PCoE should the need arise.

### **7. ROLES AND RESPONSIBILITIES OF PCoE**

#### **7.1 Family Centric and Comprehensive Management of HIV (Pre ART and ART):**

Each institution will have trained, competent faculty to diagnose and facilitate the management of CLHA who come to these centres, in addition to those who are referred from other ART facilities in the region. The centre will also facilitate linkages for referral and care of adult care givers. Areas of excellence for pCoE and hospital staff would include:

- General Paediatric Care
- HIV Awareness/Sensitivity/Non Stigmatising behaviour
- HIV Diagnosis in Children (including clinical staging)
- HIV exposed Infant Care
- Paediatric Counselling
- Psychosocial Support
- Paediatric ART Management including 2<sup>nd</sup> line management
- Management of Paediatric Opportunistic Infections/TB treatment and linkages
- Nutrition management of SAM and MAM
- Linkages with social protection and welfare schemes

As Paediatric centres of excellence, these centres should expect to receive CLHA who are very ill with complications or who are not responding to ARV medications for various reasons. To ensure effective management of such problems, these centres of excellence will need to admit and treat these patients in wards that are properly equipped and staffed

and where they are at minimum risk of acquiring additional diseases, especially nosocomial infections.

## **7.2 Capacity Building and Mentoring:**

Due to transport costs/distance, it is not feasible for every child within a region to travel to the Paediatric CoE for routine care. Therefore, it is necessary that the Paediatric Centres play an active role in building capacity amongst health care workers so that every child has access to quality medical and psychosocial care. These capacity building activities will serve to increase knowledge and skill in Paediatric HIV care within their respective institutions, as well as other relevant medical and community-based institutions within their region.

### **7.2.1 Mentoring**

Mentoring can be defined as “*a sustained, collaborative relationship in which a highly experienced health care provider guides improvement in the quality of care delivered by other providers and the health care systems in which they work.*”

Mentoring will be both programmatic and clinical. The pCoE should be able to plan, organise and carry out all mentoring activities, both programmatic and clinical. A core group of mentors will be identified and will be trained as mentors. Mentoring will be for ART centres linked to the pCoE and, also, for the trainees from the same institute and other facilities.

By maintaining this expertise and developing a strong capacity building programme, the mentors will serve as resources for providing technical support and trainers for all aspects of the NACO and SACS training network. The pCoE should establish a **Core Capacity Building Team (CCBT)** comprised of a Paediatrician, Microbiologist, Pathologist, Obstetrician, Community Medicine specialist, Nutritionist, counsellor, and M&E expert under the leadership of Programme Director PCoE. The members for CCBT will be selected based on his/her technical expertise in the respective field, training skills, related facilitation skills and availability. The CCBT must be trained and committed in the

respective areas of expertise defined above and responsible for carrying out all training and mentoring related activities. These CCBT members will undertake field visits to ART Centres, have regular case discussions (through phone or web based media) and mentor the trainees.

The CCBT will network and contribute regularly to the construction, revision and updating of training curricula and FAQs for Paediatric HIV, with an aim to broaden the skill and knowledge base of the pCoE personnel. This will be done under the supervision and approval of NACO. This will include General Paediatric Care, HIV awareness/sensitivity/non-stigmatising behaviour, HIV diagnosis in children (including clinical staging), HIV exposed infant care, paediatric counselling, psychosocial support, paediatric ART management, including 2<sup>nd</sup> line management, management of paediatric Opportunistic Infections/TB treatment and linkages, nutrition management of SAM and MAM, linkages with social protection and welfare schemes, and management of ART side effects.

The pCoE will thereby undertake the following activities towards strengthening Paediatric HIV care and treatment services in the region, with funding and coordination support from respective SACS. Mentoring of ART Centres towards quality Paediatric care will include:

- Providing CMEs for Paediatricians and SMO/MOs of the ART centres in the region, to be conducted by the Programme Director of the PCoE and one other expert paediatrician identified by the pCoE;
- Conducting review meetings to monitor and improve the quality of Paediatric care – this will be convened by the respective Regional Coordinator (ART, NACO), chaired by the Programme Director of the pCoE;
- Organising regional workshops/conferences – this will be conducted by the PCoE under the overall supervision of the Programme Director, and with funding and coordination support from the SACS;
- Continuous mentoring of selected ART centres – the Regional Coordinator and the Programme Director will work closely in this process, with the RC leading the coordination of the process from the ART centres' end, viz. scheduling of mentoring visits, coordination between the Resource Person and the ICTC and ART centre.



scheduled for this will be drawn up under the overall leadership of the Regional Coordinator,

- Maintaining the involvement of UG and PGs fellows in Paediatric HIV care.

It is expected that each Paediatric CoE will have a defined geographic area, and the paediatric HIV care and treatment service delivery points in that geographic areas should be linked to the respective Paediatric CoE for trainings, technical assistance and mentoring. Paediatric CoEs should conduct quarterly regional meetings in coordination with their regional SACS to discuss CST and PPTCT issues (include SACS, partners, other ART Centres etc) and how to address them. The Paediatric CoE should communicate regularly with NACO and share notes from these meetings.

### **7.3 Capacity Building of CCBT:**

NACO will design and implement the capacity building of CCBT, as required with the support of experts. pCoEs will continuously improve upon their skills and stay up to date on the latest information relating to Paediatric HIV (in the form of journal clubs, online CME activities,, Web- based learning/distance learning (e.g. I-TECH runs a programme for adult COEs), etc.). They will also update the ART Centres in their region regularly. On rotational basis, and under the leadership of NACO, individual pCoEs will identify articles and electronically send them to all pCoEs in the form of a newsletter.

### **7.4 Capacity Building of ART Centres:**

Identifying and filling of gaps in skills for all cadres of staff. This will be done by CCBT through a process that includes training and mentoring sessions at each ART Centre, which will work towards developing competencies in specific areas related to quality paediatric HIV care.

The pCoEs will undertake regular quality improvement exercises with SACS and ART Centres, which will include reviewing agreed upon quality of care indicators (Annex 1), identifying problem areas, generating a plan to improve problem areas, and following-up on interventions and their results. pCoEs will conduct sensitisation trainings for hospital staff to

decrease stigma. pCoEs will also train on IMNCI-HIV/SPRIT to increase referrals for testing.

The schedule for training and mentoring visits by pCoEs to ART Centres will be defined by each pCoEs, SACS and NACO. The CCBT team will be responsible for this. As information management and communication improves, each pCoE can use monthly quality scorecards to target centres that need more help. Over a period of a year, pCoEs should continue monitoring quality at centres that have been visited to ensure that expertise is maintained.

### **7.5 pSACEP:**

pSACEP will be constituted in the pCoEs based on the patient load , after approval of NACO

The pSACEP will consists of

- Programme Director of pCoE/ Nodal Officer of ART centre
- External ART expert (panel to be formed by NACO, preferably not from the same ART centre)
- Regional Coordinator/Joint Director (CST) / Consultant (CST) at SACS

#### **The functions of pSACEP will include:**

- Reviewing and deciding on paediatric cases referred by the referring ART centres for second-line ART provision – both for eligibility for viral load testing and initiation of second line ART
- Reviewing referred paediatric cases for alternative first line ART
- Reviewing cases every fixed weekday (for e.g. Tuesday) or next working day (in case the fixed day being a holiday). This is to ensure that there is no delay in review /and processing of the case referred for review of suspected treatment failure. A maximum of 15-20 patients shall be reviewed at each meeting (old and new). However, if there are very few patients, the meeting may be deferred to the next week.
- Mentoring and ensuring high quality case management of the PLHIV on second-line ART by the referring ART centre
- Documenting the registration and monitoring progress of all patients sent for SACEP review

## 8. MONITORING THE QUALITY OF PAEDIATRIC HIV CARE IN THE REGION

Each institution should be able to demonstrate measurable quality improvement through the use of a set of quality of care indicators ( Detailed in Annex 1), which will be calculated on a regular basis and disseminated to key stakeholders, including SACS, NACO and other ART centres. Quarterly analysis of a set of quality indicators will allow pCoEs to objectively assess the care that is provided. By instituting a programme for quality improvement, pCoEs should be able to maintain a high standard of care, while working towards continuous improvement. In addition, pCoEs will serve as an expert resource for paediatric referral level care (i.e. treatment failure/second line, complicated OI management) for other centres within their respective regions.

SACS will facilitate pCoEs to collect all CLHA data from ART centres, including monthly CMIS reports. The pCoEs will undertake the responsibility of analysing core indicators for all ART centres within their regions and share findings with respective ART Centres, SACS and NACO. network of pCoEs can be created with defined communication linkages (web-based, hotline, e-learning) to provide ongoing support across regions.

With inputs from the expert paediatricians in the country, including members of the Paediatric Technical Resource Group (TRG), NACO will design the M&E to track the skill and knowledge upgrade affected by this initiative. pCoEs will develop **quality indicators for paediatric care** to review their own function as well as functioning of attached ART centres. A Programme Steering Committee will be formed for reviewing the progress periodically. A Programme Steering Committee composed of permanent representatives from NACO, SACS, UNICEF, CHAI, and WHO is proposed and would be set up under the guidance of NACO. This Committee would be responsible for monitoring and providing overall management guidance for the implementation of the programme, as per NACO's approval. Additionally, 1-2 rotating representatives from each of the pCoEs are also proposed to be included in the committee for holistic steering and to help incorporate each pCoEs perspective for capacity building. This committee of 6 to 10 individuals will meet on a quarterly basis and will be responsible for guiding and monitoring the progress of the capacity building programme and ensuring that lessons learned and best practices are shared between the different pCoEs.

## **9. RESEARCH**

As expert resources in the field of Pediatric HIV, the pCoEs should be responsible for conducting and coordinating operational research to guide care and treatment decisions on an institutional as well as national, scale. NACO will help build the capacities of the pCoEs to conduct clinical trials, such as the evaluation of new drugs, drug regimens, pharmacokinetics, etc. Collaborative research with other pCoEs will be encouraged by NACO wherever possible. Each pCoE should develop detailed research implementation plans, which would include their proposal, local Institutional Review Board (IRB) clearance, and approvals from NACO. Ultimately, the final research and findings should be submitted / presented to NACO..

The operational research conducted should address the impending needs of the National programme, and should maintain high quality and standards, so as to be helpful in formulating or modifying National policies. The pCoEs should be a member of a network of Research Institutions. Additionally, the pCoEs would assist the NACP in

- Conducting in depth analysis of data of various services including ART centres,
- Maintaining a repository of information related to paediatric HIV/AIDS ,
- Monitoring and evaluation of Paediatric Cohort Analysis and Paediatric Pharmacovigilance activities.

## 10. NACO FINANCIAL ASSISTANCE TO PCoEs

<b>A. NON RECURRING GRANT</b>				
<b>No.</b>	<b>Budget Item</b>	<b>Amount</b>	<b>Details</b>	
1	Physical Infrastructure	Rs 30,00,000 (Thirty Lakhs)	Includes refurbishment / new construction; proper furniture; adequate sitting arrangements at the seminar halls etc based on need	
2	Equipments	Rs 5,00,000 (Five Lakhs)	<ul style="list-style-type: none"> <li>• Two Desk top Computers &amp;</li> <li>• Two Printers</li> <li>• Two laptops</li> <li>• One LCD projector</li> <li>• One Photocopier &amp; Scanner</li> <li>• One Refrigerator (<i>capacity 300 litres</i>)</li> </ul>	
<b>B. RECURRING GRANT – HUMAN RESOURCES</b>				
<b>No.</b>	<b>Human Resource</b>	<b>Range of Salary per month</b>	<b>Amount Per Annum</b>	<b>Essential Qualifications</b>
1	M&E and Research Officer – 1  Candidates with medical qualification can also be appointed for the this post. For MD candidates, remuneration range will be same as ART SMO For MBBS candidates, remuneration range same as ART MO	Rs.23000-28000  Rs.25000-28000*	Rs 2,76,000  Rs 3,36,000*	M Sc (any one of the Life Science Branches)  *Candidate with Ph D qualification gets higher salary
2	pCoE Coordinator - 1	Rs 11500 – 15250	Rs 1,38,000	A graduate in any discipline, preferably social sciences, or related to Human Resource development with at least of 2 years of programme management experience
3	Nutritionist -1	Rs 11500-15250	Rs 1,38,000	M.Sc. with Food Science & Nutrition/Biochemistry
<b>C. RECURRING GRANT – OPERATIONAL EXPENSES</b>				
<b>No</b>	<b>Budget Item</b>	<b>Amount Per Annum</b>	<b>Details</b>	
1	Subscription for journals	Rs 1,00,000		
2	Operational Research	Rs 4,00,000	Minimum one research required by each PCoE per year.	
3	Maintainence of equipments	Rs. 2,00,000	Can be used in next year if not completely utilised.	

4	Consumables, including Universal Precautions	Rs 2,00,000	In addition to the support to the ART centre
5	Testing Kits	From NACO	
6	Funds for travel to other ART centres Training and Mentoring in the region	Rs 1,00,000	For use for travel of CCBT Team only
7	CME / workshops (for other hospitals) per year	Rs 3,00,000	Can be carried over to be used in subsequent year if needed.
8	Sensitisation trainings for the institutes and other hospitals in the state	Rs 1,00,000	
9	Contingency	Rs 1,00,000	For needful patients / specialised investigations needed for documentation/confirmation of illness
<b>SUMMARY</b>			
<b>A. NON RECURRING GRANT</b>		Rs 35,00,000	
<b>B. RECURRING GRANT – HUMAN RESOURCES</b>		Rs 6,12,000	
<b>C. RECURRING GRANT – OPERATIONAL EXPENSES</b>		Rs 15,00,000	
<b>GRAND TOTAL Per PCoE</b>		<b>Rs 35,00,000 (Non Recurring)</b> <b>Rs.21,12,000 (Recurring per year)</b>	