BACKGROUND:
A national workshop of medical colleges was held at AIIMS, New Delhi in October 2002 to define the structure and processes for effective involvement of medical colleges in the Revised National Tuberculosis Control Programme (RNTCP). Subsequent to that workshop, one national and five zonal task forces (ZTF) were formed. All 5 ZTFs have held their first zonal workshops with participation of representatives from the medical colleges in that zone. 19 out of 23 States which are implementing the RNTCP and which have medical colleges have now formed State Task Forces (STF), and an increasing numbers of colleges have established core committee to oversee the functioning of the microscopy / treatment centre in their respective institutions.

As recommended during the previous workshop held in October 2002, the second meeting of the National Task Force (NTF) was held with the objective to review the progress made in the past year and develop an action plan for the coming year. Besides the NTF members many of whom are also the chairman of the Zonal Task Forces, the workshop had representations from chairmen of 21 State Task Forces (including representatives from 2 states where STF is yet to be formed), Central TB Institutes (TRC, LRS, NTI), State TB Officers and RNTCP Consultants of the seven States where nodal centres are located, WHO and Central TB Division (CTD). Status of the RNTCP and medical colleges involvement in the programme was presented. In addition, the experiences of Medical colleges with RNTCP as well as the proposed treatment for referral mechanism and integrated teaching on RNTCP in Medical colleges were also presented.

RECOMMENDATIONS:
Following are the recommendations made by the working groups on the topics assigned to them.

Group 1: Action plan for Year 2 with time-line
Central TB Division/ National Task Force (NTF)
The main task of CTD/NTF will be to provide leadership and advocacy, coordination, monitoring, and policy development on issues related to effective involvement of medical colleges in the RNTCP. Activities defined for the coming year are:

- Develop standardized checklist to be used by ZTF, STF during field visits.
- Develop standardized reporting formats to be used by ZTF, STF, Medical colleges.
- Develop monitoring indicators for ZTF, NTF, Medical colleges based on action plans
- Examine ways to streamline fund flow for activities of the task forces and core committees.
- Organize funds for ZTF meetings to be held in first quarter 2004
- Arrange for training of medical college faculty members at Central Institutes as per training plan: by March 2004
- Funds for procurement of computer and hiring DEO/SA at all 7 nodal centres: by March 2004
- Organize a 2-days meeting of NTF to review progress and plan future activities for NTF/ZTF/STF/Medical colleges: November 2004
- Attend meetings of the ZTF and workshops/ seminars etc organized at the zonal level.
- Monitor activities of the Zonal task forces and State task forces as per action plans.
- Compile reports from the ZTFs and prepare status report for the country twice a year.
  Disseminate report and provide feedback to zones/States
- Organize meetings/workshops at the national level for advocacy with professional bodies like IMA, NGOs, PPs etc
- Include RNTCP in the teaching curriculum of UG and PG students by allotting specific number of classes in relevant departments.
- Define priority areas for research to be conducted in medical colleges, development of generic protocols and facilitate in the conducting of research (as detailed in the section on operational research).
- Facilitate in involvement of Medical colleges in the RNTCP QA network
- Quarterly web-based updating of directory of Medical Colleges
- Central TB Division should widely and regularly disseminate published literature on Tuberculosis/RNTCP to Medical Colleges.

Activities for the Zonal Task Force (ZTF)
- Ensure that State Task Force (STF) are formed in all States - by March 2004. In States that are yet to implement RNTCP, plan for immediate formation of STF as soon as the respective State implement RNTCP
- Compile and update the list of Medical Colleges with their RNTCP implementation status for all zones – quarterly (March, June, September, December)
- Organize ZTF meetings to review progress and draw up an annual action plan for ZTF as well as an outline for annual action plan for the STFs within the zone (including setting up zonal OR priority areas based on the national recommendation) - by March 2004
- Ensure training of ZTF members as per training plans proposed in this document: by March 2004.
- Procure computer with Internet connectivity, and hire DEO/SA at all 7 nodal centres: by March 2004
- Organize zonal level CME/Seminars/workshops other academic activities for medical colleges and the private sector: at least once a year
- Facilitate in submission and conduction of operational research by medical colleges
- Travel to states within their zones for field visits/attending meeting of STF, workshops etc. Team for field visits will consist of minimum two members - nominee of ZTF and STF and in coordination with the STO of state to be visited. All States to be visited at least once every quarter
- Disseminate information about RNTCP to medical colleges (status report prepared based on reports from the STF, update on activities undertaken, results of local research, other relevant information on Tuberculosis/ RNTCP etc): at least once a year

Activities for the State Task Force (STF)
- Hold STF meetings to review progress/performance of medical colleges in the State, plan future activities and review research proposals, if any: Quarterly
- Define priorities for operational research based on the national and zonal workshop recommendations, and facilitate in conducting of research by medical colleges.
- Facilitate in issue of directives by respective State Government to all Medical Colleges to participate in the RNTCP: by February 2004.
- Ensure establishment of MC cum DOT centers in all Medical Colleges located in RNTCP implementing districts: by March 2004
- Facilitate in formation of core committees in every RNTCP implementing Medical College: by March 2003
- Help organize training for core committee members: by March 2004
- Facilitate in representation of Medical Colleges personnel as members of District TB Control
Societies: by March 2004
- STF visit to every Medical Colleges at least twice a year
- Organize State level CME/Seminars/workshops other academic activities for medical colleges and the private sector: at least twice a year
- Disseminate information about RNTCP to medical colleges (status report prepared based on reports from the medical colleges, update on activities undertaken, results of local research, other relevant information on Tuberculosis/ RNTCP etc): at least twice a year

Activities for Medical Colleges
- Form core committees in all medical colleges and arrange for their training: by April 2004
- Establish MC cum DOT centre in all medical college hospital, even if the DTC is within the same premises of the medical college.
- Core committee organizes sensitization workshops/trainings for faculty members/PG/UGs/Interns/paramedical staff etc as per training plans: First phase by April 2004. Ongoing sensitization workshops/CMEs annually
- Ensure that teaching on TB/RNTCP form part of curriculum for PG students/ Residents/UG’s. Teaching could include practical training through visits to DOTS centres as well as classes taken on by department of Medicine, TB & Chest Medicine, Microbiology, PSM etc.
- Coordinate with the district TB programme for participation in the quality assurance network of sputum microscopy, referral network, management of complicated cases of TB, and submission of monthly PHI report.
- Undertake operational research for RNTCP on the priority areas defined by the STF for the State. Encourage research on TB by faculty members as well as by students for their thesis etc
- Undertake advocacy for the programme by publishing articles on TB, newsletters, giving radio/TV talks, etc
- Monthly meeting of core committee to review performance of the MC cum DOT centre in the hospital.
- Submit a compiled quarterly report of the MC cum DOT centre to the STF

Group 2: Operational research activities in medical colleges
- Despite the growing professional consensus regarding the efficacy of DOTS amongst the medical fraternity, it remains a challenge to convince the medical fraternity on certain aspects of RNTCP guidelines pertaining to the treatment regimens used (efficacy of intermittent chemotherapy versus daily chemotherapy, doses and duration of treatment especially for EP TB like TB spine, TBM, Lymph node TB, etc). Available literature on these issues should be widely circulated. In addition, research conducted by medical colleges could focus on these topics.
- Central TB Division should widely and regularly disseminate published literature on Tuberculosis available to Medical Colleges.
- CTD and States should issue necessary guidelines to medical colleges to encourage submission of proposals (priority areas, formats, process/channels etc)
- CTD should facilitate in developing generic protocols on priority research areas for medical colleges. Multi-centric studies could then be conducted using the generic protocol for uniform data collection and analysis.
- Medical colleges should form a part of the quality assurance network for sputum microscopy under the RNTCP. In States where no culture and drug sensitivity testing facilities are available, CTD could consider supporting select medical colleges to provide such a facility.
- It was recommended that local surveys and research being regularly carried out by Medical Colleges may include topics relevant to RNTCP.
**Priority OR agenda for medical colleges**

Based on research agenda of RNTCP, recommendations of the zonal medical colleges workshops and the Joint Monitoring Mission, the following priority areas for operational research have been identified:

- Studies on EP and Childhood TB in reference to the RNTCP
- Assess need for prolongation of therapy in EP TB
- Evaluation of patients who fail on Cat I and subsequently on Cat II
- Management/alternative regimens for patients with adverse reactions to Cat II
- Drug resistance surveillance- community/ population based
- HIV/TB co-infection diagnosis and management

- Undertake studies on
  - Diagnostic practices of pulmonary smear-negative patients
  - Delays in diagnosis
  - Cause of death among patients who die
  - Acceptability and default in relation to DOT–socioeconomic profile of patients
  - RNTCP regimens – adverse reactions and treatment outcomes
  - Follow up of all patients for 2 years
  - Drug susceptibility profile of TB patients under Cat I & II
  - Category II failure patients

- Assess the impact of:
  - Screening outpatients with cough of 3 weeks versus 2 weeks duration
  - Diagnosis using 2 sputum samples versus 3 samples (could be a retrospective study)
  - Follow up using 1 sample versus 2 samples

- In addition to the above, specific studies in regard to medical college RNTCP centres could be undertaken on the following:
  - Performance of the TU/MC/DOT centre in the medical college hospitals
  - Assess the impact of medical college involvement in the RNTCP (increase in referrals, case detection, comparative treatment outcomes etc)
  - How to increase case detection among chest symptomatics who attend various OPDs of the hospital
  - Profile and treatment outcomes of admitted patients (including criteria for admission)
  - Development of a ‘referral for treatment’ system from medical colleges and large hospitals to the peripheral DOTS centres

**Recommended process:**

- Based on the national and zonal workshop recommendations, each State Task Force will develop its priority operational research area to address relevant local issues.
- States to widely disseminate RNTCP operational research priorities to programme staff, academic institutes, medical colleges, NGOs and private sector through newsletters, journals, status reports etc and invite proposals.
- Protocol submitted should be screened/reviewed by STF during the 3 monthly STF meetings. Acceptable protocols to be forwarded to Central TB Division with comments with a copy to the ZTF chairman. It should be ensured that proposed studies address the priority research areas and are not meant for development of infrastructure.
CTD will review proposals forwarded by the STF, provide necessary technical inputs and direct the STCS to make funds available for approved proposals. It will also ensure that adequate funds are available with the states for research studies.

Group 3: Plans for RNTCP sensitization/training in medical colleges and the private sector
- Training should be a well-structured programme focused on bringing about the appropriate technical, attitudinal and behavioral change, which will establish acceptability for DOTS amongst physicians. A change in prescribing habits of physicians and acceptability of DOTS as the best method of treatment for all patients is to be fostered by the projected training programme. The training plan has to be developed considering the category of personnel to be trained, the level for training, trainer, duration and to ensure that the training imparted be appropriate to their skills and needs of the programme.

- It was recommended that all staff (Medical) at Medical colleges should be sensitised for one day using the RNTCP key facts and concepts. This can be done in batches or department wise utilising the department wise time allotted for discussions. The interested faculty members/ those identified by HOD can then be trained for the full 5 days. However the staff in-charge of the DOT centre at Medical College should receive the full 12-day training on modules 1-10. This should include “buffer” staff to allow for possible leave/ transfer of the staff otherwise designated for the purpose. A number of staff in Medical College would also be required to be trained as trainers. This staff, as identified by head of the institution/ coordination committee would receive a full State level training in module 1-10 for 12 days. The venue of training for each category of staff would vary and is listed in Table 1.

- For UG/ PG students, only sensitisation workshop would be required and no separate training as this should be in-built into the curriculum being used for teaching purpose.
- For Paramedical staff, the training would be DOT provider training using the MPW module for 2 days.
- It was felt that it would be difficult to prescribe any deadline for completion of all training activities as this would vary from college to college depending on the staff strength. However it was also felt that most of the colleges should be able to complete training of Medical staff within 6-8 months and all staff within one year.
- For training of personnel from the private sector, STO/DTO would draw up the training plans. Faculty members from Medical College would be used as trainers/resource persons.

Table 1: Training plan

<table>
<thead>
<tr>
<th>Category of staff to be trained</th>
<th>Type of training</th>
<th>Place of training</th>
<th>Trainers</th>
<th>Training material</th>
<th>Duration (in days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STF Chairperson</td>
<td>Concise</td>
<td>National institute</td>
<td>Central institute staff</td>
<td>RNTCP- Key facts and concepts</td>
<td>1*</td>
</tr>
<tr>
<td>Faculty in charge of RNTCP</td>
<td>MO-TC modular</td>
<td>State - level</td>
<td>STC/STDC staff</td>
<td>1-10 modules</td>
<td>12</td>
</tr>
<tr>
<td>TOT's</td>
<td>MO-TC modular</td>
<td>State - level</td>
<td>STC/STDC staff</td>
<td>1-10 modules</td>
<td>12</td>
</tr>
<tr>
<td>HODs and Senior staff</td>
<td>Concise</td>
<td>State - level</td>
<td>STC/STDC staff</td>
<td>RNTCP- Key facts and concepts</td>
<td>1</td>
</tr>
</tbody>
</table>
Group 4: Management of TB cases presenting to a hospital with focus on diagnosis, referral, and treatment under RNTCP.

Outdoor patients

Group reviewed the flowcharts agreed upon at the 1st NTF meeting in 2002. The system proposed in relation to out door patients, seems to be working well in many Medical Colleges, although still not all patients diagnosed with TB are being “internally referred” to the DOTS Centre of the respective Medical Colleges (Annexures 1 and 2). The group made the following recommendations:

- Central TB Division (CTD) needs to initiate the pilot of the proposed “referral for treatment” mechanism at the earliest;
- To enable patients to receive timely treatment under RNTCP, RNTCP diagnostic algorithms are to be strictly adhered to by all attending physicians;
- All diagnoses made, which adhere to the RNTCP algorithms, to be honoured by the receiving treatment facilities;
- State and National level DOT Directories to be developed at the earliest, by the respective State TB Cell (STC) and CTD. At the minimum, these should contain contact details of all District TB Centres, preferably all TB Units (TU). These DOT Directories will subsequently need to be regularly updated by the STCs and CTD;
- In the pilot, the referral form to be posted to the respective DTO and TU, in addition to the patient held copy;
- Patient to be referred to the respective TB Unit. Within a district, if possible patient could be referred to the peripheral health facility (DOT Centre), which is under the respective TU. STS to be responsible for tracking of these referral cases; and
- Routine local health programme review meetings held in all RNTCP implementing districts should be utilized to facilitate tracking and feedback of referred cases.

Indoor patients

Regarding the flowchart proposed last year in relation to in-door patients, group members shared their experiences of the intervening period. In some Medical Colleges, there was still reluctance on the part of many attending physicians to use the RNTCP regimens in the indoor TB cases. In a number of instances, the prolongation pouches were not being supplied for those interested.

*5 days or 12 days modular training for those interested.
indoor patients from within the catchment area of the local TU as agreed upon last year. The group made the following recommendations (Annexure 3):

- All indoor patients who reside in an RNTCP implementing district, are to be treated with RNTCP regimens;
- Prolongation pouches will be supplied for these patients;
- The DOTS Centre of the respective Medical College must be informed of the patient’s admission at the earliest, to enable seamless transfer of the patient to their respective DOTS Centre on discharge from the Medical college indoor ward;
- All indoor patients treated in this way under RNTCP, should be registered under the local TU;
- The drug requirements needed to operationalise this system, to be assessed by the respective DTOs and STOs, and CTD;
- Consideration of a supply of, at maximum, 1 weeks drug supply (i.e. maximum of three doses) on discharge to patients who have commenced RNTCP treatment as indoor cases, to cover intervening period prior to continuation of treatment at their respective DOTS Centre, hence ensuring no interruption in treatment; and
- Continued training and sensitization on RNTCP to all staff members in Medical Colleges.
Annexure 1

Patients from RNTCP District

Medical Colleges

TB Suspect

OPD OPD OPD OPD

Diagnosed as TB

Internal referral to DOTS Centre in Medical College / Referral Register

DOTS Directory District/State/National Paper/Electronic

Stay in Medical College DOTS Centre

Within District

Other DOTS Centre

Referral Form in triplicate (pre-paid)¹

Feedback

Drugs

Register in Local TU TB Register

Drugs

¹ 1 form with patient, 1 sent to DTO and 1 sent to TU
Patients from RNTCP District

Medical Colleges

TB Suspect

OPD

Diagnosed as TB

Internal referral to DOTS Centre in Medical College / Referral Register

DOTS Directory

District/State/National
Paper/Electronic

Feedback

Referral Form in Triplicate (pre-paid)

Other District within State

1. DOTS Centre
2. TU
3. DTC

Other District different State

1 form with patient, 1 to sent to DTO and 1 sent to TU
All indoor patients who reside in an RNTCP implementing district will be treated with RNTCP regimens and will utilise prolongation pouches. The DOTS Centre of the Medical College must be informed of the patient’s admission as soon as possible. The patient will be registered under the local TU. The drug requirements to operationalise this system needs to be assessed by the respective DTOs and STOs, and CTD.

1 If attending physician judges that RNTCP regimen is not appropriate for the individual patient, a non-RNTCP regimen will be prescribed.