

A Focused Study of  
**CTEVT Mid-Level  
Pre-service Health Training Programs  
in Nepal**

2006

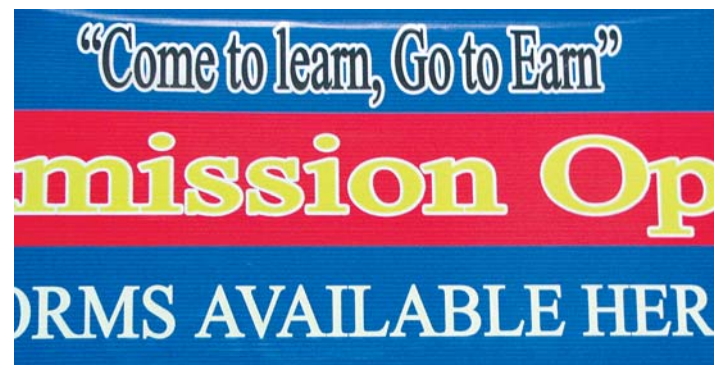


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## Abbreviations

ANM	Auxiliary Nurse Midwife
AMDA	Asian Medical Doctors' Association
BKT	Balkot, Bhaktapur
BKC	Bal Kumari Collage
BN	Bachelor of Nursing
BPH	Bachelor in Public Health
CTEVT	Council for Technical Education and Vocational Training
CMA	Community Medicine Auxiliary
HA	Health Assistant
HP	Health Post
NSI	Nick Simons Institute
NIHS	Nepal Institute of Health Science
NAHS	Nepal Academic Health Science
PHCC	Primary Health Care Center
PCL	Proficiency Certificate Level
OJT	On the Job Training
SHS	School of Health Science
SIDD	Siddartha Medical Institute
SN	Staff Nurse
SHP	Sub - healthpost
TEVT	Technical Education Vocational Training

## Executive Summary

Nepal's Health Ministry recognizes that it must extend health care services to remote areas of the country, and that in order to do that it must expand its pool of health care workers, especially at the mid-level. Training of mid-level health care workers in Nepal, which is accredited by The Council for Technical Education and Vocational Training (CTEVT), is widely regarded to be of low quality – however there is a lack of published evidence documenting the actual quality of graduates, or the specific short-comings of the training. From April - June 2006, in collaboration with and under the authority of CTEVT, Nick Simons Institute (NSI) conducted a study of mid-level health care training institutes in Nepal. We evaluated a diverse sample of 9 institutes that train health assistants (HA), community medical assistants (CMA or AHW), and auxiliary nurse midwives (ANM). We used a range of assessment tools: administrative interview/data collection, site visit/training observation, theory assessment examination, clinical skills examination, focused group discussion, and personal opinion questionnaire.

In Nepal there are now 125 mid-level health training institutes, of which 117 are affiliated with (but not directly managed by) CTEVT. The yearly national capacity for student graduates is 582 HAs, 1600 ANMs, and 2580 CMAs, and the institutes that we studied had enrollments running at over 93% capacity with low drop-out rates. In the nine study institutes, final exam pass rates were low for CMAs (48%) and for ANMs (58%), but all students were allowed to retake their exams. Yearly tuition was 4-5 times higher for HA courses than for CMA or ANM.

Physical facilities, especially demonstration rooms and models, varied greatly among institutes. Less than half of the study institutes augmented didactic teaching with more modern teaching methods. Our limited assessment found HA and CMA students possessing satisfactory theoretical knowledge, and our qualitative assessments suggested that the classroom portions of the training were taking place according to prescribed CTEVT norms. Students and teachers complained about that the curriculum was inappropriate for eventual field of health care practice.

We observed the largest deficiencies in the clinical portion of the training. With one or two exceptions, institutes did not provide adequate clinical exposure. Lacking their own clinical site, the institutes sent students to health care institutions with low clinical case load or with over-crowding by students from multiple training institutes. There was a widespread lack of coordination between theory and clinical teaching, and very little clinical mentoring of students, who felt unsupervised in the clinics. Exposure to basic clinical procedures such as normal deliveries was lacking, and ANM students performed poorly on our clinical skill assessment.

- (1) At present, 125 CTEVT-accredited institutes provide mid-level health care training, producing thousands of new workers each year.
- (2) Across different institutes, there is wide variation in almost all parameters - infrastructure, teaching methods, and clinical exposure – suggesting a lack of central control of standards.
- (3) Theory teaching appears generally to be adequate, although teaching methods and curriculum need extensive updating.
- (4) In almost all cases, the clinical experience being provided is so sub-standard – in caseload, coordination, and mentoring – that most fresh graduates are unlikely to be competent health care providers.
- (5) The CTEVT mid-level health care training system needs major overhaul.

## Introduction /Rationale /Objectives

In Nepal, as in most of the world, development of human resources for health is an urgent priority. Although for many years Nepal's Ministry of Health and multiple INGOs have targeted lack of access to health care in rural areas, it remains a chronic problem that calls for the input of a range of national and international partners. The MoH 2003-17 Human Resources for Health Plan (Nepali BS 2060-74) (1) estimates that there is a need for the addition of nearly 50,000 more health care workers in the government service over this period. These workers are most critically needed in the rural areas, and at mid-levels.

At the high level of Nepal's medical hierarchy, the basic doctor qualification is MBBS degree. Although from 1978-1992 Nepal had only one medical college producing 40 doctors per year, in the last 10 years this number has expanded to 13 medical colleges whose capacity is now approaching 1000 new MBBS doctors per year (2). Three health science universities have been providing post-graduate training (MD or MS degrees), and these are now being joined by other medical colleges as well.

The Council for Technical Education and Vocational Training (CTEVT) constituted in 1989 (2045 BS), is the policy formulation and coordination body for basic and mid-level training programs in Nepal. It is a national autonomous body committed to the development of human resources for the country. The vision of the CTEVT is "no Nepali should be unemployed due to lack of access to TEVT program" and mission is "skilled workforce preparation is key responsibility of CTEVT". In the health field, CTEVT accredits pre-service programs such as health assistant (HA), staff nurse (SN), auxiliary nurse midwife (ANM), and community medical assistant (CMA) – in addition to other pre-service programs and some in-service training (3).

Although the production of human resources increases each year, the quality of the mid-level training programs, and the knowledge and practical skills of the health workers, have increasingly become a matter of concern. The authors of this study have encountered the widely-held opinion that CTEVT's health training programs are sub-optimal. This opinion is expressed by officials in Nepal government, external development partners, and in CTEVT itself. However, on further investigation we've not

been able to identify documented evidence to support this view, nor documentation of the specific short-comings of CTEVT mid-level health care training.

Nick Simons Institute (NSI) is a newly-formed organization whose mission is to train and support skilled, compassionate health care workers for rural Nepal. Because we support the Nepal government's plan to produce health care workers, especially in the mid-levels and for rural Nepal – we are seeking hard evidence concerning the existing mid-level trainings that are being conducted here (4). Earlier in 2006, the NSI team searched for all available studies that concentrated on CTEVT pre-service training, and we found a scarcity of published reports. Two safer motherhood studies referred tangentially to CTEVT training of ANMs, but they did not focus on evaluating the quality of that training (5,6).

In March-April 2006, one of the authors of this study (IR) conducted a rapid assessment of Kathmandu-based CTEVT-affiliated mid-level training (7). This provided enough information for NSI to approach the CTEVT Director about conducting a longer, collaborative study between NSI and CTEVT. After further consultation between the two teams, the CTEVT Director gave permission to conduct this study.

### Study Objectives

- (1) To assess the quality of CTEVT managed and affiliated mid-level pre-service health care training, identifying specific strengths and weaknesses.
- (2) To obtain enough information to inform NSI in its strategic decisions regarding the types of health care training it takes on.

### Study Methods

CTEVT oversees a number of pre-service mid-level health training programs. These are either conducted at "affiliated" training institutes – which are separate entities that only receive accreditation from CTEVT – or at CTEVT "managed" training institutes, which are partly owned and operated by CTEVT itself. At present, 117 institutes are CTEVT-affiliated and 8 are CTEVT-managed. The types and numbers of the training programs are shown in Table 1.

**Table: 1: Totals of pre – service middle level health training programs under CTEVT**

Type of the training program	Course Duration	Total # Programs	# Institutes CTEVT Managed
HA (Health Assistant) (Proficiency Certificate (PCL) in General Medicine)	3 years	15	1
Staff Nurse (PCL)	3 years	31	2
CMA (Community Med Assistant)	15 months	63	2
ANM (Auxiliary Nurse Midwife)	18 months	42	5
Diploma in Pharmacy	3 years	21	1
Laboratory Technology (Basic)	15 months	25	1
Laboratory Technology (PCL)	3 years	1	1

**Table 2: Institutes for Study**

Training	Institute (Abbreviation)	Location	CTEVT relation
HA	■ Nepal Institute Health Science (NIHS)	Kathmandu	Affiliated
	■ Nepal Academic Health Science (NAHS)	Kathmandu	Affiliated
	■ School of Health Science (SHS)	Bharatpur, Chitwan	Managed
	■ Rambha Devi Health Institute (RDH)	Butwal	Affiliated
ANM and CMA	■ Balkot Technical School (BKT)	Bhaktapur	Affiliated
	■ Bal Kumari College (BKC)	Bharatpur, Chitwan	Affiliated
	■ Siddhartha Medical Institute (SIDD)	Butwal	Affiliated
	■ Jiri Technical School (JTS)	Jiri	Managed
	■ AMDA Damak (AMDA)	Damak, Jhapa	Affiliated

For our study; three programs – HA, ANM, and CMA – were selected. (CMA is also called AHW, auxiliary health worker). These cadres of health workers are the frontline health care providers of Nepal's government primary health centres and health posts, providing health care services to rural communities. Because of this, NSI is focusing on these cadres for its own training programs.

#### Site selection for the study

To facilitate site selection, several discussions took place between senior CTEVT officials and NSI. We used the principle of diversity: in type of CTEVT affiliation, type of training, CTEVT-perceived quality of the training institutes, and site location. In this regard, CTEVT has their own internal system of supervision, monitoring and evaluation of the quality of these affiliated or managed institutes. Three of our study institutes were located in the Kathmandu Valley, while six were outside. Four trained health assistants (HA), while five institutes trained auxiliary nurse midwife (ANM) and community medical assistant (CMA).

The study team also assessed the following clinical sites used by the above training institutes, which were ten in number:

#### Government clinical institutions: (Institutes Using)

Mulpani PHCC, Sangha VDC (NIHS, NAHS, BKT)  
 Bishnu Devi PHCC, Kirtipur (NIHS, NAHS)  
 Chalnakhel HP in Kathmandu (NIHS, NAHS)  
 District hospital, Jiri (JTS)  
 Madi PHCC, Chitwan (SHS, BKC)  
 Bharatpur Sub – Zonal Hospital, Chitwan (SHS, BKC)  
 Bhim District hospital, Rupandehi (RDH)

#### Non – governmental health institutions:

AMDA hospital, Damak, Jhapa (AMDA)  
 Stupa Community Hospital, Boudha, Kathmandu (NIHS)  
 Community hospital, Bal K Collage, Bharatpur (BKC)

#### Research Team

The team consisted of two members each from CTEVT and NSI. Field visits occurred with a mixed pair of workers, one from each institution in each pair. Planning and data assimilation was done with all four members present. Indra Rai – Train-

ing Manager, NSI Shanta Adhikari – CTEVT Ashish Maskey – Research Doctor, NSI Rohini Shrestha – CTEVT 4.3 Field Visit for data collection

Prior to beginning the field visit, permission for the study was taken by telephone in all selected institutes; as well, CTEVT sent a letter requesting institutes to provide support for the study. Prior to our visiting the clinical sites, permission was taken from the training coordinators of the concerned institutes.

#### Study Methodology

Prior to conducting the assessment, we held preliminary discussions with different level of professionals of teaching institutes and professional councils (including Institute of Medicine, nursing campuses, and Nursing council officials) and senior level CTEVT officials to develop information and ideas for the study. Relevant literature and reports for the study were gathered and reviewed, though, as stated above, these were few in number.

Based on these discussions and on the information from the previous pilot study, a variety of assessment tools were developed and pre – tested in Kathmandu-based mid level (HA, ANM) pre-service training institutes. Six assessment areas were finalized for this study.

## Results

This study presents the key findings of the assessment of the mid – level health care training programs run by nine diverse health training institutes, inside and outside Kathmandu valley, either directly managed or affiliated with CTEVT. The results are presented here according to the numbering system of Table 3 above.

### I Records Review

#### 1.1 Data from CTEVT

CTEVT could not provide the data of the actual numbers of students enrolled across all the institutes of Nepal.

CTEVT provided the maximum capacities for student intake, according to their own regulations. For affiliated institutes, in

**Table 3: Overview of 6 Assessment Areas**

Assessment	Tools	Subjects	Details
1. Record Review	Data collection	CTEVT central office and 9 Institutes	Examination results, student enrollment, and fee structure.
2. Institute Infrastructure and Facilities	Qualitative assessment	9 Institutes	Tour and interviews
3. Knowledge Assessment	Multiple choice questionnaire	45 HA students 28 CMA students	Topics included common medical problems of Nepal.
4. Clinical assessment of midwifery skills and exposure	Clinical skills exam and visits to clinical sites	98 ANM students	Key skills in antenatal, delivery, and post-partum care. Assessment of exposure.
5. Focused Group Discussion	Guided group discussion	6 Student groups 4 Teacher groups	Gaining insight regarding quality of training provided by different institutes.
6. Personal opinion questionnaire	13-point questionnaire related to training quality	90 Students 7 Teachers	Gaining insight regarding quality of training provided by different institutes.

each of these three programs there was an annual intake of 40 students/institute.

CTEVT managed institutes have their own criteria for enrollment. In these the maximum enrollments are 62, 30 and 30 for HA, ANM and CMA program respectively.

From these figures, the total student capacity can be calculated and is found in table 4.

**Pre-admission requirements** To enroll the diploma level program (HA program), a prospective student must have, at a minimum, SLC pass with 45% marks, including specific SLC subjects of English, mathematics and science. To enter ANM and CMA programs, a student need only pass the SLC exam.

The process of selecting students depends mainly on an entrance examination. The students are selected on the basis of merit list. 5% quota is supposed to be provided for remote and disabled, disadvantaged and ethnic groups, emphasizing equity and equal access to those groups.

## 1.2 Data from Study Institutes

In the 9 institutes that we studied, enrollment usually approached full capacity of the institute. Over the last three years, the student intake for HAs averaged 99% of capacity; and for CMAs it averaged 93%. From this we may infer that the national intake of students approaches the capacity figures in Table 4.

**Table 4. National Yearly Enrollment Capacity**

Program	No. of institutes	yearly students enrollment
HA	14	582
ANM	41	1600
CMA	65	2580

In these institutes studied drop-out rate was low, leaving a large proportion taking their final exams. Pass rate varied, from HAs who did relatively well, to CMAs of whom more than half failed. Table 5 shows the patient outcomes during the last year (2062-63).

**Tuition fee structure:** This differed widely between the programs, with health assistant being significantly more expensive. The tuition range and expected yearly institute income from the tuition of a full class of students is shown in Table 6. These figures do not include room/ board, books, exam fees, nor the fees that students pay to hospitals to receive clinical experience.

In this comparison, proficiency level programs (i.e. health assistant (HA)) – which have been used as a stepping stone to MBBS doctor training – are much more expensive than ANM or CMA courses. However, because we only sampled 10% of all health training institutes, it's possible that we've chosen more expensive HA programs for study.

## 2. Institute Infrastructure and Facilities

### 2.1 Physical Infrastructure

Six of the nine institutes do not have their own building; they are using rented buildings. Those that use their own buildings are School of Health Science Bharatpur, Jiri Technical School (using government buildings), and AMDA, Jhapa (which is an internationally-funded NGO).

AMDA, Jhapa runs its own hospital and conducts over 4500 deliveries a year. They manage both complicated and normal deliveries in the hospital. Initially, this hospital was built for Bhutanese refugees and now local people also use it. AMDA Health Manpower Institutes do not have to depend on government health institutions for clinical exposure of the students. They depute students in the government health institutions only to understand roles, regulations and functioning of health system.

**Table 5. Student Numbers in 9 Study Institutes (2062-63)**

Program	# Institutes studied	Total Capacity (# Students)	Intake (Actual # enrolled)	Drop-out Final Exam	% Passing
HA	4	182	180	1	79%
ANM	2	80	80	0	58%
CMA	3	120	119	3	48%

**Table 6. Program Tuition in Study Institutes**

Program	Years of study	Total Tuition range Nep.Rupees (Avg. US \$)	Average Yearly Tuition Per Student	Average Yearly Total Income Per Institute (Full capacity)
HA	3	283,000 – 285,000 (\$3,944)	94,667 (\$1,312)	11,360,040 (\$157,778)
ANM	1.5	28,900 – 32,500 (\$426)	20,466 (\$284)	818,640 (\$11,370)
CMA	1.3	23,800 – 26,600 (\$350)	19,384 (\$269)	775,360 (\$10,769)

Nepal Institute of HealthScience, Boudha (Kathmandu) runs its own 50-bed hospital named “Stupa Community Hospital” close to the institute and is planning to expand up to 100 beds. However, they are not able to fulfill the requirements of students’ clinical exposure in their hospital due to limited patient flow. Therefore, they are mostly relying on government health institutions. A large number of training institutes use the same government health institutions. Sometimes, at a time 10 – 15 students are coming to the health institutions from different institutes. So, the students do not have clinical exposure to the extent they should have.

In Bharatpur, Bal Kumari College has also recently opened a hospital. Though called a Community Hospital, it is providing only out patient clinical service. Daily client flow is very limited (10 – 15 per day). Most of the time a CMA runs the clinic and if they need a doctor’s help, they call the doctor from local government hospital. Therefore, it is not used for clinical training purpose of its CMA and ANM students.

## 2.2 Other Institute Facilities

Participatory observations were carried out on physical infrastructure and other facilities related to training program of the institutes. The study found that:

Classrooms were generally quite adequate with at least enough space for 40 students in all selected institutes. For teaching materials, we mostly saw black board, chalk and white board.

Teaching materials such as audio – visual aids were lacking in most of the classroom in the institutes. In AMDA, Jhapa Over Head Projector has been helpful to make theory classes more effective.

Science laboratory were available in all four study HA institutes and it seemed that it was being used regularly for

practicums. School of Health Science, Bharatpur had a good laboratory facility for science practicum. A Korean NGO called KOICA supports this infrastructure and teaching materials.

In most libraries, the space was inadequate considering the number (80 to 120) of students at some of the private institutes. Similarly, we found that both reference and test books are insufficient in number for teachers and students, and they were not updated on regular basis.

For clinical teaching materials in the demonstration room, we mostly observed a female dummy, a model of human internal organs, pelvic bone, newborn model, human skeleton, few surgical equipment and posters of human anatomy.

There was limited use of demonstration room by both clinical teachers and students, and there was a lack of appropriate and sufficient learning materials in demonstration rooms. In Chitwan, Bal Kumari College had good-sized demonstration room with appropriate model for midwifery practices. It was supported by JHPIEGO to pilot the ANM curriculum development process of midwifery and family planning component. Most demonstration rooms we observed were full of dust and very untidy, perhaps due to limited use.

Hostel facilities were only available in Jiri and School of Health Science, Bharatpur. However, even there the rooms were congested, with 8 to 10 students sharing one room, making it difficult to concentrate while studying.

## 3. Knowledge assessment (HA and CMA students)

A multiple choice questionnaire was administered to assess the knowledge of senior HA and CMA students. The question-

**Table 7. Knowledge assessment exam**

Program	Total students	Average % score
HA	45	67
CMA	28	54

naire were developed referring to the curriculum of HA, CMA and the reference books of these programs (8,9,10). The questionnaire topics included:

- Skin diseases and their management
- Acute respiratory tract infections and their management
- Worm infestation and their preventive measures
- Tuberculosis and its choice and dose of drugs
- Common Diarrhoeal diseases

**Immunization** For this knowledge assessment, 45 HA and 28 CMA senior level students from various study institutes were selected for the study. Thus, these students had already completed their theory portion of study. The overall scores of the students are shown in Table 7.

On this short, basic level exam, derived using the HA/CMA curricula, the students showed reasonable knowledge of the theory portion of their course. These average scores would be high enough to pass that portion of the course.

## 4. Clinical assessment (ANM students)

### 4.1 Clinical skills assessment

A skill assessment tool was developed, which was based on the national midwife refresher curriculum (11). The skills include:

- Ante-natal care (ANC)
- History and physical exam during labor
- Monitoring of labor
- Conduct normal delivery

**Immediate postpartum care** During this skill assessment, we observed ANC skills mostly on real patients. For other skills observation, we asked students to do role - play, and observed their skills using a check list. 98 ANM students from five institutes were participated for the skill assessment. The assessment found that the skills were poor in all five institutes.

### 4.2 Observations of Clinical Exposure

According to the curriculum of the ANM program; each student has to observe 10 normal deliveries, conduct 10 deliveries themselves under the supervision of teachers or senior staff,

**Table 8. Skill assessment results of midwifery practicum of ANM students**

Institutes	AMDA	JTS	BKT	SIDD	BKC	Total
No.students tested	25	9	18	36	10	98
% performed successfully	41	21	29	32	33	31

and finally conduct 10 normal deliveries independently. In practice, this requirement is not nearly fulfilled.

Moreover, the study found that there was little opportunity to practice midwifery skills at the hospitals where they practice the skills. This was due to limited time allocation (one month) for practicum. In some government district hospitals (Bhim hospital, Rupandehi) the number of institutional deliveries is limited, and not adequate to practice the skills for large number of students at the same time.

The study team visited the PHCC Madi of Chitwan district where students of Bal Kumari College were deputed for on-the-job-training (OJT). During visit it was found that an ANM and CMA were on duty, and expected to supervise 12 ANM students. The day was the ANC day, therefore, there were 32 ANC cases registered for ANC check up. During clinical skill observation, most students missed out the steps of ANC. There were 3 cases of anemia with pregnancy. Student did not know what to do with this and how to manage it.

Informal discussion with staff of Madi PHCC revealed that there is a post for MO (MBBS) and staff nurse. Staff nurse is supposed to supervise the students during OJT at the PHCC. Institutes assign that responsibility to them with the coordination of District Public Health Office. Unfortunately, both posts of staff nurse and MO were vacant since long time. Therefore, there was no clinical teacher to provide clinical teaching, monitoring, supervision and moral support to the students. The recently posted ANM did not know how to supervise or how to provide clinical teaching to the students – although there was adequate opportunity for the students to learn the skills.

PHCC setting for a clinical site is not appropriate to learn the skills. There was only one blood pressure apparatus and stethoscope for 12 students. ANC room was congested and they were distributing iron + folic and de-worming drugs from the same room. There were no facility for hand washing although very recently PHCC had received whole site infection prevention training with the supports of DPHO and NFHP. It was observed that no one seems aware of practicing Infection Prevention in the clinic.

Use of a partograph had been initiated in AMDA, Bharatpur and Bhim District Hospital in Rupandehi, but the skill assessment found that the students are unaware of using and maintaining a partograph to monitor labor. Some of the teachers and clinical staff were found to be completely unaware of maintaining and using it, though according to academic requirement of ANM students, they should be able to records of 5 partograph during their clinical training.

## 5. Focused Group Discussions

The research team, working in pairs, conducted focused group discussions with 6 student groups and 4 teacher groups at the institutes. One research member conducted the discussion,



prompting open discussion in a number of areas of interest; the second recorded conversations.

In analyzing this qualitative data, we have made some subjective judgments regarding the weight that discussants gave to various opinions. In some areas of questioning, there was very strong consensus across groups, while in other areas the opinions seemed to reflect the varying qualities of the different institutes. Within a given institute, we also found some differing opinion on some of the topics.

The opinions summarized from the FGDs are listed here:

### 5.1 Administration

- Cost of the courses was felt to be fair. While in several instances we heard the comment “This institute is run more like a business”, this comment usually related to the additional costs that students encountered during the course of their study. There were few complaints about the level of the tuition.
- Support facilities were lacking. Most often mentioned were adequate library (or access to library), and hostel space on campus.
- Supervision was variable. Some institutes had well-coordinated and supervised programs; in others the teachers came and went from the campus independent from organization coordination.

### 5.2 Theoretical teaching

- Teacher qualification was generally adequate. There were few complaints about their technical capability.
- Teaching methods showed marked variation. In some institutes, teachers use role play, question and answer sessions, and group discussions; in other places, teaching is limited to didactic lectures.
- Teaching equipment Generally, this was inadequate, an opinion expressed by both the teachers and the students. At best an overhead projector and a few models were available, but often not even this.
- Curriculum Across all groups, in almost every institute, and for each of the cadres of training – we heard the complaint that the curriculum was inappropriate. Many told us that the content did not suit the eventual field of practice, with much extraneous material added. Also, there is a real need for good course syllabi. Related to this, we heard that the curriculum material cannot be found in one textbook, but is spread across many books.

### 5.3 Clinical teaching

- Clinical exposure Students and teachers generally felt that the clinical exposure was inadequate due to lack of patient contact. There were some exceptions to this, such as in Damak, where the hospital exposure received praise.



- Coordination Even where the volume was adequate, students complained that there was poor supervision in the clinics and that the timing of the clinical exposure could have been better matched with the theory classes. Many advised that some of the clinical exposure be shifted until earlier in the course time.

### 5.4 Other

- Career ladder Although this subject did not directly pertain to our study of training quality, all the HA student groups asked that the government re-activate the career path from HA to MBBS (doctor) study.

## 6. Personal Perception Questionnaire

A 13-question paper was given to students to numerically assess their perceptions and opinions about their training programs. They were asked to assign a number from 1 (poor) to 10 (best), with 6 being (satisfactory). These questions covered areas similar to the focused group discussions: overall program quality, theory teaching, clinical teaching, and support facilities. Table 9 displays some selected questions and their average responses.

In general, these questions were not so helpful. Responses tended to cluster near the middle, with averages being in the 4–6 range, and not much differentiation between different questions. Health Assistant students tended to be less satisfied (avg. 5.9) than CMAs (avg. 6.7) or ANM students (avg. 6.6), but the sample size was too low to find significance. A number of questions, students from NIHS Boudha and Jiri Technical School expressed more satisfaction, but again, the sample size was too small. Interestingly, JTS provides little or no practical exposure on in Jiri (students must travel to Kathmandu, 8 hours away), but the students rated the clinical experience as 8.5/10. On average, students rated housing/hostel facility as 1.7 / 10 – which was the only question that generated an average response outside of the 4.0 – 7.0 middle range.

**Table 9 Personal Perception (Sample Question Average Responses) [1 – poor, 6- satisfactory, 10 –excellent]****1. How satisfied are you with your current training program?**

Program Institutes	HA					CMA				ANM					
	SHS	NAHS	NIHS	RDHI	TOTAL	BalKC	AMDA	SIDDARTHA	TOTAL	BALKC	BALKOT	AMDA	SIDDARTHA	JIRI	TOTAL
<b>No of students</b>	15	8	9	15	47	13	7	8	28	6	3	7	7	15	38
<b>Avg. Score</b>	5.5	6.5	7.2	5.1	5.9	6.5	6.9	6	6.7	1.2	6	6.9	6	9.4	6.6

**5. Are the lessons well planned?**

Program Institutes	HA					CMA				ANM					
	SHS	NAHS	NIHS	RDHI	TOTAL	BalKC	AMDA	SIDDARTHA	TOTAL	BALKC	BALKOT	AMDA	SIDDARTHA	JIRI	TOTAL
<b>No of students</b>	15	8	9	15	47	13	7	8	28	6	3	7	7	15	38
<b>Average Score</b>	4.9	6.6	9	5.5	6.2	6.8	7	7.3	7.0	0.3	7	7	7.3	7.5	6.2

**8. Do you get adequate practical exposure?**

Program Institutes	HA					CMA				ANM					
	SHS	NAHS	NIHS	RDHI	TOTAL	BalKC	AMDA	SIDDARTHA	TOTAL	BALKC	BALKOT	AMDA	SIDDARTHA	JIRI	TOTAL
<b>No of students</b>	15	8	9	15	47	13	7	8	28	6	3	7	7	15	38
<b>Average Score</b>	4.6	5.4	5.1	2.1	4.0	6.2	5.3	3.2	5.1	0.6	7	5.3	3.2	8.5	5.6

**13. Do you have adequate housing/hostel during your training program?**

Program Institutes	HA					CMA				ANM					
	SHS	NAHS	NIHS	RDHI	TOTAL	BalKC	AMDA	SIDDARTHA	TOTAL	BALKC	BALKOT	AMDA	SIDDARTHA	JIRI	TOTAL
<b>No of students</b>	15	8	9	15	47	13	7	8	28	6	3	7	7	15	38
<b>Average Score</b>	Girls only	0	7.3	6	3.3	0	0	0	0.0	0	0	0	0	0	4.3

## COMMENTS

In its Human Resources Plan (2003-17), Nepal's Health Ministry has identified expansion of the pool of mid-level health care workers as a critical need: these workers constitute the front line of a widely dispersed health care system, and they are most likely to remain in remote service. In Nepal, almost all pre-service training of mid-level health care workers occurs under the authority of (and accredited by) CTEVT.

Our conversations with health care and educational institutions, the Nepal government, and with external development partners had elicited a high level of criticism for CTEVT mid-level health training. Paradoxically, we found almost no reports – published or locally-disseminated – that documented this training's shortcomings. Because of this, in March 2006 we conducted a rapid assessment of 4 health care training institutes under CTEVT; this revealed problems, especially in the clinical component of the trainings. Based on these findings, we entered into discussions with CTEVT officials and the study described here is a result of collaboration with CTEVT.

There are now 125 CTEVT-affiliated and -managed mid-level health care training institutes in Nepal. We assessed 9 of these sites, basing our selection on the principle of diversity in geography, CTEVT relation, level of training, and perceived quality. The validity of our data may suffer because we examined less than 10% of all institutes. However, based on the experience of the research team (which included CTEVT officials), our 9 sites probably represented the upper end of the spectrum. Because of this, our findings may understate the actual national problem with CTEVT training. Additionally, we felt that this level of data was sufficient to advise NSI in its future plan.

Within a given assessment tool, our sample sizes were not large, but probably were adequate for the qualitative conclusions that we drew. We don't expect that the quantitative scores from examinations of students – theory and skills assessment – could be extrapolated to represent the national level. Our study teams carried out a range of different evaluations: central office data collection, classroom and clinic visits, examinations of students, focused group discussions with



students and teachers, and questionnaires. The high level of consensus across multiple methods of assessment strengthens our conclusions.

The findings are discussed in some detail in the results section and summarized in the Executive Summary. We believe that this study validates many of the complaints that are voiced about CTEVT training: public perception about the poor quality of the training, while only a generalization, appears to be accurate. This study points out that the weakest aspects lay in central quality control and in the clinical experience that students are provided.

It seems clear to us that unless someone overhauls the CTEVT mid-level training system, the market will continue to be flooded with under-qualified health care providers. How should an organization like NSI react to such findings? There are several options: First, we could open up a number of training sites in NSI-network hospitals. These would likely be among the best of CTEVT's sites, but would still only be a small fraction of the national output. Second, we could offer practicum courses that essentially fill in the gaps left by sub-standard pre-service courses. Third, we could take a lead in the accreditation of sites or graduates. In any of these cases, our first step is to present this data to CTEVT and to the Health Ministry, and to disseminate it to other health development EDPs. We invite your comments about this study.

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