



PARAMEDICAL COURSE

PROSPECTUS & INSTRUCTION MANUAL



- **Certificate Course In Telemedicine Technologist [C.T.T]**
- **Certificate Course In Rural Ultra-Sonography Technologist [e.C.R.U.S.T.]**
- **Certificate Course In Emergency Paramedic Technologist [C.E.P.T.]**

HEALTH MANAGEMENT RESEARCH INSTITUTE (HMRI)

Beacon Towers, # 1-1-60/7, 7A, 7B, & 7C, Bakaram,
Near R.T.C 'X' Road, Hyderabad 20. Phone: 040-42404024

Applications are invited from eligible candidates for admission into the following Certificate Paramedic Courses, Recognized by A.P. Paramedical Board, Hyderabad and Government of Andhra Pradesh for the academic year **2010 -2011**.

TOTAL NO. OF SEATS FOR IN EACH COURSES : 40 [FORTY ONLY]

Including Govt. & Management Quota

**All the courses would be conducted by HMRI,
Beacon Towers, # 1-1-60/7, 7A, 7B, & 7C, Bakaram, Near R.T.C 'X' Road, Hyderabad 20.**

1) Certificate Course In Telemedicine Technologist [CTT]

- **Medium of instruction: English**
- **Eligibility:** B.Sc. / Nursing / GNM & ANM with 02 [Two] years experience.

2) Certificate Course In Rural Ultra-Sonography Technologist[ECRUST]

- **Medium Of Instruction : English**
- **Eligibility:** B.Sc. / Nursing / GNM & ANM with 02 [Two] years experience.

3) Certificate Course In "Emergency Paramedic Technologist [CEPT]

- **Medium Of Instruction : Telugu**
- **Eligibility :** Minimum Qualification 10+2 (Bi.P.C. only)

Duly filled application form, along with the relevant certified copies and application fees should reach, on or before the **LAST** date of submission, to HMRI office.

The management does not take any responsibility of any application not reaching our office by due date.

Last date for receipt of completed application form : _____

The classes for the course will commence on : _____

Sd/-

C.E.O.

HEALTH MANAGEMENT & RESEARCH INSTITUTE (HMRI)

PROSPECTUS

PARAMEDICAL CERTIFICATE COURSE

INDEX

- 1) Health Management and Research Institute - Introduction
- 2) Introduction & Course Curriculum:
 - a) **Certificate Course in Telemedicine Technologist [CTT]**
 - b) **Certificate Course in Ultra - Sonography Technologist [eCRUST]**
 - c) **Certificate Course in Emergency Paramedic Technologist [CEPT]**
- 3) Course Objectives
- 4) Teaching Technique
- 5) Faculty
- 6) Eligibility Criteria
- 7) Registration & Fee Structure
- 8) Admission counselling
- 9) Selection Criteria
- 10) Application Filling Instructions to Candidates
- 11) Documents to be Submitted
- 12) General Information
- 13) Application

Health Management and Research Institute

Health Management and Research Institute (HMRI) is a Registered Society under AP Registration of Societies Act 2000. The organization has eminent healthcare and management professionals on its Governing Board.

HMRI aims to provide outcome-oriented management to enhance access and utilization of health services through IT-enabled support to policy makers, government and private healthcare providers, and teaching and training institutions.

HMRI and Government of Andhra Pradesh have come together under a public-private partnership (PPP) to augment healthcare delivery systems in the state of Andhra Pradesh.

104 - Health Information Helpline - Associated Businesses

An all Andhra Pradesh **Toll Free Number – 104**, is state-of-the-art health information, a **Non - Emergency Helpline**, which is accessible to all the 80 million people living in Andhra Pradesh.

- With **Round-The-Clock**, qualified and standardized medical information, advice and counselling in three languages — Telugu, Hindi and English.
- Medical Advice using triage (classifying the caller's condition into 'critical', 'serious' or 'stable' states) and providing appropriate advice.
- Counselling Services on the HIV/AIDS , matrimonial discord, depression and chronic diseases, psychological distress, and suicide prevention.
- Directory Information on Health Service Providers, Diagnostic Services, Hospitals etc.
- Complaint Registry - Citizens can register complaints against any public health system / provider.
- **On an average 60,000 Calls are received per day who get all the above services round the clock.**

104 - Mobile Clinic Services - Fixed Day Health Services [F.D.H.S.]

- The Fixed Day Health Service – Deploys Mobile Health Units (MHUs) to render 4 hours service on a **FIXED** day of each month in each habitation with a population of about 1,500 and located more than 3 KM away from the nearest PHC.
- Each mobile health unit covers two habitations, in a day - 56 villages in a month.
- Provides free diagnostic Services and limited drugs distribution.
- Staff comprising paramedics, pharmacists and lab technicians.

- Each vehicle provides the following services to the rural beneficiaries / patients :
 - o Ante-natal check ups & Nutritional supplements for mothers and children
 - o Basic blood and urine lab investigations and screening
 - o Advice and medicine dispensation for chronic illnesses such as diabetes, hypertension, epilepsy and COPD.

104 - Telemedicine

Telemedicine is an innovative need based cost effective point of care technology offering comprehensive telemedicine solutions for rural India.

The objective of HMRI's Telemedicine service is to design a point of care, user friendly, cost effective, integrated multi functional device for rural telemedicine applications with emphasis on general physician functionality. The disease pattern at the primary health centre and sub centre level in rural India typically includes conditions like acute minor ailments, chronic diseases (diabetes, hypertension, renal disease and COPD) pregnancy and related illness and paediatric illnesses. Since there is a shortage of trained physicians, there is a dire need for an 'all in one' comprehensive low cost point of care tele-med device which fills this gap.

As part of innovation in the field of Health care, HMRI has started a pilot project of Telemedicine after getting approval from the Director Of Health, Govt. of A.P. Real time Telemedicine operation started on 16 Jan2008, initially at three (3) PHC's; two (2) district hospitals and two(2) old age homes – Telemedicine consulting centers(TCC's).



The 'Doc in the Box' – this unique solution offered by HMRI makes use of innovative information technology to provide rural patients with access to low-cost, world-class virtual medical diagnosis and treatment.

Telemedicine aims to reach the under-served rural populations through its virtual physical examination modules such as Tele-ENT, Tele-Dermatology, Tele-medical and surgical consult, Tele-Cardiology, Tele-Ophthalmology, Tele-Laboratory, Tele-Pathology etc.

COURSES

- **Health Management and Research Institute** has a greater responsibility and commitment to conduct these Paramedical courses in a regulated manner, ensure proper certification, make them acceptable to health professionals in the state and maintain optimum quality. A.P. Paramedical Board had approved conducting of courses by Health Management and Research Institute with state of the art facilities under one roof has greater employment scope.
- These Paramedical courses are designed to produce a large cadre of trained health care professionals required to bridge the existing gap in health care delivery in rural Andhra Pradesh. Immediate requirement is for effective implementation of Fixed Day Health Services of Govt. A.P.; Hospital Management Services & Telemedicine. Besides other future programs from the Government of Andhra Pradesh to provide assured reliable health services at the remote un-reachable areas that are aimed to reach out to the Poorest of the poor. All these initiatives will go a long way in achieving NRHM goals on IMR and MMR.

Course Objectives

The course essential materials and syllabus is designed and developed right from the fundamentals and keeping abreast with the telemedicine technological advancements :

- The involved information & technology
- Tele-Diagnostic Instruments & equipments
- The application telemedicine specialist.

So at the end of the Certificate Course in Telemedicine Technology, a candidate would be well equipped with the updated, well oriented and acquainted with the latest Telemedicine technological Advancements.

Teaching Technique

Regular classes would provide a forum for interaction with the domain experts from all the fields. The Course provides a perfect blend of lectures, seminars, self-learning tutorials and hands-on-experience.

Regular interaction with the In-House Medical Specialist, Guest & Industrial Technologist including the experts from Research & Development would automatically enhance each individual's knowledge base. This requires no further education in advancements in Telemedicine Technology or focusing on the methodology and technological applications.

Faculty

In – House Faculty - Technology & Medical Specialist:

A major part of the faculty from HMRI, mainly from R & D, would take special interest to impart not only fundamentals but also the required expertise application knowledge base.

Regular advancements and other developments are communicated by the faculty and also through regular circulation of bulletins & periodicals.

Guest & Industrial Faculty:

Visiting Medical Specialist and Technological Experts, during their visit impart their latest know-How's that go into improvements in the existing applications.

Experts from the industries, suppliers and guest, impart direct teaching and applications Hands-On-Equipment training, both simulated and Live-On-Site.

Facilities at the Institute:

- Infrastructure - Building, Lecture halls, Conference rooms, Instrumentation Labs, AV projection facilities, Learning Center.
- One dedicated instrumentation lab of medical and IT peripherals (ECG, Ophthalmoscope, Sending DICOM stations etc)
- Library Facilities. - Periodicals & Journals - Audio Visuals – Power Point Presentations – R & D Updates (Internal & External)

Eligibility Criteria

1) Certificate Course In “ Telemedicine Technologist” [CTT]

- **Medium of instruction: - English**
- B.Sc. / G.N.M. / or A.N.M. with 02 [Two] years experience.

2) Certificate Course In “Rural Ultra-Sonography Technologist” [eCRUST]

- **Medium Of Instruction : - English**
- B.Sc. / G.N.M. / or A.N.M. with 02 [Two] years experience.

3) Certificate Course In “Emergency Paramedic Technologist “[CEPT]

- **Medium Of Instruction : - Telugu**
- 10 + 2 (Bi.P.C. Only)

- **Age : Above 15 years for all the above mentioned courses.**
- Candidates who have completed their education in open / distance mode of education are also eligible for these courses.
- Candidate can apply for all the offered courses but in Separate Individual application for each course.
- **Candidate can opt and take admission in any one course only.**

TOTAL NO. OF SEATS IN EACH COURSES : 40 [FORTY ONLY]

(Including Management & Govt. Quota.)

Application Fee:

Application forms for admission can be collected on payment of Rs. 100/- (Rupees Hundred only) by demand draft in favour of D.M. & H.O., Hyderabad payable at Hyderabad.

- D.M.&H.O., Room No. 306 / 307, A.P. Paramedical Board Directorate of Medical Education Complex, Khoti, Hyderabad 500 001.
- Prescribed application form along with other details can be downloaded from the website: www.appmb.org or from www.hmri.in and pay the Application fee at the time of Registration.
- The last date for receipt of filled in application by the DM&HO shall be
- The application set, duly completed, has to reach the following address the last date of submission:

Health Management and Research Institute,
1-1-60/7A, 7B, 7C, Beacon Towers,
Musheerabad, R.T.C. 'X' Road, Hyderabad-500020.
- **The management does not take any responsibility of any application not reaching our office by due date.**

Course Fee Structure

Fee:	1. Govt. Sponsored Candidate	: Rs.12, 000/-
	Admission , Lab & Exam Fees	: Rs. 6,500/-
	Total Rs.18,500/- (Eighteen Thousand Five Hundred Only)	
	2. Management Sponsored Candidates	: Rs.36, 000/-
	Admission , Lab & Exam Fees	: Rs. 6,500/-
	Total Rs.42,500/- (Forty Two Thousand Five Hundred Only)	

Admission Counselling:

- 1) The eligible candidates will be admitted to various courses by centralised counselling.
- 2) The counselling schedule and venue will be informed to the eligible candidate.
- 3) The candidates desirous of seeking admission have to attend the counselling at their own expenses.
- 4) The candidate has to bring along all relevant original certificates and two sets of certified copies of testimonials required for submission.
- 5) All selected candidates will be subjected to a medical examination and only those found fit will be finally selected.

Selection Criteria

- 1) Candidates nominated by the State Government will be 16 [Sixteen] and
- 2) Candidates nominated by the Management will be 24 [Twenty Four] only.
- 3) The candidate must be Indian National. The minimum age shall be fifteen (15) years.
- 4) The A.P. Paramedical Board and HMRI reserve the right to conduct an Entrance Test, if felt necessary.
- 5) The A.P. Paramedical Board and HMRI reserve the right to cancel the admission at any stage if the particulars furnished by the candidate are found to be incorrect.
- 6) Application with incorrect or false information or false / incorrect certificate or relevant documents without proper attestation / certification would be rejected automatically.
- 7) Candidates shall not be permitted to change their social status or local candidature etc., after submission of application form.
- 8) Applications unaccompanied with the required certificates or applications with incomplete entries and ineligible applications will be rejected automatically.
- 9) Notwithstanding anything contained in this brochure, the rules and regulations which are in force in HMRI on the date of counselling will be applicable.
- 10) The Selection Committee consisting of the following Members shall make selections in Government quota seats (i.e. 40% of the total number of sanctioned seats) purely on merit on the basis of aggregate marks obtained by the candidates in relevant group subjects excluding the marks obtained in the language. In deciding such merit, candidates who pass under compartmental system will be placed after candidates who pass in single sitting.
 - a) Dist. Medical & Health Officer : Chairman cum- Convener
 - b) Superintendent of a Teaching hospital : Member
 - c) Principal of the concerned training Institution : Member
- 11) Dates and schedule of all the counselling would be released by the A.P. Paramedical Medical Board.
- 12) Selections shall be conducted by the Selection Committee to enable the paramedical Institutions to commence the classes from
- 13) Even after 3rd counselling, if any Government seats are left over, the managements are permitted to fill those seats automatically and the same is informed to the A.P. Para Medical Board immediately.
- 14) The Selection Committee shall verify the G.Os in which the seats were granted to the Para Medical Institutions and approve the selection lists of the Government and Management seats. The Selection Committee shall also verify the recognition granted to the Para Medical Institution by the Andhra Pradesh Para Medical Board and obtain a copy of the said recognition certificate.
- 15) The Management of the Institution shall admit the candidates allotted by the Selection Committee on the basis of ranking assigned to them against the Government seats. The maximum number of students to be admitted in each Para Medical Training course shall be the sanctioned in take capacity. Selection for the Management seats shall be made by the managements. However, the selection shall be based on merit in the qualifying examination.

Reservation

16) Rules of reservation shall be strictly followed while making selection for both Government quota seats and management seats. The seats reserved for Scheduled Tribes shall be made available to Scheduled castes and vice-versa, if qualified candidates are not available in the category. If qualified candidates belonging to Scheduled Castes and Scheduled tribes are not available, the left over seats reserved for them shall be treated as open competition seats and shall be filled up with the candidates of general pool.

a) Local and Non-local Candidates:

Admission to the 85% of the available seats in every course shall be reserved in favour of the local candidates in relation to the local area in respect to community and other reservation in force.

b) The reservations meant for local candidates shall be followed as prescribed in the Andhra Pradesh Educations Institutions (Regulations of Admissions) Order, 1974, as amended from time to time.

c) The remaining 15% the seats which are open to local and non-local shall be filled up subject to similar reservation as applicable to 85% local candidates.

d) Following is the schedule of reservation of seats for SC, ST and Other Backward categories.

I) Schedule Caste	:	15 % [Fifteen Percent Only]
II) Scheduled Tribe	:	06% [Six Percent Only]
III) Backward Categories	:	
1. Group A	:	07% [Seven Percent Only]
2. Group B	:	10% [Ten Percent Only]
3. Group C	:	01% [One Percent Only]
4. Group D	:	07% [Seven Percent Only]
5. Group E	:	04% (Subject to the court decision)

(For proforma of community Nativity and Date of Birth Certificate for SC, ST, BC candidates, please see G.O. Ms/No.58, Social Welfare (J) Dept, dated 12-5-1997)

e) If sufficient number of candidates are not available to fill up the seats reserved for S.C.s they shall be filled up by suitable candidate from S.T.s and vice-versa. If the required number of candidates are not available for filling the quota of seats reserved for S.C.s & S.T.s they may be filled up by candidates from the general pool

f) Whenever applicable a minimum of 33% of the available seats will be allotted to women candidates from each category i.e. S.C., S.T. & B.C. - A, B, C, D.

g) SPECIAL CATAGORY SEATS:-

I) Sports / N.C.C. / N.S.S.: one seat for every block of 40 seats taking the course of study as one unit shall be reserved for Sports / N.C.C. / N.S.S categories in each of the courses.

II) Physically Handicapped: one seat for every block of 40 seats taking course of study as one unit for physically handicapped candidates.

III) Widow / Children of Armed Forces Personnel etc: one seat for every block of 40 seats taking the course of study as one unit, for the children of Ex-Serviceman, for each course.

DOCUMENTS TO BE SUBMITTED ALONG WITH THE APPLICATION FORM:

- 1) Date of Birth certificate (SSC or its equivalent pass certificate).
- 2) Memorandum of the marks and pass certificate of the qualifying examination. (SSC / Intermediate / Graduation or its equivalent pass certificate).
- 3) Certificate of study from 6TH class to SSC / Intermediate.
- 4) Duly filled application.**
- 5) Demand Draft for Rs.100/- (Rupees One Hundred only), towards Registration fee, drawn from any Nationalized Bank in favour of D.M&H.O. payable at Hyderabad.
- 6) The SC / ST / BC candidates should furnish a Copy of Caste Certificate issued by the competent authority as proof of their claims for reservation. The prescribed community certificate signed by the competent authority not below the rank of M.R.O.
- 7) Candidates seeking admission under special category must submit the attested Xerox copies of relevant certificates. (NCC, NSS, Sports, CAP, and Physically Handicapped)
- 8) Migration Certificates of the students admitted from other than Andhra Pradesh State should be obtained otherwise their applications will not be accepted by the Selection Committee.
- 9) Transfer Certificate (T.C.).

Application Filling Instruction:

READ THE INSTRUCTIONS CAREFULLY BEFORE FILLING THE APPLICATION.

- 1) Duly filled application form, along with the relevant certified copies and application fees should reach, on or before the prescribed date, to HMRI office.
- 2) Application shall be filled in **English or Telugu** only.
- 3) Read all the Instructions, rules and regulations before filling in the application.
- 4) The candidate is required to fill in the application form carefully and legibly in his or her own handwriting. [Use BLOCK LETTERS wherever possible].

- 5) Ensure that you fulfil all **ELIGIBILITY CONDITIONS**.
- 6) Should have passed the qualifying examination.
- 7) The candidates are required to submit all the relevant certified copies of certificates and pay the required fee by Demand Draft payable to DM&HO, Hyderabad.
- 8) Once admission procedure is completed the fee will not be refunded under any circumstances.
- 9) The candidate will be held personally responsible for any incorrect entry.
- 10) Application for Admission to the applied Course would not be processed or admitted under any circumstances unless:
 - The application is completely filled with all the required information
 - All the relevant certified certificates are submitted and
 - The required registration fee is paid.
- 11) The management does not take any responsibility of any application not reaching our office by due date.

General Information

- Timings** : Training will be conducted 9 AM to 5 PM on all working days Monday to Saturday.
- Examinations** : Regular Internal Assessments would be conducted after the completion of each chapter.
At the end of the course, Final examination will be conducted by A.P. Paramedical Board and successful candidates would be awarded certificates.
- Hands-On-Experience** : Field and clinical work would be in different location in or outside the city, anywhere in Andhra Pradesh.
- Attendance** : 75 % [Seventy Five Percent] attendance is compulsory to be eligible to appear for the examination.

The authority, on the specific recommendation of the Principal/ Head of the Department may condone the deficiency in attendance to the extent of 10% on medical grounds subject to production of Medical Certificate.

- **Accommodation** : Management does not take the responsibility for any accommodation for Local / Non-Local. Candidates have to make their own arrangement.

The Application cum Prospectus can be downloaded from www.hmri.in or from www.appmb.org and the Application fee paid along with Registration fee.

Duly filled application form, along with the relevant certified / attested copies and fees should reach, HMRI on or before the prescribed date.

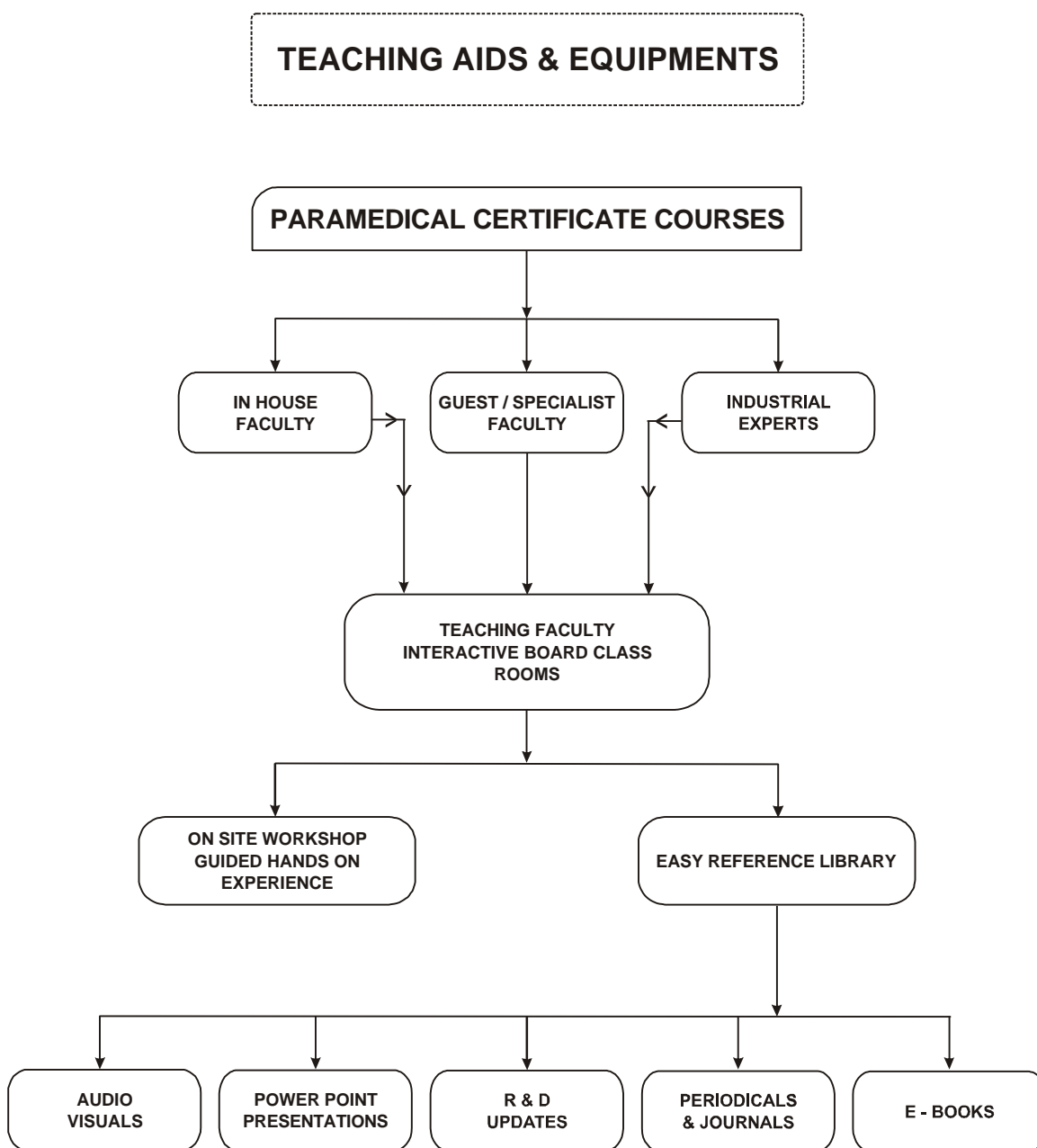
Important Information:

Last date for receipt of completed application form : _____

Last Date for submitting the application with Late Fees : _____

The classes for the course will commence on : _____

This booklet contains Complete Information - The General Rules, Regulations and Instructions to the candidate to various Courses offered By Health Management & Research Institute [HMRI] approved by A.P. Paramedic Medical Board.



Certificate Course for Telemedicine Technologist [CTT]

The Need

The term **Telemedicine**, in short refers to the utilization of telecommunication technology for medical diagnosis, treatment and patient care placed at remote distant location.

Maximum benefits derived by the Telemedicine application go to the beneficiary stationed at remote rural isolated regions and communities. Telemedicine application not only saves more than 80% of the cost to the beneficiary, but also saves a lot of valuable time and renders the essential life saving Medical Diagnosis and treatment promptly.

Telemedicine processes would require a trained person at both ends. But there is a scarcity of qualified and required manpower especially in the rural area. The need for their service would raise the demand for the usage of telemedicine services in the immediate future. This would be much more useful in the areas of emergency and critical care, and monitoring of patients.

Requirement

Fundamental Aspects of the Course focus:

- Theoretical and practical training in Fundamentals of Computers and Network Communications (**IT peripherals**) and to the specific technological application of its use in the Medical sector.
- Hands-on Training on **Medical peripherals** like ECG, ECHO, X-Ray digitizer, Vital Sign Monitors, Ultrasound Scanner. This includes safe handling of these peripherals, installations, basics of trouble shooting, image acquisition and data transfer. High priority would be given to the participation in specific research and development projects.
- Hands-on field training in running a typical **Clinical** Rural Telemedicine Center.

Livelihood Potential

This program offers new livelihood opportunity for graduates from rural area and an employment niche for women and a potential of 10,000 rural area jobs in next 2-3 years.

Effective Utilization of the Trained Technologists after completion of the course:

- Effective disease monitoring using trained and skilled technologists, thus enhancing back bone of Telemedicine program.
- This approach will enable purposeful utilization of technology, hence a high fidelity health care platform.
- Need based Telemedicine with Tele consult and Tele monitoring modules is effectively possible.

- Tele Radiology is made possible with trained Technologist digitizing the X ray films from an Area Hospital or a DH
- Tele Cardiology, Tele ophthalmology and tele dermatology can be effectively implemented.
- Need based Telemedicine with Tele consult and Tele monitoring modules is effectively possible.
- Tele Radiology is made possible with trained Technologist digitizing the X ray films from an Area Hospital or a DH
- Tele cardiology, Tele ophthalmology and tele dermatology can be effectively implemented.

Certificate Course for Telemedicine Technologist [CTT]

Course Syllabus: Three Modules.

Module A:

- Introduction to telemedicine
- Telemedicine in the universe
- Telemedicine in India
- Computers and networking
- Data Communications
- Internet
- Video conferencing and multimedia
- Medical Data (Acquisition, properties, Transmission standards, Security, Compression, Transfer)
- Hospital Information System [HIS]
- Electronic Health Record EHR
- Digital Imaging Communications In Medicine [DICOM]
- Image Compression and Standards.
- Image Archival

Module B:

- Instrumentation and hands on training (X-Ray digitization, ECG, VSM, Spirometry, Ultrasound and Echo, Ophthalmoscope Dermoscope Videoconference)

Module C:

- Clinical Telemedicine
- Mainstream Health Sector Services
- General practitioners and Primary Care Services
- Monitoring of conditions
- Minor injuries and emergencies
- Better coordination with secondary care
- Acute Hospital And Secondary Care Services
- Tele-Radiology
- Tele-Dermatology
- Tele-Neurophysiology
- Tele-Cardiology
- Tele-Psychiatry
- Tele-Ophthalmology
- Tele-Pathology
- Tele-Obstetrics
- Tele-Oncology
- Telemedicine Law
- Patient communications
- Structured reporting
- Hands on training at sending and receiving station

Certificate Course for Rural Ultra Sonography Technologist (e - CRUST)

The Need & Present Status:

Ultrasonography is presently a widely accepted diagnostic procedure in various specialties of medical - obstetric practice for early identification and detection of maternal and fetal abnormalities and pregnancy monitoring. The procedure is found to be relatively cheap; harmless; non invasive; and easily acceptable by the patients and in many instances confirms diagnosis. **The equipment is relatively cheap, and the recurring and maintenance costs are inexpensive. The training required for a qualified medical provider is also relatively of short duration.**

There are around 2000 Ultrasonography scanning centers in the state of Andhra Pradesh for a population of 8 crore. More than 75% of the populations living in about 80000 rural areas do not have free access to the facility nearer to their habitations. Even those from rural areas who access the urban facility they do so at considerable cost, time and inconvenience specially the pregnant women. There is also a widespread understandable and real apprehension amongst administrators and policy makers about its misuse in view of the prevailing adverse sex ratios.

Present Procedure of Scanning

- The present number of radiologist or obstetrician available in the state would not be sufficient to conduct scan for all pregnant women, since the radiologist have various other functions. This diagnostic procedure is one of their many other functions.
- A trained technologist can perform the procedure in a remote area and the images and screens could be forwarded to the radiologist or obstetrician for diagnosis. Such procedure would enable a pregnant woman in most remote and unreachable areas to have the advantage of scanning facility and advice. The scanning would help especially in the critical conditions in pregnancy.

Livelihood Potential

This program offers new livelihood opportunity for rural area graduates and an employment for women science graduates and a potential of 10,000 rural area jobs in next 2-3 years.

Hence, there is requirement immediately for such trained Sonography Technologist.

Performance Requirement of Rural Sonography Technologists:

- To fill the lacuna of skilled personnel in rural AP by trained Technologist who collects ultrasound data ethically from pregnant women in three trimesters of pregnancy and transfer data to Mission Control Center of HMRI for interpretation and risk estimation.
- To effectively implement the Fixed Day Health Services for pregnancy monitoring by ultrasound imaging in rural AP.

Likely Impact on health care by the Technologists after completion of the course:

- Effective pregnancy monitoring using trained and skilled Technologists for performing scans thus ensures significant reduction of maternal and infant mortality rates.
- This approach will enable purposeful utilization of technology, hence a high fidelity health care platform.

Technologists Performance Capacity after completion of the course:

- Rural Ultra Sonography Technologist (HMRI) :
 - o Performs the scan
 - o Records the images and transfers to Mission Control Centre where professionally qualified Ultra Sonologist reviews the results and gives the report
 - o Does not interpret or report the results (lesser chance of malpractice)

Certificate Course for Rural Ultra Sonography Technologist (e -CRUST)

Course Syllabus

Module: A

Physics And Principles Of Ultrasound

- Ultrasound transducers
- Ultrasound instrumentation
- Quality assurance / quality control of equipment
- Basics of Abdominal and Pelvic anatomy :Tips
- Protocols in clinical Ultrasound Imaging
- Basics of Computers and Internet :key points
- Basics of Image processing : Tips

Module: B

Abdominal scan Techniques

- Liver and Gall Bladder normal anatomy
- Kidneys normal anatomy
- Spleen, Pancreas normal anatomy
- Peritoneal cavity
- Urinary bladder: normal anatomy and physiology
- Prostate: US normal anatomy
- Uterus and Ovaries normal anatomy

Module: C

- Liver Module
- Hepatobiliary system
- Pancreas, Spleen, Peritoneum
- Gastrointestinal tract: normal gut ultrasound
- Acute appendicitis, diverticulitis, peritoneal cavity: free air
- Kidney Ureter Bladder (KUB) Module

Female Pelvis Module - Prostate Module - Testis Module - Breast Module

Module: D

Hands on Clinical Scanning Under supervision

By the end of each level trainee should be able to scan most of the clinical scenarios listed below in each training category:-

- Gallbladder (gallstones/acute cholecystitis)
- Liver (masses)
- Kidney (hydronephrosis, stones)
- Transabdominal / transvaginal pelvis (mass/cyst/free fluid)
- Lower extremity (deep vein thrombosis)
- Abdominal aorta (aneurysm)
- Pleural effusion and ascites
- Thyroid nodules
- Pancreas (pancreatic, mass)
- Biliary (common bile duct, biliary ductal dilation)
- Abdominal mass/adenopathy
- Kidney (mass/cyst)
- Basic Doppler (portal vein, pseudo aneurysm, arteriovenous fistula)
- Adnexal mass (ovarian and non-ovarian)
- Testis (pain and masses)

Module E:

Internship at FDHS mobiles and Tele Sonography centers

- Hands-on training under supervision.
- Recording of images and data transfer.

Certificate Course for Emergency Paramedic Technologists

[CEPT]

Need

The time between a medical emergency **event** and initial stabilization is the vital factor for the patient survival, the first 30 – 60 minutes being the most critical. Thus has evolved the concept of “Golden Hour” in emergency medical care.

The **Golden hour** concept envisages that any medical emergency shall have better chances of survival and lesser morbidity or prognosis if victim can be reached to an appropriate health care centre within an hour, at the same time ensuring that the condition of the victim does not deteriorate en route. This means that there shall be pre hospital care at the site of occurrence and en route to hospital.

Requirement & Objective: Emergency Paramedic Course

- There are about around 3500 hospitals and nursing homes in the state of AP and about 1500 ambulances registered in the state and the requirement of emergency paramedic to man these hospitals and ambulances would be 15000 to work in three shifts.
- To train adequate number of emergency paramedic and to make their services available in all ambulances, in all hospitals across the state.
- These paramedics to be adequately trained with knowledge and skills for stabilizing patients and providing respiratory and cardiac support and rehydration, arrest of bleeding, improving the comfort and other routine care required in emergency situations.

Livelihood Potential:

This program offers new livelihood opportunities for even the under-graduates from rural areas.

Performance Capacity of Emergency Paramedic Technologist after completion of the course:

Envisages preparedness and availability of

1. Quick **Communication System** to inform and seek help
2. The availability of a **Well - Equipped - Ambulance**
3. **First Responders:** A high degree of awareness in the community on emergency events and first aid. (First responder's with knowledge of Do's & Don'ts)
4. A trained **Emergency Paramedic** in the vehicle providing **Pre Hospital Care**.

5. All hospitals in the vicinity with basic equipment and skills to at least **stabilize** the condition of the patient before moving for any specific treatment.
6. A structured program to provide **Specific Treatment & Care** for the victims based on Clinical Priority.

Requirements yet to be addressed:

- 1) **First responder:** A massive program to sensitize the general public on CPR and first aid is yet to be launched
- 2) **Emergency Paramedic:** However the issue of availability of trained, certified and registered Emergency Paramedic is yet to be addressed- The present EMTs working in the ambulances are partially trained and quickly placed in the ambulances. Their skills need to be enhanced, validated and certified to provide better care. Such training would also address the medico legal aspects of emergency care.
- 3) **Stabilization facilities:** All hospitals are to be equipped and all staff to be trained

Performance capacity after completion of course

- 1) History Taking
- 2) Triage
- 3) Respiratory Care
- 4) Circulatory Support
- 5) CPR
- 6) Immobilization
- 7) Administration of IM
- 8) Administration of IV
- 9) Re-Hydration
- 10) Dressing Of Wounds
- 11) Arrest Of Bleeding
- 12) Positioning Of Patient
- 13) Lifting And Transport

- 14) Safety Of Patient
- 15) Securing The Site
- 16) Sanitizing The Site
- 17) Waste Disposal
- 18) Care Of Equipment
- 19) PCR Form Filling
- 20) Reports
- 21) Examination and Validation through an independent and autonomous body.

Certificate Course for Emergency Paramedic Technologists [CEPT]

The course is designed in the following modules

- 1) Preparatory course of 8 weeks (200 theory and 100 practical classes)
- 2) Basic EMT Course of 12 weeks (240 theory and 120 practical classes)
- 3) Hospital/ ambulance / field Internship of 8 weeks (300 Hrs)

Course Syllabus:

Skill sets of Basic Emergency Paramedic:

- 1) Basic understanding of the Anatomy and Physiology of Human Body Systems
- 2) Identification of Emergency Medical Conditions
- 3) Triage
- 4) CPR
- 5) Use of Air way and Ambu Bag
- 6) Arrest of bleeding
- 7) IV drip management
- 8) Immobilization of parts
- 9) Immediate treatment of anaphylaxis.
- 10) Restricted use of medication under direct or virtual supervision of Medical Officers.



HEALTH MANAGEMENT & RESEARCH INSTITUTE

Beacon Towers, # 1-1-60/7, 7A, 7B, & 7C, Bakaram,

Near R.T.C 'X' Road, Hyderabad 20.