**Department of Community Medicine**

**PRACTICAL NOTE BOOK**

**Day Visits Reports**

**Batch: SWMC – VIII**

**Reg. No: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Session: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Code No.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Sylhet Women’s Medical College**

**Mirboxtula, Sylhet**

**DAY VISITS REPORT**

Institutes

1. Chest Disease Hospital, Sylhet
2. Jalalabad Disabled Rehabilitation Center and Hospital, Sylhet.
3. Ashar Alo Society (ASS), Sylhet

**Chest Disease Hospital**

We the 4th year students (SWMC- VIII) of Sylhet Women’s Medical College have visited Sylhet Chest Disease Hospital on 14th January, 2016 under the guidance of department of Community Medicine. Chest disease Hospital, Sylhet is a specialized hospital in Sylhet Sadar at Shahi Eidgah and the west of MC College. The Hospital was established in the year 1952 with the objective to provide treatment of tubercular and non-tubercular chest diseases. Initially it was established only to treat tubercular diseases, later its service was extended to include other non-tubercular chest diseases. There are two separate buildings, one for indoor services and another for outdoor services and diagnostic services. The Hospital is headed by Medical Officer Dr. Jakaria Mahmud.

Date of Visit: 14th January, 2016

Name of Organization: Chest Disease Hospital, Sylhet

Location: East Shahi Eidgah, Sylhet.

Year of establishment: 1952

**Objectives of visiting Chest Disease Hospital:**

1. To see the service rendered by Chest Disease Hospital
2. To see the management of cases of tubercular and non-tubercular chest diseases.
3. To see some cases of tuberculosis which are infrequent in general hospitals.
4. Staffing pattern and infrastructure of the Hospital
5. Protective measures of the employee, if any.

**Infrastructure:**

The hospital has an area of 330 Bighas.

It has two separate buildings. One for the indoor services and the other for outdoor & diagnostic services.

**Indoor patient department:**

Number of bed: 100

Bed occupancy on the day of visit: 46 [Male: 35, Female: 11]

Outdoor patient department: On an average 40 patients per day.

Services provision: Outdoor (OPD)

Indoor (IPD)

Diagnostic services

**Activities of the organization:**

1. To ensure effective chemotherapy to all patients free of cost.
2. Promotion of early detection of sputum positive tuberculosis cases.

**Staffing of Hospital:**

|  |  |  |
| --- | --- | --- |
| **SI No.** | **Designation** | **Number** |
| 01 | Senior Consultant | 01 |
| 02 | Medical Officer | 03 |
| 03 | Head Clark | 01 |
| 04 | Assistant Clark & typist | 02 |
| 05 | Senior Staff Nurse | 14 |
| 06 | Staff Nurse | 2 |
| 07 | Pharmacist | 1 |
| 08 | Lab technician | 1 |
| 09 | Medical Radiographer | 1 |
| 10 | Lab attendant | 1 |
| 11 | Cook | 03 |
| 12 | MLSS | 05 |

**Personal observation:**

On visit my observation are as follows:

1. It is 100-bedded hospital and all the beds are occupied with patients
2. Cleanliness of the hospital is average
3. Working environment is satisfactory
4. Lack of adequate manpower.

**Disease review: Tuberculosis**

Tuberculosis or TB (short for Tubercle Bacillus) is a common and often deadly infectious disease caused by mycobacteria, usually Mycobacterium tuberculosis in humans. Tuberculosis usually attacks the lungs but can also affect other parts of the body. It is spread through the air, when people who have the disease cough, sneeze or spit. Most infections in humans result in asymptomatic, latent infection, and about one in ten latent infections eventually progresses to active disease, which if left untreated, kills more than 50% of the victims.

* **Global scenario:** With 1.7 million deaths, 9.2 million new active cases per year and nearly two billion people harboring latent infection.
* **Bangladesh scenario:**In 2006, Bangladesh ranked 6th on the list of 22 highest TB countries in the world. According to WHO, in 2006, apprx. 391 cases per 100,000 population. Among these, apprx. 101 per 100,000 were infectious cases.
* **Estimated incidence rate: Sputum +ve :** 101/1,00,000/year
* **Estimated prevalence rate:** 391/100,000 population
* **Estimated mortality:** 45/1,00,000/year

**Pathology and pathogenesis:**

M. bovis infection arises from drinking non-sterilized milk from infected cows; M. tuberculosis is spread by the inhalation of aerosolized droplet nuclei from other infected patients.

The smallest particle (1-5 µm) enter the periphery of lung and are engulfed by macrophages

CD4+t T lymphocytes produce an array of cytokines, including interferon-gamma (IFN-γ)

Recruitment of monocytes, formation of granulomas limiting the replication and spread of the organism, appearance of primary lesion in the lung (‘Ghon focus’)

The combination of a primary lesion and regional lymph node involvement is termed the ‘Ghon complex’.

**Secondary tuberculosis:**

**Cause:** The bacilli spread (either by lymph node or blood) before immunity is established, secondary foci may be established in other organs.

**Sites:**

* Lymph node
* Serous membranes
* Meninges
* Bones
* Liver
* Kidneys
* Lungs

**Factors increasing the risk of TB:**

* Age (Children>Young adults<Elderly)
* First generation immigrants from high prevalence countries
* Close contacts of patients with smear-positive pulmonary tuberculosis
* Overcrowding prisons, collective dormitories
* Chest radiographic evidence of self-healed tuberculosis
* Primary infection <1yr previously
* Immunosuppression- HIV, Persons taking Immunosuppressive agents Infliximab, Rituximab, MTX, high dose corticosteroids, Cytotoxic agents
* Malignancy (esp. Lymphomas and Leukemia)
* Type I diabetes mellitus
* Chronic renal failure
* Silicosis
* Gastrointestinal diseases associated with malnutrition

**Primary Tuberculosis:**

**Cause:**

Primary TB refers to the infection of a previously uninfected (tuberculin negative) individual. A few patients develop a self-limiting febrile illness but clinical disease only occurs if there is a hypersensitivity reaction or progressive infection.

**Clinical presentation of primary pulmonary tuberculosis:**

* Chronic cough, often with haemoptysis
* Pyrexia of unknown origin (PUO)
* Unresolved pneumonia
* Exudative pleural effusion
* Asymptomatic (diagnosis on Chest X-ray)
* Weight loss, general debility
* Spontaneous pneumothorax

**Milliary TB:**

**Cause:** Blood-borne dissemination gives to milliary TB.

**Clinical Features:**

* 2-3 weeks of fever
* Night sweats
* Anorexia
* Weight loss
* Dry cough
* Hepatosplenomegaly may be present
* Presence of headache may indicate co-existent tuberculous meningitis.

**X-ray findings:**

* Milliary deposits appear as 1-3 mm diameter nodules, which are uniform in size and uniformly distributed.

**Chronic complications of Pulmonary TB:**

**Pulmonary**

* Massive haemoptysis
* Cor-pulmonale
* Pneumothorax
* Pleural calcification
* Bronchiectasis
* Bronchopleural fistula

**Non-pulmonary**

* Laryngitis
* Enteritis
* Anorectal fistula
* Amyloidosis
* Poncet’s polyarthritis

**Diagnosis of TB:**

**Specimen**

**Respiratory**

* Sputum (Induced with nebulized hypertonic saline if not expectorating)
* Gastric washing (mainly used for children)
* Bronchoalveolar lavage
* Transbronchial biopsy

**Non-respiratory**

* Fluid examination (Cerebrospinal fluid, Ascitic, Pleural, Pericardial, Joint)
* Tissue biopsy (from affected site, also bone marrow/ liver may be diagnostic in patients with disseminated disease)

**Diagnostic tests:**

* Circumstantial (ESR, CRP, anaemia, etc.)
* Tuberculin skin tests (Low sensitivity/specificity; useful only in primary and deep-seated infection)
* Stain:
  + Zeihl-Neelsen
  + Auramine Fluorescence
* Nucleic acid amplification
* Culture
  + Solid (Lowenstein-Jensen, Middlebrook)
  + Liquid (eg: BACTEC)
* Response to empirical antituberculous drugs (usually seen after 5-10 days)

**Control and prevention**

**BCG (Calmette-Guérin bacillus)** is a live attenuated vaccine used to initiate protective immunity and prevent the dissemination of MTB in an infected host. Vaccination policies vary worldwide according to epidemiology of the disease status and health-care resources.

**Multidrug resistant TB**

Multidrug resistant tuberculosis (MDR-TB) is defined as resistance to both Isoniazid and Rifampicin, with or without resistance to any other antitubercular drugs.

**Drug dose and combination:**

* Rifampicin: 150mg
* Isoniazid: 75mg
* Ethambutol: 275mg
* Pyrazinamide: 400mg
* 2 choiceof combination: 4FDC and 2FD

**Main adverse reactions of First-line antitubercular drugs:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Drugs** | **Isoniazid** | **Rifampicin** | **Pyrazinamide** | **Streptomycin** | **Ethambutol** |
| Major adverse reactions | * Peripheral neuropathy * Hepatitis | * Hepatitis * Gastrointestinal disturbances | * Hepatitis * Gout | * 8thnerve damage | * Retrobulbar neuritis |

**Prevention and control of TB in Bangladesh**

**The National TB control Program (NTP)**

**Goals and objectives of the National TB control Program (NTP):**

The overall goals of the NTP is to reduce morbidity, mortality and transmission of TB until the disease is no longer a public health problem.

The objectives are to detect 70% of new smear-positive pulmonary TB cases and cure at least 85% of them by the year 2005 and to be maintained thereafter to reach the MDG by 2015.

**DOTS Strategy:**

The NTP adopted the WHO recommended strategy of Directly Observed Treatment Short-course (DOTS) in 1993. The DOTS strategy consists of 5 components.

* Political commitment
* Diagnosis by direct microscopy
* Directly Observed Treatment(DOTS)
* Uninterrupted supply of drugs
* Standard recording and monitoring of detection and treatment results.

**Achievements**

Since the introduction of the NTP and its partners have achieved satisfactory treatment results in new smear-positive patients, 84% treatment success among the patients detected during 2001. However, case detection has remained under 35%. During 2004 the detection rate of new smear-positive patients was 46%. During 2005 the detection rate was 61% and the treatment success rate was 89%.

**Conclusion**

The visit to the above institute was very much helpful to us. Although for obvious limitation it is very difficult to draw a true picture of what part of total population has been suffering from a life threatening disease like leprosy, in spite of limited resources the organization has been playing a very important role in controlling and preventing tuberculosis which is of course appreciable.

**JALALABAD DISABLED REHABILITATION CENTER & HOSPITAL, SYLHET.**

Bangladesh is the most densely populated country with a population of about 150 million of which 75% live in the villages. Besides other characteristics of the developing countries of health sector of Bangladesh also lacks and modern facilities. It is estimated by WHO that about 10% of population suffer from physical and mental disability resulting from various disease and accident. Most often this huge population cannot afford to avail medical treatment and rehabilitation facilities. So far rehabilitation services are concerned facilities very limited as there is only one centre in Dhaka at Savar. Jalalabad Disabled Rehabilitation Centre & Hospital, Sylhet is only one functioning rehabilitation centre which plays very vital role for the disabled. We the 4th year MBBS students (SWMC-V) of Sylhet Women’s Medical College, have visited Jalalabad Disabled Rehabilitation Centre & Hospital, Sylhet Group wise on 9th, 10th& 11th March,2014 under the guidance of department of Community Medicine. Jalalabad Disabled Rehabilitation Centre & Hospital is a specialized hospital in Sylhet Sadar at Kumarpara opposite to Hazrat Manikpir Saheb (Rahmatulla- he Alaihe) graveyard. The hospital was established in the year of 1996 with a small outpatient clinic rental tin shed house for helping the physically challenged underprivileged people of all ages. It has been a time demanding, brilliant effort from the Rotary Club of Jalalabad under Rotary International District 3280, Bangladesh. With whole hearted effort from the authority subsequently has grown in few years’ time into a big, fledged specialized hospital in its own multistoried building. It serves total services to the disabled headed by Dr.Sydur Rahman.

* Day of visit : 20 January 2016
* Name of organization : Jalalabad Disabled Rehabilitation Centre & Hospital
* Location : Kumarpara, Manikpir Saheb Road,Sylhet.
* Year of establishment :1996

**Objectives of visiting Jalalabad Disabled Rehabilitation Centre & Hospital:**

1. To observe the services rendered by Jalalabad Disabled Rehabilitation Centre & Hospital
2. To gain practical knowledge regarding rehabilitation services provide to the disabled persons.
3. To see some cases of disabled person and their management as these services are not provided by general hospitals in full.
4. Infrastructure, Machines &equipments, Staffing pattern of a rehabilitation centre for the disabled.

**Aims & Objectives:**

* To utilize existing capacity of handicapped patient up to optimum level
* To conduct physio and occupational training courses of various duration & grades in order to develop skilled men power.
* To set up linkage with international and communities.

**Board of Management:**

1. Chairman - 01
2. Vice-chairman - 01
3. Secretary - 01
4. Additional Secretary --01
5. Directors - 13

**Employees:**

|  |  |  |
| --- | --- | --- |
| **SL.No** | **Post** | **Number** |
| 1 | Senior Consultant Neurology |  |
| 2 | Consultant Physiotherapist (Rehab) |  |
| 3 | Occupational Physiotherapist |  |
| 4 | Clinical Physiotherapist |  |
| 5 | Medical Officer |  |
| 6 | Physiotherapy Technologist |  |
| 7 | Physiotherapy Assistant |  |
| 8 | Nurses |  |
| 9 | Receptionist |  |
| 10 | Manager |  |
| 11 | Care Taker |  |
| 12 | Ward Assistant |  |
| 13 | Aya |  |
| 14 | Guard |  |
| **Limb Centre** | | |
| 15 | Chief Technologist of Limb & Breech |  |
| 16 | Assistant Technologist of Limb & Breech |  |
| **Total** |  | **50** |

**Available Services:**

**Outdoor Service:**

* Number of Doctors : 03
* Average daily Patients: 100
* Day: Saturday – Thursday
* Time: 9.00 am – 5.00pm
* Fee;30 taka

**Indoor Services:**

* Number of bed :33

(Cabin – 16,

Ward (17) – Male 8, Female & Pediatrics - 9

**Charge:**

Cabin: 300 – 400 Taka

Ward Bed: 150 taka

**Free for patients certified as poor by the concerned Ward Commissioner/Chairman**

* Number of patients taken services from the hospital in the last year (2012)

**Workshop:**Following instruments are made for external support of patients

**One Male Exercise therapeutic Unit: Charge 150 tk but free for poor**

|  |  |
| --- | --- |
| **Instrument** | **Number** |
| Static Bicycle | 1 |
| Walker | 1 |
| Bed | 4 |
| Shoulder Wheel | 1 |

**One Male Exercise therapeutic Unit: Charge 150 tk but free for poor**

|  |  |
| --- | --- |
| **Instrument** | **Number** |
| Ball | 1 |
| Walker | 1 |
| Special Chair for Child | 1 |
| Bed | 3 |

**Available Instrument**

|  |  |  |
| --- | --- | --- |
| **Sl. No** | **Name** | **Number** |
| 1 | Short wave diathermy | 1 |
| 2 | Micro computed traction unit | 3 |
| 3 | Ultrasound Unit | 2 |
| 4 | Electrical Stimulator | 2 |
| 5 | Paraffin Wax | 1 |
| 6 | Tranceelectrica nerve stimulator | 2 |

**Common Cases:**

1. Neurologic Case

Stroke

Cerebral Palsy

Spinal Cord Injury

Bell’s palsy

1. Orthopaedic Cases

Frozen shoulder

Osteoarthritis

Intervertebral disc prolapsed

**Special Facilities**

* Doctors are available round clock – 24 hours a day
* Generator Service is available
* Kitchen Facilities

**Limitation**

* Inadequate Accommodation
* Insufficient Fund
* Lack of Ambulance Service
* Lack of Children exercise therapeutic unit

**Future Plan**

* Establishment of another large rehabilitation hospital within 10 km of City.
* Establishment of Blood Bank, Limb Centre

**Conclusion**

Jalalabad Disabled Rehabilitation Centre is an achievement of Rotary Club of Jalalabad. They Render service for humanity through treatment and rehabilitation. We believe that such landmark of charitable project will inspire to do something for mankind in our future life.

**Ashar Alo Society (AAS)**

A community based non Govt. organization, working for those infected with and affected by HIV & AIDS, for improving the quality of life, ensuring rights & services, reducing stigma & discrimination, encouraging greater involvement, & contributing to HIV prevention in Bangladesh.

Day of Visits: 18th January 2016

Location: Upashahor, Sylhet

**Existing Donors**

* Family Health International (FHI) / USAID
* Save the Children USA/ NASP (GFATM)
* CAFOD
* Tides Foundation
* Action Aid Bangladesh
* Manusher jonno Foundation/ HASAB

**Goal of the Project**

To support people living with HIV/ AIDS, as well as affected family members, to improve their quality of life, support HIV prevention efforts & reduce stigma & discrimination.

**Service Coverage of AAS**

**Dhaka Head office**

**Project office Project office**

**Chittagong**

**Jessore**

**Sylhet**

**Rajshahi**

**Khulna**

**Member of AAS**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Area | Male | Female | Child | TG | Total |
| Dhaka | 183 | 96 | 5 | 3 | 287 |
| Sylhet | 199 | 81 | 19 | 1 | 300 |
| Ctg | 110 | 47 | 12 | 0 | 169 |
| Total | 492 | 224 | 36 | 4 | 756 |
| Death | 182 | 40 | 7 | 1 | 230 |
| Alive | 310 | 184 | 29 | 3 | 526 |

**Activity under BAP in Sylhet**

* Counseling
* VCT Services
* Ols Management
* Referral Support
* Social Day
* Networking Visit
* Information Sharing Session with MARP
* Training for PLHA
* Home Visits
* Advocacy
* Courtyard Meeting
* Community Sensitization Meeting

**BAP Achievement**

|  |  |  |
| --- | --- | --- |
| **Activities** | **BAP Achievement** | **Sylhet** |
| On- going Counseling | 1551 | 422 |
| Partner Counseling | 450 | 128 |
| Nutritional Counseling | 638 | 326 |
| Caregiver Counseling | 459 | 219 |
| Family Counseling | 580 | 234 |
| ARV\* Counseling | 283 | 251 |
| HIV CT\*\* Services in Sylhet |  | 436(97 positive) |
| Out - patient Care | 8482 times | 4282 |
| Pathological test | 1685 | 396 |
| Inpatient Services | 882 | 226 |
| Combined Members Day | 3 | 0 |
| Monthly Members Day | Achieved every month | 102 batches |
| Exposure Visit from others organization | 36 | 09 |
| Information Sharing Session with MARP\*\*\* | 196 | 07 |
| Peer Education Training | 13 | 01 |
| Positive living Training | 10 | 03 |
| Caregiver Training | 16 | 04 |
| Home Visit | 93 | 22 |
| Courtyard Meeting | 28 | 04 |
| Community Sensitization Meeting | 32 | 08 |
| Condom Distribution | 53520 | 23731 |

\*ARV= Antiretroviral, \*\* HIV CT service = HIV Collecticut service, \*\*\* MARP= Mining and rehabilitation program.

**Modhumita Project**

**Activities:**

* Conduct Weekly Social Day
* Provide Out- patient Care
* Develop Linkages for Inpatient & diagnostic service referral
* Provide Counseling (Ongoing, Family, Partner, Care giver, ARV, Nutritional Counseling )
* Provide HIV Counseling & Testing services in Sylhet IHC.
* Networking with GO & NGOs, DiagnosisCenter, Hospital & others VCT Centers.
* Information Sharing Session
* Day Observation
* Provide quality TB services
* Provide prevention parent Transfer to Child (PPTCT) Services

**Overall Challenges**

* Limited & High cost testing facilities
* Day by Day number of PLHIV are increasing.
* Lack of Access for Inpatient Services
* No home base care services
* Limited TB Test facilities (FNAC)
* No Financial Support for PPTCT.
* No Sufficient support for outpatient services.
* Develop & Distribute IEC Materials on PLHIV issues.
* Increase Home base care services.

**Scope of Work**

* Enhancement of work with the HIV infected & affected women & children
* Enhance treatment access of PLHIV to the public health service sectors.
* Income generating support
* Nutritional training & support
* Setup lab facilities to increase testing facilities like CD-4 cell count.

**HIV**

Human immunodeficiency virus (HIV) is the causative agent of acquired immunodeficiency syndrome (AIDS)

HIV is of two types:- HIV -1

HIV -2

HIV- 1 has worldwide distribution, HIV -2 is prevalent is west Africa & is much less virulent.HIV infects & kills helper CD4T lymhocytes.

Properties of HIV: HIV is the lentivirus subgroup of retroviruses. It is spherical in shape, 100 -140 nm in diameter. The lipid envelope is derived from host CH membrane. HIV has a bar - shaped core surrounded by an envelope.

Global picture: Since AIDS was first recognized in 1981. It has led to the deaths of more then 25 million people making it one of the most destructive disease in recorded history.

Despite recent improved access to antiviral treatment & care in many regions of the world. In 1007 the AIDS pandemic killed an estimated 2.1 million people including 330.000 children in 2007, an estimated 33.2 million people lived with the disease worldwide, with an estimated 2.5 million people newly infected in 2007.

Picture in Bangladesh: The national AIDS / STD programme ( NASD) is one of the wings of directorate general of health services under the ministry of health & family welfare responsible for coordinating with all stakeholders & development partners involved in HIV / AIDS programme activities throughout the country.

In Bangladesh the first care of HIV are detected in 1989. Till December 2008. There were 1995 cases of HIV & 476 cases of AIDS. Among them 165 died. By definition Bangladesh is a low prevalence Country. The last surveillance conducted in 2007 found national prevalence of HIV (1% ). But there are significant level of risky behavior that make out country vulnerable to HIV/ AIDS.

**Route of transmission:**

1. Sexual transmission
2. Blood transmission of infected blood
3. intravenous drug abusers
4. Vertical transmission.

**Clinical feature:**

**Major signs:**

1. Weight loss ≥ 10% of body wt.
2. Chronic diarrhea more then 1 month.
3. Prolong fever more then 1 month.

**Minor signs:**

1. Persistent cough for > 1 month
2. Generalized pruritic dermatitis.
3. H/o herpes zoster
4. Oropharyngeal candidiasis.
5. Chronic progressive or disseminated herpes simplex infection.
6. Generalized lymphadenopathy.

**Treatment:**

At present there is no curative Rx of vaccine for AIDS. So prevention is the best policy.

1. Preventive measure
2. Antiretroviral treatment Drug-Zidovudine, Didanosinez, Zalcitabine
3. Specific prophylaxis
4. Primary health care: mother & child health care family planning & education program.

**Preventive measures of AIDS:-**

1. **Sexual:**
2. Comprehensive school sex education programmes.
3. Public awareness campaigns for HIV
4. Easily accessible / discreet testing centers.
5. Safe sex practices:-
   * Avoidance of penetrative intercourse
   * Correct / consistent condom use
   * Reduction of sexual partners / high risk group
6. Targeting safe sex methods to high risk group
7. Control of sexually transmitted disease
8. **Parentral**
9. **Blood product transmission:**

* Donor questionnaire
* Routine screening of donated blood.
* Use of blood substitutes

1. **Intravenous drug use:-**

* Education
* Needle / syringe exchange
* Avoidance of high- risk situations
* Support for detoxification

**C**

1. Routine antenatal HIV Ab testing

2. Counselling about risks of pregnancy if HIV- seropositive

3. Measures to reduce vertical transmission-

* Highly active antiviral therapy treatment during pregnancy
* Perinatal antiretroviral prophylaxis
* Zidovudine to neonate
* Avoidance of breastfeeding.

1. **Occupational:-**
   1. Education / Training:-

* Universal precautions
* Needle stick avoidance

2. Post - exposure prophylaxis.