

Summer Training At



A study to review, modify and implement Standard
Operating procedures in Deepak Medical Foundation.

By

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MBA Hospital and Health Management

2014-2016



Institute of Health Management Research, Jaipur

Certificate

This is to certify that Dr.Nimeeta Gukhar, a student of MBA Hospital and Health Management at The IIHMR University, Jaipur, batch 2014-'16 has successfully completed her summer training for the period from April 1st to May 31st,2015,at Deepak Foundation,Vadodara under my guidance. During this period she has completed a study on **"To review, modify and implement Standard Operating Procedures in Deepak Medical Foundation"** as part of partial fulfilment of the course requirements recommended for MBA Hospital and Health Management with specialization in Health Management. All the data related to the study is primary data. Her approach towards the study has been sincere, scientific and analytical.

I wish her all the best for her future endeavours.

Col. (Dr.) Ashok Kaushik (Retd.)
Dean(Academic and Student Affairs)

Dr S. D Gupta
Director,



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To whomsoever it may concern

This is to certify that Ms.Nimceera Gakhar student of MBA Hospital and Health Management, IIMR University, Jaipur was pursuing her internship from April 1, 2015 to May 30, 2015.

She has completed a project on "To Review, modify and implement SOPs in Deepak Medical Foundation" at Nandesari, Vadodara, Gujarat.

During her association with the organization she was found to be sincere.

We wish her best luck for future endeavors.

With regards,

Dr. Binita Verdia

Senior Coordinator – Clinical Services

ACKNOWLEDGEMENT

‘No task is one man effort’. Co-operation and co-ordination of various people at different times go into successful completion and achievement of set goals. It is a great pleasure to extend my heartfelt thanks to everybody who helped me through the successful completion of this project.

Firstly, I would like to thank Col. (Dr) Ashok Kaushik (Dean Academics and Student Affairs, The IIHMR University, Jaipur) to provide a great learning opportunity.

I own to my sincere gratitude to Ms. Archana Joshi (Director) for all the support and encouragement.

I would like to extend my deepest gratitude to Dr. Nandini Srivastava (Deputy Director) and Dr. Binita Verdia, (Senior Coordinator-Clinical services) my mentor at Deepak Foundation who helped me getting relevant data related to this project and for the constant guidance and support.

I would like to thank Ms. Rita Shelankar (Human Resource) for providing me all facilities and permission during the course of research.

My thanks to Dr Prafulla Nagwekar and Dr. Alok (Department of Occupational Health) Dr. Manisha Pawar and Dr. Pratik Patel (Department of Gynaecology) and Dr. Hardik Shah (Department of Paediatrics and Neonatal Intensive Care Unit) for helping me during my project.

I would also like to thank Mr. Surendra Rawat for helping me with the field visits.

The successful completion of this project and final outcome required a lot of guidance and assistance from the staff and I’m thankful to them for sharing their experiences and providing their precious time to add value to my knowledge.

I would also like to take the opportunity to express a token of thanks and sincere regards for all the support and help that I received from my mentor, Dr S.D Gupta (Director, The IIHMR University)

I would like to thank Institute of Health Management Research, Jaipur which provided me such a wonderful opportunity to do this project while pursuing MBAHM course.



TABLE OF CONTENTS

Sr. no	Contents	Page No
1	Introduction	7
2	Vision	7
3	Mission	8
4	Mode of collection	8
5	Orientation	9
6	Departmental details	10
7	Conclusive learning, limitations and suggestions for improvement	11
8	Project Report	12
9	Learning	16
10	Recommendations	17
11	Ethical considerations	17
12	Questionnaire	18
13	SOPs	26

INTRODUCTION

Deepak foundation is a corporate social responsibility unit of Deepak Group of companies, was set up in 1982 for providing medical and healthcare facilities to the workers and the local community near the industrial area of Nandesari. The focus was to reach out to the most vulnerable population groups, viz., women and children belonging to poor families. The Foundation has since emerged as a leading organization undertaking large-scale implementation projects in the areas of health, women & child development and livelihood promotion in Gujarat.

The Foundation entered the health sector by setting up Deepak Medical Foundation (DMF) hospital in Nandesari, a 15-bedded multi-specialty hospital, catering to a population of around 50,000 living of 33 surrounding villages. The hospital offers 24-hour preventive and curative medical services to the local community and to many companies of Nandesari Industrial Association (NIA). In terms of infrastructure, the hospital has a well-equipped operation theatre, ultra-sound machine, labour room, an intensive care unit, pathological laboratory, pharmacy and round-the-clock ambulance service and has laboratory, ambulance and pharmacy services.

Currently the hospital has a Comprehensive Emergency Obstetric Care unit with full time Gynecologist, Pediatrician providing Pediatric and NICU services in RCH department and Deepak Occupational Health Centre initiated before one and half year provide Comprehensive Occupational Health Services to the industries. The package of services offered is such that it will allow companies, both large and small, to choose from a variety of occupational health options which meet their specific needs. The centre is well equipped with trained medical and paramedical staff, the equipment (Audiometry, Spirometry, ECG, X-ray machine with CR system). Looking to the present needs discussion on formation of trauma centre in DMF is thought off.

VISION

Empowering underprivileged communities to ensure holistic development, economic stability and a life of dignity.

MISSION

Creating a socially inclusive and sustainable environment among the underprivileged communities by providing health care, education, capacity building and livelihood opportunities. We envisage a world free of distress, disease, deprivation, exploitation and subjugation, ensuring the overall well being of the family, society and community.

MODE OF DATA COLLECTION

Data was collected by taking in depth interviews and group discussions with stakeholders. As part of secondary data, previously made SOPs were reviewed. Also feedback and questionnaire was taken.

ORIENTATION

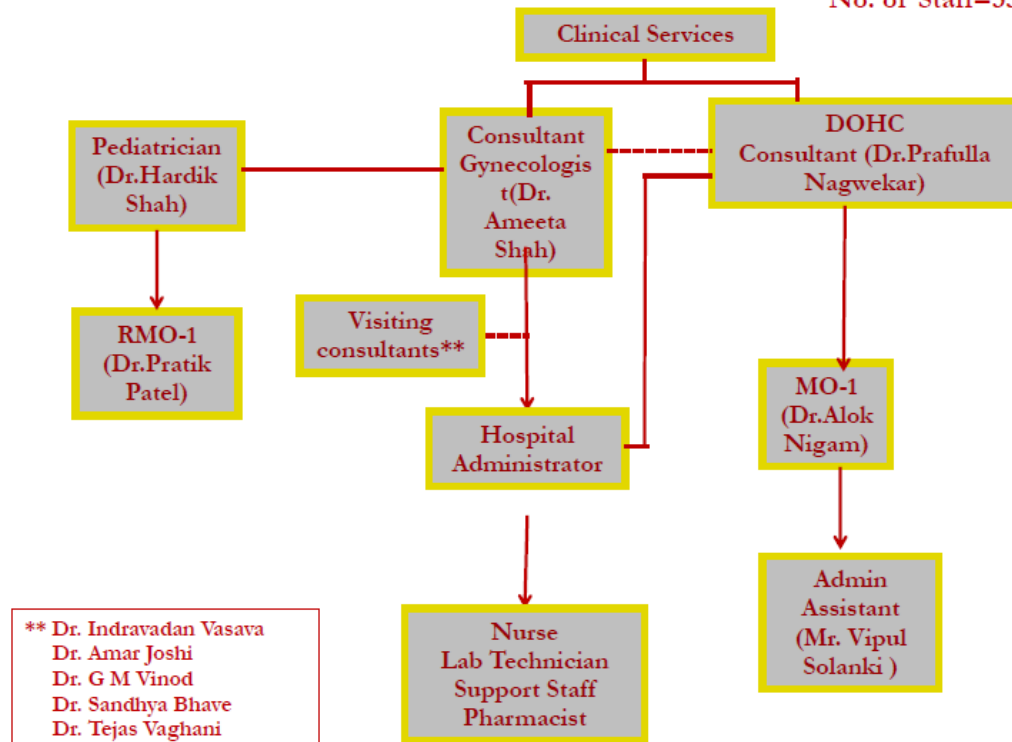
BOARD OF TRUSTEES:

1. Mr. C. K Mehta (Chairman)
2. Mrs. K.C Mehta (Trustee)
3. Mr. D. C Mehta (Trustee)
4. Mr. S.C Mehta (Trustee)

:

DMF, Nandesari

No. of Staff=35



June 2015

FUNCTIONAL ORGANIZATIONAL STRUCTURE

TOP SPECIALITIES

1. Dept of Gynecology
2. Department of Pediatrics and Neonatal Intensive Care Unit
3. Dept of Occupational Health

DEPARTMENTAL DETAILS:

No of beds: 15

Bed occupancy rate: 33

Total turnover: 4393070

Number of patients: 27181

ISSUES IN INDIVIDUAL DEPARTMENTS:

1. Gynecology Department: Dearth of staff, No stringent working pattern , lack of compliance amongst doctors.
2. Pediatrics and Neonatal Intensive Care Unit Department: No separate consulting room, only one doctor. Non availability of round the clock Doctor.
3. Department of Occupational Health: No separate marketing body.
4. Pharmacology services: Staff not well trained. Only one pharmacist. The turnaround time for Indents is very high.
5. Housekeeping and Laundry services: No washing machine, no internal monitoring.
6. Front desk: Under trained receptionist. No round the clock receptionist.
7. IPD: No room for relatives. Insufficient beds.
8. OPD: Waiting time too high.
9. Nursing Services. Poor staff retention, No appraisal system, dearth of nurses.
10. Laboratory Services: Sterilization (Autoclaving) was not done properly.

CONCLUSIVE LEARNING, LIMITATIONS AND SUGGESTIONS FOR IMPROVEMENTS

Deepak Medical Foundation is a 15 bedded multispecialty hospital with a well equipped Operation theatre, Ultra sound machine, labour room and an intensive care unit. They also have Pharmacy and round the clock ambulance services, laboratory, ambulance and pharmacy services.

The centre is well equipped with trained medical and paramedical staff which helped us to grasp the relevant information and the required knowledge.

LIMITATIONS

The hospital sector is a complex network with multiple functioning and busy schedule time constrain was a very important factor while learning about the hospital. Also in absence of a Hospital Administrator gathering all the information was quite a challenge.

SUGGESTIONS FOR IMPROVEMENTS

- ⦿ Appropriate Nurse patient ratio to be maintained
- ⦿ Division of work to be done more carefully
- ⦿ Employ more people for efficiency in work
- ⦿ Strengthening Organizational Culture
- ⦿ Training and development provided by the hospital should be encouraged
- ⦿ There should be availability of sound amenities for staff
- ⦿ A conducive working atmosphere, good culture, training and career growth with adequate salary are some provisions that control attrition.
- ⦿ Advancement opportunities
- ⦿ Soft skill coaching
- ⦿ Behavior change communication
- ⦿ Emphasis on Work ethics
- ⦿ Build up space for the relatives

PROJECT REPORT

Introduction:

Standard operating procedures (SOPs) are written instructions intended to document how to perform a routine activity. The primary reason many companies rely on SOPs is to help ensure consistency and quality in their products. SOPs are also useful tools to operationalize and communicate important corporate policies, government regulations, and best practices.

Benefits of SOPs

Many workplace processes require strict adherence to a set of instructions to ensure the intended outcome occurs. Even the best employees don't have perfect memories, so having a set of written instructions they can refer to when performing the steps of the process ensures everything is done correctly. When new employees are trained, SOPs help keep their training fresh and serve as important reference tools.

Rationale

The SOPs have been found to be of immense use in proper working, training of personnel and favorable outcomes. However lack of basic standards including standard operating procedure (SOPs) for hospitals makes this a difficult job. Hence SOPs are an essential pre-requisite for any Quality initiative.

Objectives

1. To suggest modifications and revise the SOPs
2. Generate new SOPs
3. To implement the revised SOPs in the Hospital and set the procedure

Methodology

Study Area and population

Deepak medical foundation hospital which is catering to a population of around 50,000 living of 33 surrounding villages. Survey was also conducted in the Rupapura village which is 5kms away from Nandesari.

Study design

The formerly made SOPs were reviewed and then modifications were suggested based on the current condition and needs of the hospital. It was a Descriptive study and revision and changes were made after conducting in depth interviews, Focused group discussions, observations and community health surveys.

Reasons for revision

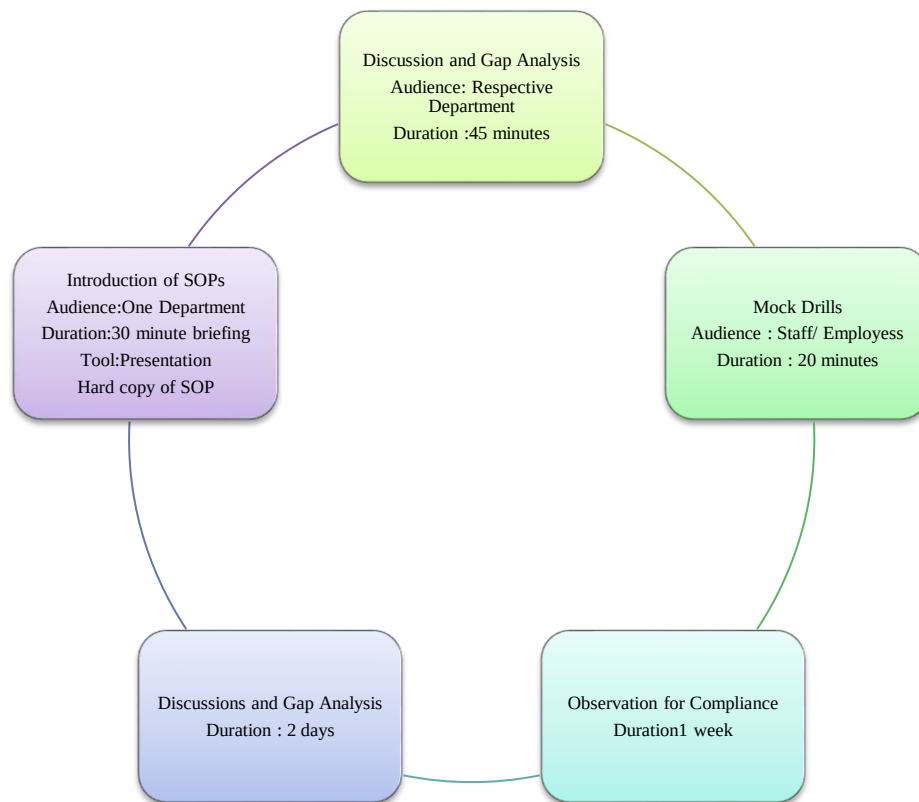
1. Optimum utilization of resources lacking
2. Duty Roasters not followed
3. Weak management and Administration
4. No standard process
5. Improve Quality

Training of Hospital Staff

Training Need Assessment was carried out and the hospital staff training was done accordingly. This laid the basis for further modifications in the existing SOPs.

Initially, a one day training workshop was organized to orient the team on protocol and deliverables. Subsequently, 2-day training workshops were organized for training of the team separately for data collection procedures. The training with mock questionnaire filling was supplemented with field visits wherein field related issues and concerns in data collection were resolved.

Debriefing was done to minimize interviewer bias by making questions simple and clear.



DATA COMPILATION, ANALYSIS AND INTERPRETATION:

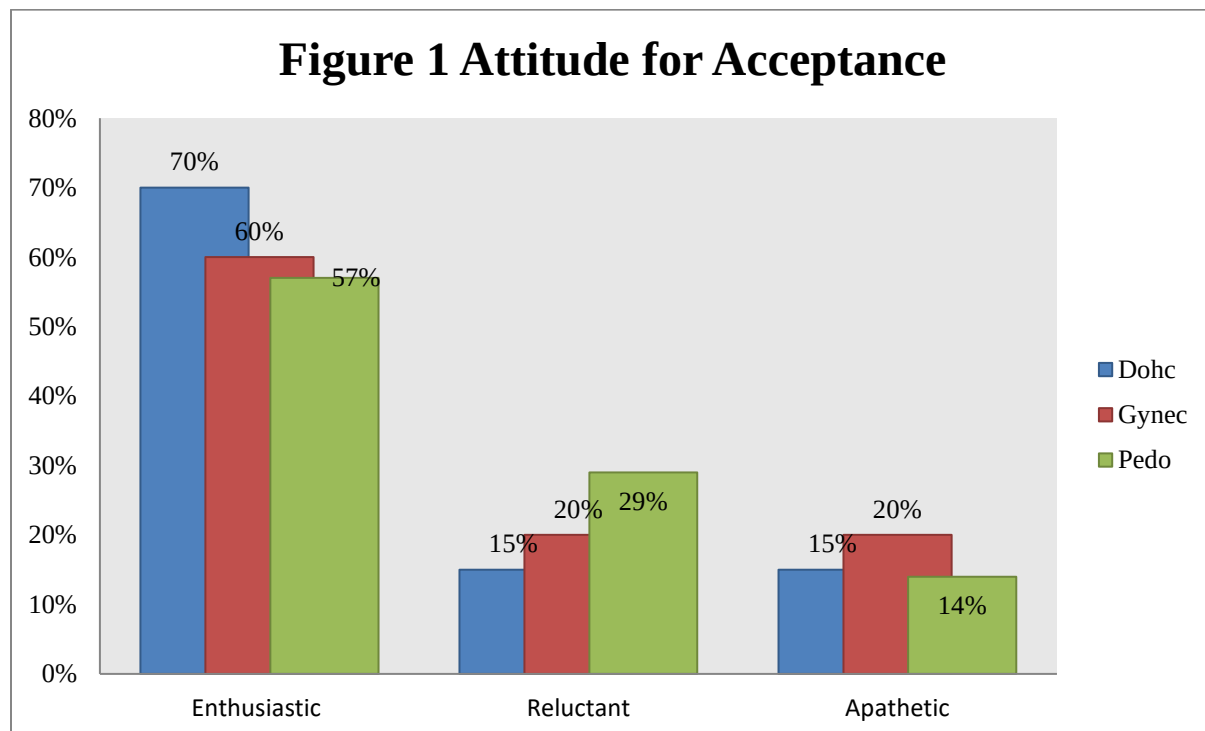


Fig.1 depicts the level of attitude of acceptance as far as the SOPs are concerned. It was observed that out of 20 (100%), (70%) 14 DOHC staff members were enthusiastic, followed by (60%) 12 Gynec and (57%) 12 Paediatric staff members.

15 %(3) of DOHC staff members showed reluctance followed by 20%(4) Gynec and 29%(6) Pedo staff members.

(15%) 3 of the DOHC members were apathetic followed by (20%) 4 Gynec staff members and (14%) 8 of Pedo staff members.

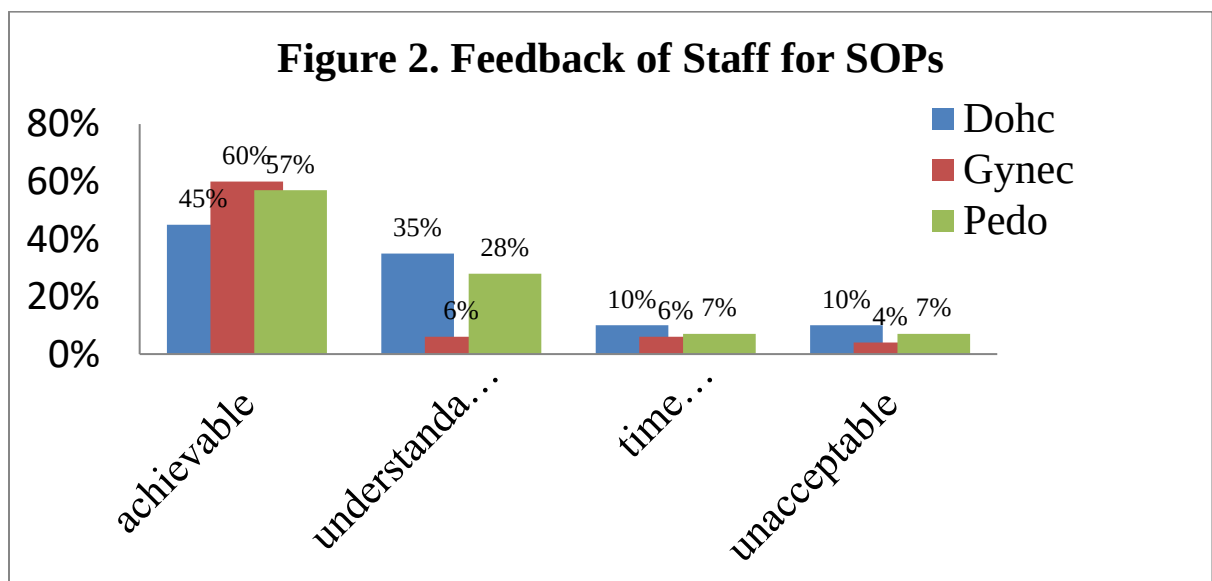


Fig.2 shows the feedback of the staff members after having read and understood the Sops.

It was found that out of 20(100%) staff members, (45%) 9 of the DOHC members thought the SOPs were achievable while (35%) 7 found it understandable, (10%) 2 found it time consuming and (10%) 2 found it unacceptable.

Amongst the Gynec staff members, (60%) 12 of them found the SOPs achievable, (35%) 7 found them understandable, (6%) 1 thought it was time consuming and 2 (10%) found the SOPs were unacceptable.

Amongst the Pediatric department staff members 57% of them found the SOPs achievable, 28% found them understandable, 7% thought it was time consuming and 7% found the SOPs were unacceptable.



LEARNINGS

1. The importance of Team work and interpersonal communication.
2. The clarity and physiological advantage of villages over urban areas
3. Good doctors lay the foundation for a good hospital.
4. A Hospital Administrator bridges the gap between the lower staff and managerial staff. He/she is the backbone of the hospital
5. Work allocation and work implementation
6. The art of Multitasking

7. Leadership and training is allowing error without consequence
8. Staff retention and importance of feedback\
9. Acclimatization and absorbing the culture of the organization.
10. Round the clock availability of doctors.
11. How sound marketing strategies can lead to growth of the organization.

RECOMMENDATIONS

1. Manpower requirement: Appointment of Hospital Administrator, shortage of skilled manpower like nurses, Medical Officers and surgeons.
2. Infrastructure development: Infrastructural development such as starting a surgical department, kitchen, dental department to gain autonomy.
3. Equipments: Up gradation of equipments and investing in washing machine which can save labour cost and ensures hygiene.
4. Quality Control: Continuous internal monitoring of the facility, proper record maintenance.
5. Compliance with statutory requirement: Fire protection act, BMW Act etc is the local responsibility of the facility.
6. Information, education Information: Proper information of the available services to be made available to the community through proper marketing strategies.
7. Disaster preparedness: Developing internal / external disaster guidelines, training of the staff and conducting mock drills.

ETHICAL CONSIDERATIONS

The privacy of participants will be protected by numerical coding to keep the responses and their identity confidential.

All study data will be kept confidential.

Participants will be told summary data will be disseminated to the professional community, but it will not disclose identity of respondents.

DEEPAK MEDICAL FOUNDATION

DEPARTMENT:

DATE:

Sr. No

Name

Duty

Signature

1. Have you read and understood the standard operating procedures as explained?

❖ Yes

❖ No

2. Is there any problem you are facing while working here? If yes, please explain.

3. What corrections should be made in the existing SOPs?

4. There is a strong correlation between work satisfaction and motivation.

❖ Strongly agree

❖ Agree

❖ Neither disagree nor agree

❖ Disagree

❖ Strongly disagree

5. Can you manage to carry out instructions and daily responsibilities and duties accurately and efficiently?

- ❖ Yes
- ❖ No

6. If not, explain the reasons.

7. Does your organization facilitate coordination and meetings among team members?

- ❖ Yes, it's a common practice
- ❖ Not encouraged
- ❖ To some extent

8. Are your team meetings effective in terms of providing resolution to issues related to the project?

- ❖ Yes
- ❖ No

9. Do you regularly involve yourself in training activities?

- ❖ Yes
- ❖ No

10. Is patient counselling a normal routine practice in the hospital?

- ❖ Yes
- ❖ No

11. We regularly inspect the hospital physical environment to identify conditions that pose or could pose a worker safety or health concern.

- ❖ Yes
- ❖ No

12. Hospital employees understand the elements of the worker safety and health management system and how to participate in it.

Strongly agree

Agree

Disagree

13. Hospital employees can ask questions, receive answers, and provide feedback during and after training.

Strongly agree

Agree

Disagree

14. We conduct an annual review of the worker safety and health management program.

Strongly agree

Agree

Disagree

15. Top hospital management assigns responsibility and accountability for the implementation and maintenance of the program.

Strongly agree

Agree

Disagree

Compiled by: Nimeeta Gakhar

Signature:

Methodology FGDs and KII (Community gate keepers) were conducted to get (quick) response from the community about DMF services residing within 5kms of DMF Hospital.

a) FGDS will be conducted with following four groups

- 1) Married women and member of SHG (35 - 45 +years)
- 2) Married men (25-45 yrs) having a child below 2 years
- 3) ASHAs
- 4) Married women (20-35 years)

Total 4 FGDs x 1 = 4

Study area and population:

FGDs were conducted in following villages based on geographic location and patients availing maximum services and less service from DMF Hospital within 5kms of DMF Hospital

- 1) Damapura
- 2) Angadh
- 3) Fajalpur
- 4) Raiyka

LEARNINGS

1. Psychological advancement of rural area over urban
2. Women empowerment
3. Capacity building and training skills
4. Interview taking skills and techniques

QUESTTIONNAIRE

Awareness of DMF services and facilities from the villages around 5kms vicinity of DMF Hospital

FGD #1:

Participant: SHG Women (age-35 and above)

Objective:

To know the perceptions and opinions about services and facilities provided by DMF from the community residing within 5 kms of vicinity of DMF Hospital

Date: _____

Start Time: _____

Place: _____

Name of Facilitator: _____

Name of Recorder: _____

Consent:

Namaste!!!

My name is _____ and I am here to understand treatment seeking behavior of community members with focus on health services available for women and child. The discussion will take about an hour of your time. Whatever information you provide will be used to facilitate the addition and improvement of services at DMF. Participation in this interview is completely voluntary.

Background information of Respondents:

SHG Group Name: _____

Sr. No	Name of participant	Gender	Age	Education	Occupation	APL/ BPL	Signature/Left thumb impression of Participants
1.							
2.							
3.							

4.							
5.							
6.							
7.							
8.							
9.							
10.							

Discussion Guide

A) Treatment seeking behaviour

1.0 Health Problems in the Community

1.1 What as per you are the main health problems in this area?

1.2 Are there any health problems/illnesses which are specific to this area?

1.3 Do you see and emerging health problems and illnesses in the area? Probe for : diabetes, cancer, heart problems, infectious diseases, gyne problems, paediatric problems

2.0 Availability and Utilization of Health Services

2.1 What are the public and private health facilities available in the area to cater to the health needs of the community? Probe for: Village level, PHC, CHC, Block/private hospitals.

2.2 In your opinion, where do people in your village prefer to seek care (probe: Private or Public health providers, Reasons)

2.2.1 Constraints in seeking care from public health facilities, if any

2.4 Where do people of your village go for seeking health services

2.3 For general illness : (cough, cold, fever, diarrhoea, vomiting, etc)

2.4 For major illness/accidents: (Surgeries, long hospital admissions..)

2.5 For Gynec problems/delivery

2.6 For Paediatric cases : for children below 12 years

2.7 For Laboratory test :

2.8 For Medicines :

2.9 For Sonography / x-ray

3.0 Which health facilities are considered to be offering the best services in your area?

(List the name)

3.1 Paediatric:

3.2 Gynec services

3.3 General

3.4 Laboratory

3.5 Pharmacy

Build back ground of DMF: DMF hospital has been established more than 30 years ago.
It is the only facility within a radius of 5 kms within GIDC

4.0 Awareness of services offered at Deepak Medical Foundation Hospital

4.1 Have you heard of DMF Hospital

4.2 Which services and facilities of DMF are you aware about (probe: Gynec/ Paediatric/ General/ industrial health/ lab-services/ pharmacy / ambulance)

4.3 Do people in your community use DMF services (Gynec/ Paediatric/ General/ lab-services/ pharmacy/ambulance)

4.4 We understand DMF offers following services. Please rank the services offered at DMF (from 1-10. 1 for poor and 10 for best)

Services /Rank	1	2	3	4	5	6	7	8	9	10	DK
----------------	---	---	---	---	---	---	---	---	---	----	----

Gynec services

Paediatric services

General services

Laboratory services

Pharmacy services

Ambulance services

Sonography services

4.5 What are the reasons for using services of DMF (probe for all services : Gynec/ Paediatric/ General/ Sonography/ lab-services/ pharmacy/ambulance)

4.6 What are the suggestions to make to improve the services of DMF in respect to quality of care indicators

4.6.1 Behavior of staff

4.6.2 Waiting time

4.6.3 Sanitation and hygiene

4.6.4 Cost of services

4.6.5 Food and canteen facilities

4.6.6 Timely response for any query

4.6.7 Pharmacy services

4.6.8 Laboratory services

4.6.9 Ambulance services

4.7 Which services should be added at DMF to get benefit to you and your village?

At End of discussion: Brief about the new services:

DMF: Specialized OPDs- Skin, Eyes, Dental, X-ray facilities, and laboratory tests

Standard operating procedures

May 28

2015

This contains all the SOPs of the respective departments.

Sr.No	Contents	Page No.
1.	Gynecological services	2
1.1.	Sonography	18
2.	Pediatric services and Neonatal Intensive Care Unit	24
3.	Occupational Health	35
	Equipments :	44
3.1.	Audiometry	46
3.2.	Spirometry	52
3.3.	X ray	59
3.4.	ECG	62
4.	General Patients	67
	Specialized OPD Services.	73
4.1.	Vision	74
4.2.	Skin	77
5.	Nursing Services	78
6.	Laboratory Services	83
7.	Pharmacy	88
8.	Housekeeping	105
9.	Reception	110
10.	Hospital Administrator	126

GYNECOLOGY SERVICES

Standard Operating Procedures (SOPs)

	Name	Designation	Signature & Date
Prepared by		Medical Officer	
Reviewed by		Gynecologist/In-charge	
Approved by		Superintendent/Hospital In-charge	

Sr. No.	Contents	Page No.
1.	Purpose	3
2.	Objective	3
3.	Scope	4
4.	Responsibility	4
5.	Definitions	4
6.	Abbreviations	5
7.	Applicable regulations & guidelines	5
8.	Procedure	5
9.	References	17

1.1 PURPOSE

The purpose of this SOP is to describe the procedures to be undertaken by the team of staff members of Gynecology unit to ensure provision of appropriate and quality services keeping in mind the safety of mother and child as first priority.

1.2 OBJECTIVE

- To provide diagnostic, curative and rehabilitative obstetric services that are appropriate, effective, adequate and comfortable to mothers requiring institutional care so as to ensure the safe delivery of babies in order to reduce infant as well as maternal mortality and morbidity.
- To provide an efficient and effective service in an optimum environment to patients undergoing elective and emergency surgery so as to relieve suffering and achieve early recovery.
- To ensure that patient care in obstetrics and gynecology ensures the highest order of patient safety, efficiency, justification for actions and meticulous treatment.
- To ensure all verbal advice, counseling, treatment and management is well documented.

1. SCOPE

- Provision of Antenatal Care
- Provision of Specialized Maternal Fetal Services
- Conduct Hospital Deliveries
- Provision of Elective and Emergency Caesarean Sections
- Provision of Postnatal Care
- Provision of Initial Immunization
- Provision of Counseling
- Provision of General Gynecological Services
- Provision of Fertility Services

2. RESPONSIBILITY

- The Head/In-charge of Gynecology Unit will be responsible for overall implementation of this SOP.
- The Medical Officers and nursing staff will be responsible for undertaking the Obstetrics and Gynecology care under the guidance of the Head/In-charge
- All other support staff such as hospital administrator, house-keeping staff and other support staff of the hospital and clinic will be responsible to support in provision of the services.

3. DEFINITIONS

Standard Operating Procedures (SOPs)

Detailed, written instructions to achieve uniformity of the performance of a specific function (ICH GCP 1.55)

4. ABBREVIATIONS

CTG	Cardiotocography electronic measurement
CRF	Case report form
GCP	Good Clinical Practice
IPD	In-Patient Department
HIV	Human Immunodeficiency Virus
MO	Medical Officer

NICU	Neonatal Intensive Care Unit
OPD	Out Patient Department
SAE	Serious Adverse Event
SOP	Standard Operating Procedure
WHO	World Health Organization

5. APPLICABLE REGULATIONS & GUIDELINES

- ICH guidelines for Good Clinical Practice E6 (R1)
- WHO Recommended Interventions for Improving Maternal and Newborn Health, WHO/MPS/07.05, WHO, 2009

6. PROCEDURE

a. Registration

At a minimum level all patients attending Deepak Foundation Hospital/clinic services should be registered in a dedicated register and should receive a unique registration number. The service is linked to record maintenance and thus patient's unique registration number should be reflected in all the records of the patient. It is also important for monitoring and evaluation purpose. A Case Record Form should be prepared for each patient with the unique registration number.

OBSTETRIC WARDS

Standards

ACCESS TO CARE AND CONTINUATION OF CARE

All patients cared for by the organization have their health care needs identified through in established assessment process.

8.1.1 Standard

Each patient assessment(s) include an evaluation of physical, psychological, social and economic factors, including a physical examination and health history.

Intent of 8.1.1

1. The assessment(s) of patient provide the information to
 - understand the care the patient is seeking
 - select the best care setting for the patient
 - form the initial diagnosis
 - understand the patient's response to any previous care
2. Relevant investigations to form the diagnosis shall be sent
 - Refer circulars on handling/ordering of lab investigations
 - Ordering radiological investigations

Measurable Elements of 8.1.1

All patients shall have an initial assessment in Patient Admission Centre / in the wards for the elective admission by the house officer / medical officer.

- The initial assessment(s) results in understanding any previous care and the care the patient is currently seeking.
- The initial assessment(s) result in selecting the best setting for the care.
- The initial assessment(s) results in an initial diagnosis.

8.1.2 Standard

At admission as an inpatient, patient and families shall receive information on the proposed care, the expected outcome of that care, and expected cost to the patient for the care.

Intent of 8.1.2

Patient and family shall receive sufficient information to make knowledgeable decision. Information is provided about above matters. When financial constraints related to the cost of care are present, the relevant authorities shall seek ways to overcome those constraints.

Measurable Elements of 8.1.2

- The staff and doctors shall provide the patient / family with information at admission on proposed care and the expected outcome.
- Proper documentation shall be written in the patient's record regarding the information provided.
- Patient shall receive sufficient information to make knowledgeable decisions.

8.1.3 Standard

Reduce physical, language, cultural and other barriers to access and delivery of services.

Intent of 8.1.3

The department serves communities with a diverse population. The staff shall be familiar with the barriers and try to reduce the impact of these barriers on the delivery of services.

- All patients admitted shall be orientated on the facilities available in the ward and made aware of the rules and regulations of the hospital.

8.1.4 Standard

In all phases of care, there is a qualified individual identified as responsible for the patient's care.

Intent of 8.1.4

In order to maintain continuity of care, throughout the patient's stay in the hospital, the individual with overall responsibility for the patient's care or particular phase of patient's care is clearly identified.

- All new admissions from the clinic need to be clerked, assessed and documented in patient's records by medical officer in the wards.
- All patients in ward need to be reviewed by medical officer within one hour.
- All patients admitted should be seen by the respective specialist at least once a day. On call specialist shall review the new cases in the ward.
- Medical officer shall do ward rounds three times a day.

Measurable elements of 8.1.4

- The medical officer / specialist / medical officer responsible for the patient's care is identified.

8.1.5 Standard

The department provides continuity of patient care services and coordinates it among health professionals.

Intent of 8.1.5

Several departments and services may be involved in providing care. The department shall implement continuity and coordination of care among physicians, nurses and other health care providers.

- The ward staff shall be informed regarding the transfer to coordinate and prepare the patient bed.

Measurable Elements of 8.1.5

- Continuity and coordination shall be evident throughout all phases of patient care.

8.4.1 Standard

Admission or transfer to or from units providing intensive or specialized services is determined by established criteria.

Intent of 8.4.1

Antenatal cases:

- Cases requiring surgery in the Maternity Operation theatre shall abide by the policies of the Operation theatre.

Postnatal cases:

- Staff shall transfer patients and their babies from Labour room to wards.
- Paediatric staffs are responsible to transfer the babies that need to be admitted to Maternity Neonatal Intensive Care Unit (NICU).
- New-borns requiring neonatal intensive care shall be sent to the NICU as soon as possible for further management after informing the parents.
- On receiving the mother and baby, the ward staff shall check their tags to verify their identification – 'Correct baby to the correct mother'. Ward staff shall go through the checklist that is available.
- Patients who have a perinatal death shall be nursed away from other postnatal mothers in a ward with no babies and the mothers would be discharged home faster if they have no complications at delivery.

Measurable Elements of 8.4.1

- Established entry and / or transfer criteria for intensive / Maternity Neonatal ICU) or specialized services / Maternity Operation Theatre) shall be followed.

- Patient who no longer meet the criteria to remain in the unit are transferred or discharged.
- New-borns are tagged and transferred according to the operative procedures.

8.5 DISCHARGE, REFERRAL AND FOLLOW

Referring or discharging a patient to health care professional outside the organization, another care setting, home or family is based on the patient's health status and need for continuing care or services. The family is included in the discharge planning process as appropriate to the patient and her needs.

8.5.1 Discharge

Standard

Appropriate discharge of patients

Intent of 8.5.1

- Patients who wish to leave the hospital against medical advice need to do so in writing in an appropriate form.
- The minimum length of stay for the uncomplicated postnatal primigravida mothers and their babies shall be up to 48 hours.
- Postnatal patients with complications and delivered operatively shall be discharged appropriately (not less than 48 hours after delivery).
- Mothers should have been able to pass urine before discharge. The new-born should have been able to pass urine and stool before discharge.
- Mothers shall be discharged together with their babies unless the babies require prolonged stay in the hospital.
- Identification, verification of babies and relevant administrative matters/ education, shall be carried out by the nursing staff before leaving the ward. A checklist shall be filled up.
- Physically disabled and mentally incompetent patients shall be discharged to the legal custodian with written acknowledgement.
- Discharge summary for antenatal or postnatal patients should be done by house officer / medical officer. A copy of the discharge summary shall be attached to the antenatal card for the patient / the Health officers responsible for the patient's continued and follow up care.
- Discharge summary shall include the following:
 - Reason for admission.
 - Significant diagnoses and co morbidities.
 - Diagnostic and therapeutic procedures performed.
 - Significant medications and other treatment.
 - The patient's condition on discharge.
 - Discharge medication.
 - Follow up instructions.

Measurable elements of 8.5.1

- Patient shall be appropriately referred and / or discharge.

- Discharge summary shall be prepared at discharge by a qualified person, containing relevant information and follow up instructions, for patients and their practitioner responsible for the patient's continuation of care.

8.5.2 Referral

Standard

Appropriate referral of patients.

Intent of 5.5.2

- The department shall cooperate with health care practitioner and outside agencies to ensure timely and appropriate referral
- A referral shall be made appropriately to other departments or for outside agencies if necessary
- All interdepartmental referral shall have an input from the specialist
- A referral letter, containing the summary of the patient's problem and care shall be given to patient for the next practitioner.

Measurable Elements of 8.5.2.

- Referral shall be made appropriately when necessary

8.5.3 Follow-up

Standard

Patients and as appropriate, their families shall be given understandable follow-up instructions at referral or discharge

Intent of 8.5.3

- The name and location of sites for continuing care shall be informed to patient and family.
- Appropriate appointment dates shall be given to patient if any return for follow up.
- The instruction shall be explained to patient and family and provided in writing.

Measurable Elements of 8.5.

- Follow up instructions shall be provided in an understandable form and manner (verbal and written) to patient and / or family.

8.8 DEATH

8.8.1 Standard

Patients care in the department may end up or complicated with the death of the patient.

Intent of 8.8.1

- Death Certificate shall be signed immediately by medical officer and the accurate cause of death shall be written.

- The next of kin shall be informed of patient's death, in the ward or via the hospital police counter if necessary and documented in the patient's record.
- The parents shall be informed / counseled regarding perinatal death by medical officer/specialist and offered a post-mortem. The perinatal death format shall be filled up and sent to the Health Officer of the district concerned and a copy shall be kept in the department for future references
- The deceased shall be sent to mortuary within one hour for release to the next of kin or for post-mortem.
- Any patient/mother who dies in the hospital shall be transported on a cadaver trolley to the mortuary by the mortuary attendants.
- All maternal deaths shall be notified to the Health Officer immediately by the hospital maternal death coordinator. The relevant documents shall be documented by the specialist involved after the maternal mortality meeting, and submitted to the relevant authority within 2 weeks.

Measurable Elements of 8.8.1

- Patient's family / next of kin shall be informed regarding the death appropriately and shall be documented in the patient's record.
- Appropriate transfer of the deceased to mortuary shall be made appropriately.
 - A proper notification regarding the patient's death shall be made to the health officer.

9.0 LABOUR ROOM

Standards

9.1 Admission to labour room

Process of patient's assessment and admission.

9.2 Care of patient in labour room

- In all phases of care, there is a qualified individual identified as responsible for the patient's care.
- Procedures and activities in labor room
- Delivery by Caesarean Section / Procedure in Operation Theatre

9.2 CARE OF PATIENT IN LABOUR ROOM

Standard

In all phases of care, there is a qualified individual identified as responsible for the patient's care.

Intent of 9.2.1

- In order to maintain continuity of care, throughout the patient's stay in the labor room, the individual with overall responsibility for the patient's care or particular phase of patient's care is clearly identified.

- All new admissions need to be examined, reviewed, assessed and documented in patient's record by house officer / medical officer in the labor room
- All patients need to be reviewed by house officer / medical officer immediately/ as soon as possible.
- The labor ward has identified consultant / specialist and medical officer in charge.
- Management of all patients in labor ward suite shall be supervised by the specialist / consultant.

Measurable Elements of 9.2.1

- The medical officer / specialist / medical officer responsible for the patient's care are identified.
- The individual is identified to the department's staff by the department's roster and writing the names and contact numbers in the labor ward admission counter.

Standard

Procedures and activities in labour room

Intent of 9.2.2

Labour room is a specialize area, taking care of mothers in labour. To ensure optimum patient care and safety to mothers and their babies, appropriate guidelines shall be followed for all procedures and activities.

- During intrapartum period / postnatal period, refer to protocols
- Management of normal delivery
- Management of CTG
- Management of the placenta
- Vaginal examination
- Ensure babies' safety.

Measurable Elements of 9.2.2

- Procedures and activity is according to the guidelines available.
- Baby safety checks done.

9.2.3 Standard

Delivery by Caesarean Section / Procedure in Operation Theatre

Intent of 9.2.3

- All caesarean sections shall be decided or discussed with the specialist in charge.
- Patient's pre-operative preparation shall be done appropriately;
 - Consent from patient.
 - Patient's husband or next of kin shall be informed prior to the surgery.
 - Prophylactic antibiotics shall be given to patient in labor room for Caesarean section.
 - Patients shall be put in Operation Theatre attire
 - Patient shall be transferred to OT on stretcher by the labor room staff once patient is called to OT.

- Case shall be passed over to OT staff and fetal heart rate shall be checked. Foley's catheter shall be inserted in the operation theatre after the patient has been anaesthetized.
- Refer Standard Operating Procedures of Operation Theatre.
- Time for decision to caesarean section is less than 30 minutes.

Measurable Elements of 9.2.3

- Continuity and coordination shall be evident throughout all phases of patient care.
- Continuity and coordination are evident to the patient.
- Urgent referral should be seen within 1 hour.

9.5 DISCHARGE / TRANSFER FROM LABOR ROOM

9.5.1 Standard

Intradepartmental transfers are handled by staff nurse in labour room.

Intent of 9.5.1

- Staff nurses call the HDW/wards to see the availability of beds; if present the patient and babies tag numbers are informed prior to sending the patient.
- Staffs from labor room are responsible for transfer of postnatal mothers and their babies to ward or High Dependency Ward (HDW).
- On receiving the mother and baby, the ward staff shall check their tags to verify their identification – 'Correct baby to the correct mother'.
- Ensure babies' safety

Measurable Elements of 9.5.1

- Call made prior to sending of patient.
- Names of patient informed.
- Check done on admission prior to sending the patients to the ward.

9.5.2 Standard

Interdepartmental / other hospital transfer requested based on severity of illness or decided by the Specialist.

Measurable Elements of 9.5.2

- Continuity and coordination shall be evident throughout all phases of patient care.
- Continuity and coordination are evident to the patient.
- Patient safety is ensured and acknowledge

11.0 OPERATION THEATRE

Standards

11.1 Patients are planned for elective and emergency caesarean section at operation theatre.

Intent of 11.1

- Elective cases are planned earlier and performed from pre-determined hours
 - All cases listed for operation are by a specialist.
 - The patients are counseled regarding the indication, procedure and associated complications prior to the surgery and they are admitted one day prior to the day of operation.
 - The patients are reviewed again by the obstetrician and gynecologist who is planned to perform the operation.
 - Necessary investigations are taken and reviewed prior to the operation.
 - All patients are reviewed by the anesthetist prior to the operation and are counseled again regarding the operation and type of anesthesia planned.
 - All high risk cases are performed by specialist/consultant.
 - Once the patient has been counseled, a written consent is taken from the patient.
 - Blood is group and cross matched for all high risk cases according to the hospital protocols. Other patients shall have blood grouped and saved as appropriate.
 - A day prior to surgery a list is drawn up of all the cases and the Operation theatre list is signed by the Head of Department
-
- The staff from the respective wards/units shall notify the staff of the Operation Theatre (OT) by means of an OT dispatch book prior to the surgery.
 - The respective wards shall be responsible for transporting the patients to and from the OT after being informed by the OT staff.
 - The Operation Theatre guidelines for patient's attire shall be adhered to.
 - At the Operation Theatre "transfer bay" the ward staff shall "hand over" the patient to the theatre nurse to ensure patient's safety. Any special instructions shall be conveyed to the OT nurse.
 - The Operation Theatre staff shall carry out the necessary checklist in accordance to the standard procedures.
 - The ward staff shall be informed of any cancellation of cases.
 - No food and drinks are allowed in the OT except in the designated rest rooms.
 - All linen and instruments shall be packed in OT before being sent for sterilization.

Measurable Elements

- Cases reviewed by medical officer/registrar.
- Cases reviewed by specialist
- Cases reviewed by anesthetist
- Counseling of patients and relatives
- Consent taken from patient
- Blood investigations taken and reviewed by doctor
- OT checklist
- Sterile supplies
- Air sterility and bacteria sterility test in OT
- Cleaning roster for OT

12.0 GYNAECOLOGY WARDS

Standards

12.1 Admission to gynecological ward should be in the appropriate manner following the various guidelines.

Intent of 12.1

- All patients admitted to the ward will be seen by a staff nurse within 10 minutes and vital signs recorded and bed allocated.
- All new cases will be seen by the doctor within 20 minutes from admission.
- All new cases will be seen and managed or discussed with a specialist or consultant.
- A planned admission would be admitted by specialist with the management documented.
- The complete plan of management will be documented in the folder.
- The diagnosis, current condition and plan of treatment will be explained to the patient and relatives once again by the medical officer in charge of ward.
- The patient would be managed with the help of a multidisciplinary team if needed with the appropriate subspecialty referral given.
- The patients would be discharged with a discharge note to be kept with the patient including details of medication, treatment and new appointment dates, copy of which will be in the notes.
- In cases of elective surgical procedures, it would be done within 3 months from the date of diagnosis, except for oncology cases.
- All medications, including benefits and side effects would be explained to the patient.

Measurable elements of 12.1

- Elective cases admitted should have a plan of management written.
- Time taken from admission until review by doctor < 20 minutes
- All cases to be seen and managed by specialist at least once during admission daily
- Discharge summary should be given to the patient.

14.0 GYNAECOLOGY DAY CARE PROCEDURES

Standard

14.1 Day Care Tubal Ligations

- Patients undergoing laparoscopic Tubal Ligations must fully satisfy all requirements and is decided by specialist.

DAY CARE TUBAL LIGATIONS

14.1.1 Standard

Patients undergoing laparoscopic Tubal Ligations must fully satisfy all requirements and is decided by specialist.

Intent of 14.1.1

- All patients for tubal ligation are seen at the gynecology clinic.
- They are given an appointment during the first 2 weeks of their LMP.

- On the morning of the procedure, a UPT and an Ultrasound scan is done for the patient.
- Patient is explained regarding the procedure failure rates and risks before consent is taken.
- After the procedure, patient is told to rest and discharged after 6 hours with adequate analgesics.

Measurable Elements of 14.2.1

- Time taken from appointment to procedure.
- Only credentialed and privileged doctors should do the case.
- Ensure consent with proper counseling done

15.1 PAIN MANAGEMENT

15.1 Standard

Patients are supported in managing pain effectively

Intent of 15.1

- Patient's pain needs to be assessed and managed appropriately.
- Identify patient with pain during assessment and reassessment.
- Providing management of pain according to availability of pain management services (e.g epidural in labor)
- Communicating and educating patients and family about pain
- Educating health care providers about pain and management

Measurable Elements of 15.1

- Based on the scope of services provided, patients in pain are assessed and managed.
- Patients and family will be educated about pain, management and services available.
- Based on the scope of services provided, the staff will educate about pain.

7. REFERENCES

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http://www.who.int/maternal_child_adolescent/documents/who_mps_0705/en/,
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2. ICH Guidelines for good clinical practice.
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Sonography

Standard Operating Procedures

	Name	Designation	Signature & Date
Prepared by		Medical Officer	
Reviewed by		Gynecologist/In-charge	
Approved by		Superintendent/Hospital In-charge	

PROCESS OVERVIEW

A. Qualification of personnel

B. Policies and Procedures Safeguarding Patients and Ultrasound Personnel

C. Obtaining an Ultrasound Image

D. Obtaining Other Ultrasound Images

PROCEDURES

A. Qualification of Personnel Scans may be performed by a sonographer or by a physician. Other research personnel performing ultrasound scans may do so after initial and ongoing training by a certified sonographer or physician and at the discretion of the principal investigator.

B. Policies and Procedures Safeguarding Patients and Ultrasound Personnel ALARA Principle Personnel must be familiar with and show evidence of practicing the ALARA (as low as reasonably achievable) principle.

- All personnel must adhere to professional ethics and behaviour ensuring subject confidentiality
- All equipment containing digital copies of subject information must be password protected and the software locked when not in use
- All paper copies of subject information must be stored securely, according to the principals of good clinical practice

C. Obtaining an Ultrasound Image

- Input patient information and set the parameters
- Select appropriate transducer
- Position patient in a lying down position, and apply ultrasound gel to surface of the area.
- Position the ultrasound transducer over the area.
- Select acquire and a volume will be obtained

- The first scan will be the test scan to determine if all required information has been obtained.
- Obtain the type and number of scans indicated by the protocol for which the scans are being performed
- Repeat steps 3-7 if necessary.
- Save all volumes to the hard-drive and archive to an external drive

D. Obtaining Other Ultrasound Images imaging for other types of scans should be carried out according to the protocol for which the scans are being obtained. The sonographer and/or the study physician should define specific steps for image acquisition based on the protocol.

ULTRASOUND EXAMINATION PROCEDURES

Relating to all ultrasound examinations, the sonographer should be aware of locally agreed standards of practice and current guidelines of other professional bodies and organizations. The following points should be considered for all ultrasound examinations:

- The clinical details provided are sufficient to carry out the examination requested and the correct examination has been requested
- Relevant information is available from the case notes, previous investigations and other sources
- The role of the ultrasound examination is understood in the clinical context for the patient
- Informed consent is obtained before proceeding with the examination
- The necessity for the presence of a chaperone and/or an interpreter
- A systematic scanning approach that can be modified according to the individual patient
- The implications should the examination be incomplete
- The need to extend the ultrasound examination, and/or proceed to additional imaging techniques where necessary in accordance with locally agreed protocol
- The after care of the patient
- The potential risks involved in the procedure to the patient
- Appropriate national and local Health and Safety regulations including infection control

COMMUNICATION

Whilst undertaking any ultrasound examination and working in accordance with locally agreed practice, the sonographer should:

- Obtain sufficient verbal and/or written information from the referring clinician to undertake correctly the examination requested
- Be mindful of the need to use interpreters as and when necessary to communicate adequately with the patient
- Greet the patient using his or her full name and status
- Be able to discuss the relative risks and benefits of the examination with the patient
- Explain the scanning procedure appropriately to the patient

- Obtain informed consent from the patient or their representative being mindful of his/her capacity to understand
- Be aware of the individual patient's special needs including chaperoning and privacy during the examination
- Be professional and understanding throughout the examination; manage the interaction between the patient and any accompanying adults and children in a way that enables the examination to be carried out to a competent standard
- Explain and discuss the findings with the patient
- Interpret and communicate the findings appropriately and in a timely fashion to the referring clinician
- Ensure appropriate arrangements have been made for further care before the conclusion of the examination

SAFETY

It is the responsibility of the sonographer to be aware of and apply the current safety standards and regulations and to undertake a risk/benefit assessment for each examination. The sonographer should be responsive to:

- Potential bio-effects of ultrasound and the need to minimize dose at all times
- Potential hazards arising from the particular ultrasound equipment
- Relative risks for each application
- conditions where current recommendations contra-indicate the use of certain types of ultrasound equipment
- Current guidelines regarding replacement of ultrasound equipment

The sonographer's **responsibilities** in relation to the ultrasound equipment should include:

Appropriate selection for the examination and awareness of its limitations within that clinical context

Manipulation of the controls to maximize the clinical information observed

- Awareness of system artifacts and how to interpret their appearances
- ensuring that the equipment is suitably maintained to provide optimal images
- ensuring that all transducers are appropriately prepared and cleaned according to the manufacturers' guidelines, with especial reference to intra-cavitary probes
- Awareness of and adherence to local infection control procedures
- ensuring that the recorded image is an accurate record of the displayed real-time information
- following the proper shut-down procedure for the equipment, so that stored data and settings are not corrupted or lost
- Inspection for electrical and mechanical safety, ensuring that apparently unsafe equipment is not used until it has been checked and repaired

- Agreement of equipment performance criteria for each type of examination undertaken. (This should be updated regularly, in line with new developments in equipment carry performance)
- reporting any concerns in relation to the performance of specific equipment
- Awareness of current guidelines regarding the replacement of ultrasound equipment

PEDIATRIC AND NEONATAL INTENSIVE CARE UNIT SERVICES

Standard Operating Procedures

	Name	Designation	Signature & Date
Prepared by		Medical Officer	
Reviewed by		Pediatrician/In-charge Neonatal Care Unit	
Approved by		Superintendent/Hospital In-charge	

TABLE OF CONTENTS:

Sr. No.	Contents	Page No.
1.	Purpose	25
2.	Scope	25
3.	Responsibility	25
4.	Definitions	26
5.	Abbreviations	26
6.	Applicable regulations & guidelines	26
7.	Procedure	26
8.	References	29
9.	Annexure/Attachments	29

1. PURPOSE

The purpose of this SOP is to describe the procedures to be undertaken by the team of staff members of neonatal care unit to ensure provision of appropriate and quality services keeping in mind the safety of the neonate as first priority.

2. SCOPE

The procedures described in this SOP are for appropriate provision of out-patient and in-patient neonatal health care in a standard manner in all hospitals and clinics of Deepak Medical Foundation providing neonatal health care.

3. RESPONSIBILITY

- 3.1. The Head/In-charge of Neonatal Care Unit will be responsible for overall implementation of this SOP.
- 3.2. The Medical Officers and nursing staff will be responsible for undertaking the neonatal health care under the guidance of the Head/In-charge
- 3.3. All other support staff such as hospital administrator, house-keeping staff and other support staff of the hospital and clinic will be responsible to support in provision of the services.

4. DEFINITIONS

Standard Operating Procedures (SOPs)

Detailed, written instructions to achieve uniformity of the performance of a specific function (ICH GCP 1.55).

Adverse Event (AE): Any untoward medical occurrence in a patient or clinical investigation subject administered a pharmaceutical product and which does not necessarily have a causal relationship with this treatment. An adverse event (AE) can therefore be any unfavorable and unintended sign (including an abnormal laboratory finding), symptom, or disease temporally associated with the use of a medicinal (investigational) product, whether or not related to the medicinal (investigational) product (see the ICH Guideline for Clinical Safety Data Management: Definitions and Standards for Expedited Reporting).

Serious Adverse Event (SAE): Any untoward medical occurrence that at any dose: results in death, is life-threatening, requires inpatient hospitalization or prolongation of existing hospitalization, results in persistent or significant disability/incapacity or is a congenital anomaly/birth defect.

5. ABBREVIATIONS

AE	Adverse Event
CRF	Case report form
GCP	Good Clinical Practice
IPD	In-Patient Department
HIV	Human Immunodeficiency Virus
MO	Medical Officer
NICU	Neonatal Intensive Care Unit
OPD	Out Patient Department
SAE	Serious Adverse Event
SOP	Standard Operating Procedure
WHO	World Health Organization

6. APPLICABLE REGULATIONS & GUIDELINES

- ICH guidelines for Good Clinical Practice E6 (R1)
- WHO Recommended Interventions for Improving Maternal and Newborn Health, WHO/MPS/07.05, WHO, 2009

7. PROCEDURE

7.1. Registration

At a minimum level all patients attending Deepak Foundation Hospital/clinic services should be registered in a dedicated register and should receive a unique registration number. The service is linked to record maintenance and thus patient's unique registration number should be reflected in all the records of the patient. It is also important for monitoring and evaluation purpose. A Case Record Form should be prepared for each patient with the unique registration number.

7.2. Outpatient Treatment

The new-born or neonate that visit the clinic or hospital or is referred from the labour room for any adverse event should be provided health care as per the following procedure.

Assessment: All new-borns / neonates should undergo clinical assessment (i.e. history taking and examination) by a trained and competent doctor/ paediatrician. For the purpose, adequate infrastructure (material and equipment) should be available ensuring comfort and privacy.

Counselling: Parents of the new-borns /neonates assessed by the trained doctor should receive counselling as per the clinical needs from the attending doctor.

Treatment prescription: Every patient should receive a prescription of the treatment advised to him.

The outpatient services should have provisions for both – the new patients as well as for the old patients for follow-up.

7.3. Inpatient Treatment

Inpatient treatment will be provided only in the dedicated beds/area of the hospital. While the duration of the in-patient treatment may vary as per the individual needs of the patients, all efforts must be made to provide the in-patient treatment for an adequate length of time. During the in-patient stay, following services should be made available to the neonate:

- Assessment by the doctor(s): at least once per day during the morning rounds
- Availability of nursing care: Round the clock
- Availability of emergency care (on call doctor /Paediatrician): Round the clock
- Psychological interventions: whenever required
- Medicines
- Facility to meet visitors during specified visiting hours

Since most patients admitted in ward would be suffering from withdrawal symptoms, all efforts must be made to make their hospital stay comfortable.

The in-patient treatment period should be used to formulate the plans for long-term treatment and the same must be discussed with the patient/parents or guardian of the neonate. *(Note: While there may be certain restrictions during the inpatient stay (i.e. restrictions on bringing certain items inside the ward / restrictions on movements outside the ward etc.), the entire treatment should be provided only with the explicit informed consent of the patient/parents or guardian of the neonate. The patient should have a right to leave treatment any time if not satisfied from the services. However proper guidance should be provided for further treatment)*

7.3.1. The Process of Indoor Treatment:

- Informed consent regarding various treatment procedures should be obtained from the parents or guardian of the neonate by the treating doctor/paediatrician. The doctor should explain the details of the procedures before obtaining consent. Informed consent should be obtained from the parents or guardians.
- Before undertaking any surgery or diagnostic procedures, the consent form should be checked before starting any process. The parents should be prepared according to the guidelines and instructions from the doctor for the necessary procedures.
- Patient /Neonate should be accompanied by a staff with the necessary emergency kits or emergency tray (Annexure 2)
- After the procedure, the patient should be transferred back to the ward and vital parameters should be monitored
- In critically ill patients, continuous monitoring and supportive care should be ensured after admitting
- All visitors should contact or communicate with the reception desk and receive authorization and directions for visiting as suggested by duty nurse

7.3.2. *Transfer of babies to the Neonatal Care Unit from OPD or IPD:*

- Whenever new-born babies are transferred, the NICU staff should be informed.
- All detail history about the delivery, interventions and complications should be noted and all relevant forms should be duly filled and sent along with the patient to staff in NICU
- Babies should be transferred in the incubator with oxygen whenever necessary and should be accompanied by a nursing staff.

7.3.3. *Neonatal Intensive care unit indications: Secondary care :*

- Acute symptomatic treatment
- Monitoring
- Respiratory distress
- Fluid management
- Normal septicaemia
- Feeding management
- Vitals
- Phototherapy (jaundice)

Annexure 3 gives the detailed list of SAEs that may require admission in NICU.

7.3.4. *Discharge of the patient:*

- The parents should be informed about the tentative date of discharge
- Check the confidence of the parents regarding the child care and willingness about the discharge plan and provide counselling if required
- Clarify any doubts and questions regarding the child's disease
- Provide hospital discharge papers to the parents

7.4. *On Call Process:*

- A duty roster should be prepared monthly in consultation with the Head/In-charge of the Neonatal Care Unit and appointment of two members should be on call
- The duty roster should be for known to all and displayed at key location in the unit or hospital
- On call information board should be maintained strictly on daily basis.
- Concerned specialist on call should be consulted over phone depending upon the case. If necessary the specialist should be called to attend the case in person.
- If on call doctor, is too busy, next on call doctor should be informed. This should preferably be done by doctors not by nurses.
- If there are acute emergencies, next doctor on call should help. Second opinion can be taken if required.

8. REFERENCES

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9. ANNEXURES/ATTACHMENTS

- Annexure 1: WHO Guideline for Newborn Health
- Annexure 2: List of Emergency Pediatric Instruments & Medicines in the emergency tray
- Annexure 3: List of Critical Problems requiring admission in NICU

Annexure 1

WHO Guideline for Newborn Health Services

	Routine Care	Additional Care	Specialized Care
Newborn Care (birth and immediate postnatal)	○ Promotion, protection and support for breastfeeding ○ Monitoring and assessment of wellbeing, detection of complications (breathing, infections, prematurity, low birth weight, injury, malformation) ○ Infection prevention and control, rooming-in ○ Eye care ○ Information and counselling on home care, breastfeeding, hygiene ○ Postnatal care planning, advice on danger sign and emergency preparedness ○ Immunization according to the national guidelines (BCG, HepB, OPV-0)	○ Care if moderately preterm, low birth weight or twin: support for breastfeeding, warmth, frequent assessment of wellbeing and detection of complications e.g. feeding difficulty, jaundice, other perinatal problems ○ Kangaroo Mother Care follow-up ○ Treatment of mild to moderate - local infections (cord, skin, eye, thrush) - birth injuries ○ Pre-referral management of infants with severe problems: - very preterm babies and/or birth weight very low - severe complications - malformations ○ Supporting mother if perinatal death	○ Management of severe newborn problems - general care for the sick newborn and management of specific problems: ○ preterm birth ○ breathing difficulty ○ sepsis ○ severe birth trauma and asphyxia ○ severe jaundice ○ - Kangaroo Mother Care (KMC) ○ Management of correctable malformations
Essential			
Situational	○ Promotion of sleeping under Insecticide Treated Bed Nets	○ Presumptive treatment of congenital ○ Syphilis ○ Prevention of mother-to-child transmission of HIV by Anti Retro-viral Treatment ○ Support for infant feeding of maternal	○ Treatment of: ○ congenital syphilis ○ - neonatal tetanus

Postnatal Newborn Care (visit from home)	○ Assessment of infant's wellbeing and breastfeeding ○ Detection of complications and responding to maternal concerns ○ Information and counselling on home care ○ Additional follow-up visits for high risk babies (e.g. preterm, after severe problems, on replacement feeding)	choice ○ Management of: - minor to moderate problems and feeding difficulties ○ Pre-referral management of severe problems: - convulsions - inability to feed ○ Supporting the family if perinatal death	○ Management of severe new-born problems: - sepsis - other infections - jaundice - failure to thrive
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Essential

Annexure 2

List of Emergency Pediatric Instruments & Medicines in the emergency tray

Instruments

Sr. No.	Description
1	Mucus Extractor
2	Airway
3	Intracath No. 24
4	Scalp Vein Needles no. 24, 25
5	I.V. Sets
6	Infant Feeding Tube no.6,7
7	Endotracheal Tube no. 3, 3.5
8	Paediatric Laryngoscope
9	Ambulatory Bag
10	Oxygen Masks
11	Oxygen Cylinder
12	Oxygen Catheter
13	Pulse Oximeter
14	Torch
15	Syringe No. 2ml, 5ml, 10ml
16	Needle No. 20, 22, 24, 26

Medicine/ Injectable

Sr. No.	Description
1	Inject epinephrine .01 mg/kg/dose (corresponds to 1:1000 dilution, .01ml/kg/dose)
2	I. V. Glucose 5% -500 ml.
3	I.V. Glucose saline- 500ml
4	I.V. Isolyte-P- 500ml
5	Inj. Calcium Gluconate

List of Critical Problems requiring admission in NICU

- Severe respiratory distress
- Preterm
- Transient tachypnea of new born
- Meconium aspiration syndrome
- Birth asphyxia

- Apnea
- Those who requires continuous monitoring and ventilation
- Neonatal jaundice
- Feeding difficulty
- Neonatal pneumonia
- Congenital anomalies
- NEC (Necrotizing Enterocolitis)
- Hypoglycemia
- Hypothermia
- Neonatal convulsions
- Suspected case of sepsis
- Post-operative neonatal surgical cases

Occupational Health Services

Standard Operating Procedures

	Name	Designation	Signature & Date
Prepared by		Medical Officer	
Reviewed by		Industrial specialist /In-charge	
Approved by		Superintendent/Hospital In-charge	

TABLE OF CONTENTS:

Sr. No.	Contents	Page No.
1.	Purpose	36
2.	Scope	36
3.	Responsibility	36
4.	Definitions	37
5.	Abbreviations	37
6.	Procedure	37
7.	References	41
8.	Annexure/Attachments	42

1. PURPOSE

The purpose of this SOP is to describe the procedures to be undertaken by the team of staff members of occupational health center to ensure provision of appropriate and quality services keeping in mind the safety of the employees as first priority.

2. SCOPE

The procedures described in this SOP are for appropriate provision of periodic and pre-employment checkup in a standard manner in all hospitals and clinics of Deepak Medical Foundation providing occupational health care.

3. RESPONSIBILITY

- The Head/In-charge of Occupational health center will be responsible for overall implementation of this SOP.
- The Medical Officers and nursing staff will be responsible for undertaking the employee checkup under the guidance of the Head/In-charge
- All other support staff such as hospital administrator, house-keeping staff and other support staff of the hospital and clinic will be responsible to support in provision of the services.

ROLE OF THE MEDICAL CENTER OCCUPATIONAL HEALTH PROVIDER

MEDICAL ASSESSMENT OF EMPLOYEES

Occupational health practice in a medical center setting requires the same skills as such practice elsewhere, including thoughtful administrative management; knowledge of and

interactions with safety, industrial hygiene, and toxicology; and sound preventive and clinical medicine, including surveillance, assessment of history and physical findings, diagnosis, treatment, and disposition.

4. DEFINITIONS :

Standard Operating Procedures (SOPs)

Detailed, written instructions to achieve uniformity of the performance of a specific function (ICH GCP 1.55).

5. ABBREVIATIONS

PFT: Pulmonary Function Tests

ECG: Electrocardiogram

6. PROCEDURE

MEDICAL CHECK UP

Client Finalization process

- The business team to enquire about a particular company
- Then offer letter to be sent to the Company by the team.
- Then admin team to send the quotation to the Company.
- If the Company to accept the work order with the date of Medical check up and other details of the test to be given.
- Employee sheet format to be sent by the admin to the Company.
- After completion of form filling, date for the medical check up to be finalized.

a) Pre-employment check up

Registration

At a minimum level all employee/worker attending Deepak Occupational centre should be registered in a dedicated register and should receive a unique registration number form industrial software. The service is linked to record maintenance and thus employee/worker's unique registration number should be reflected in all the records. It is also important for monitoring and evaluation purpose. A Case Record Form should be prepared for each patient with the unique registration number.

Clinical Check up

- Patient goes to Doctor where clinical check-up is conducted
 - Then the nurse to direct the patient to the laboratory for sample collection.
 - Then patient to return to the doctor with the tests.
 - The admin to give the feedback form to the patient.
 - The feedback form to be filled by the patient.
 - The report to be made by the doctor.
 - Verification of the report to be done by the Consultant.
- After verification, the report to be submitted and bill is to be paid by the patient.

a) Medical checkup process

- Patient goes to Doctor where clinical check-up is conducted
- Then the nurse to direct the patient to the laboratory for sample collection.
- Then patient to return to the doctor with the tests.
- The admin to give the feedback form to the patient.
- The feedback form to be filled by the patient.
- The report to be made by the doctor.
- Verification of the report to be done by the Consultant.
- After verification, the report to be submitted and bill is to be paid by the patient

a. Check up at the Centre.

- Receptionist or duty nurse to guide the patient to the department.
- Doctor to check the work order given by the company and take a call to accept it.
- After the work order is accepted, thorough case history is taken by the Doctor/Consultant.
- In absence of the Medical Officer, industrial specialist to conduct the check-up.
- The X-ray technician to take the X-ray
- Audiometry technician to conduct the Audiometry test.
- Vision test to be conducted by the eye-specialist.
- Other tests like Spirometry, ECG to be conducted if necessary.
- The OHC in charge and the Medical Officer to guide the technician and help in the smooth functioning of various tests.
- Patient to be sent to the Laboratory where the blood tests should be carried out by the laboratory technician.
- After the completion of the entire tests patient to report to the department and consult the doctor before leaving.
- Feedback form to be given and collected from industry during payment collection.

5.2.1 Check up at the site

- The team of staff members Minimum 6 members of the staff (Doctor, Lab technician, Audio technician, Spiro technician, nursing staff, and administrator) to prepare the case records for the industry visit.
- In case of more than fifty employee check-up, there should be more staff members.
- All the necessary diagnostic equipments should be collected and carried to the industry centre by the respective persons.
- Laboratory technician- tool kit for blood and urine tests.
- Nurse- Sphygmomanometer, Stethoscope, pulse oxymeter, weight machine.
- Admin- Laptop and camera.
- Technician- vision charts and vision palate, Audiometer, spirometer, ECG machine
- Doctor- Case papers and list of employees.
- The samples taken for the laboratory tests to be brought to the hospital.

- The comprehensive report to be generated not later than 15 days of medical check-up done. (annexure attached approved report submission timeline)
- The industry consultant/specialist to check the report and sign it after the review.
- The report is to be sent to the respective company along with form no.33

5.3 Equipments

- 1. Calibration and quality control of Equipments**
- 2. Maintenance of Equipments**
- 3. Cleaning of Equipments**
- 4. Infection Control**

1. Calibration and quality control of Equipments

- Must be carried out regularly by trained staff.
- Calibration should be performed on the day of testing or at least before a week.
- It is to be carried out according to the manufacturer's direction.
- A hand copy of the calibration report should be filed every month.

2. Maintenance of Equipments

- Maintenance must be performed regularly by trained staff.
- Equipments should be checked at least monthly to ensure they have no visible signs of wear and damage.
- Any problem should be noted in the record book, along with the steps taken to remedy the problem.
- Any servicing performed should also be recorded in the record book.

3. Cleaning of equipments

- Cleaning is to be carried out by trained staff.
- Personnel must wear gloves at all times when handling equipment that has been in contact with the subject's mouth or nose.
- Equipment that is designed for one time use (mouthpiece) must be disposed off appropriately after each test.
- Equipment designed for multiple uses must be cleaned according to the manufacturer's direction.
- Equipments should be cleaned at least a week or more frequently if required by the number of tests being performed.
- Reusable equipment must be appropriately disposed if it shows visible signs of wear or damage.
- Cleaning of countertops
- Countertops should be wiped down with clean cloth and disinfectant spray at least once a week or more if required.

4. Infection Control

Nosocomial infections are a potential risk during PFT.

- Gloves must be used.
- Hands must be washed immediately and thoroughly before and after each test.

5.4 A. Outpatient Treatment

Assessment:

Counselling:

Treatment prescription: Every patient should receive a prescription of the treatment advised to him. WHO guidelines to be followed as described in Annexure 1.

The outpatient services should have provisions for both – the new patients as well as for the old patients for follow-up.

B. Inpatient Treatment

i. The Process of Indoor Treatment:

ii. Transfer of patients from OPD or IPD:

iii. Discharge of the patient:

- The parents should be informed about the tentative date of discharge
- Check the confidence of the parents regarding the child care and willingness about the discharge plan and provide counselling if required
- Clarify any doubts and questions regarding the child's disease
- Provide hospital discharge papers to the parents

b. On Call Process:

- A duty roster should be prepared monthly in consultation with the Head/In-charge occupational health centre and appointment of two members should be on call
- The duty roster should be for known to all and displayed at key location in the unit or hospital
- On call information board should be maintained strictly on daily basis.
- Concerned specialist on call should be consulted over phone depending upon the case. If necessary the specialist should be called to attend the case in person.
- If on call doctor, is too busy, next on call doctor should be informed. This should preferably be done by doctors not by nurses.
- If there are acute emergencies, next doctor on call should help. Second opinion can be taken if required.

7. REFERENCES

1. Global strategy on occupational health for all: The way to health at work http://www.who.int/occupational_health/globstrategy/en/index1.html, Accessed on 28 April, 2015

8. ANNEXURES

Annexure 1

WHO Guidelines for occupational health

The 10 priority objectives proposed by the strategy are as follows:

- Strengthening of international and national policies for health at work and developing the necessary policy tools
- Development of healthy work environment
- Development of healthy work practices and promotion of health at work
- Strengthening of occupational health services (OHS)
- Establishment of support services for occupational health
- Development of occupational health standards based on scientific risk assessment
- Development of human resources for occupational health
- Establishment of registration and data systems, development of information services for experts, effective transmission of data and raising of public awareness through public information
- Strengthening of research
- Development of collaboration in occupational health and with other activities and services.

Annexure 2

List of Emergency occupational health Instruments & Medicines in the emergency tray

Instruments

Sr. No.	Description
1	Needle holder
2	Tooth forceps
3	Plain forceps
4	Sponge holder
5	Plain Allies forceps
6	Plain Artery forceps
7	Curved Allies forceps
8	Gauze
9	Cotton swab

Sr. No.	Description
10	Bowl
11	Curved needle
12	Plain needle
13	Wound towel
14	Knife handle
15	Scissors
16	Stitch removal scissors
17	Gloves

Medicine/ Injectable

Sr. No.	Description
1	Inj. Atropine
2	Inj. Adrenaline
3	Inj. Hydrocortisone
4	Inj. Dexamethasone
5	Inj. Avil
6	Budicort/ Asthalin
7	Betadine
8	Savlon
9	Hydrogen peroxide
10	D.N.S (dextrose normal saline) I.V
11	Ringer Lactose I.V
12	D -5 Dextrose 5%
13	D-10 Dextrose 10 %, 15%, 25%
14	Silver sulphadiazine
15	Eye cool drops
16	Normal saline
17	Oxygen
18	Inj. T.T
19	Inj. Dicyclomine
20	Inj. BAL
21	Inj. Diclofenac
22	Tropamicin
23	Inj. Methylene Blue
24	5ml syringe

Annexure 3

List of Critical Problems requiring admission

- All hazardous chemical exposures and gases.

- Burns.
- Local injury.
- Acid burn.
- Cold burn.

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Equipments

Standard Operating Procedures

AUDIOMETRY

Standard Operating Procedures

	Name	Designation	Signature & Date
Prepared by		Medical Officer	
Reviewed by		Industrial specialist /In-charge	
Approved by		Superintendent/Hospital In-charge	

PRINCIPLES OF AUDIOMETRY

An audiometer gives calibrated noise signals of variable intensity, at different frequencies ranging between 250Hz or 500Hz, up to 8 kHz, into the headphones used for testing hearing. Audiometry should be conducted according to ISO 6189. The person's response to a 'barely audible' tone forms the basis of the test, so it is 'subjective'; this can be unsatisfactory if he/she is not participating fully -either because of inadequate instructions, noisy conditions, inattention or medico-legal factors affecting test compliance. A suitably soundproofed setting must be provided for testing. Persons must be correctly instructed and monitored during the test to ensure continued attention and compliance. Many audiometers have a facility for talking via microphone and headphones to the person in the test booth. This should be used if responses to audiometric tones seem exceptionally poor or are inconsistent.

OBJECTIVES OF HEARING CHECKS AND AUDIOMETRY The purpose of hearing checks and audiometric tests carried out as part of health surveillance is to provide early diagnosis of any hearing loss due to noise and to assist in the preservation of hearing of employees. Guidelines on Hearing Checks and Audiometry

The "hearing check" requires:

- Taking of a medical history of the worker, with particular reference to ear problems and existing ear protection use.
- Examination of the external auditory canal and the tympanic membrane.
- The (audiometric) screening test.

PROCEDURE

Step 1: The better ear is tested first in order to determine the need for masking.

Step 2: Start with a 1000 Hz tone at a level above the threshold to allow easy identification of the tone. This tone is selected because it is an important speech frequency, and the patient is less apt to mistake the frequency. If the patient is suspected to be having a profound hearing loss then the testing should be started with 250Hz frequency. This is because of the fact that the individuals with profound hearing loss often have testable hearing only in the low frequency range.

Step 3: The patient's understanding of the listening task should be checked by using both short and long duration test tones. The patient should be instructed to raise the index finger as soon as the sound is heard.

Step 4: During testing, the examiner should vary the interval between tone presentations to avoid telegraphing the stimulus. Tone should not be presented while the attenuator dial is being rotated, because switching artifacts may contaminate the results. As the threshold levels are being reached, a check should be made for the existence of abnormal tone decay. This is done by sustaining the tone for several seconds longer than usual. If the index finger drops before the tone is discontinued, abnormal tone decay should be suspected.

Step 5: The starting intensity of the test tone is reduced in 10 dB steps following each positive response, until a hearing threshold level is reached at which the subject fails to respond. Then, the tone is raised by 5 dB, if the subject hears this increment, the tone is reduced by 10 dB; if the tone is not heard then it is raised by another 5 dB increment. This 5 dB increment is always used if the preceding tone is not heard, and a 10 dB decrement is always used when the sound is heard. The threshold is defined as the faintest tone that can be heard 50% or more of the time, and is established after several threshold crossings.

Some basic scheme for classifying severity of hearing loss is necessary. Although there is no one universally accepted method of defining degree of hearing loss, the following system is generally representative of the various schemes currently in use: „ 0-25 dB Hearing within normal limits „ 26-40 dB Mild hearing loss „ 41-55 dB Moderate hearing loss „ 56-70 dB Moderately severe hearing loss „ 71-90 dB Severe hearing loss „ 91+ dB Profound hearing loss

INTERPRETATION OF AUDIOGRAM

Young adults without major noise exposure or identified hearing loss in the past are the 'baseline hearing comparison point' for other workers. Normal hearing is NOT 0dB across all frequencies. On average, men have slightly worse high frequency hearing than women (ISO 7029:2000) but this may not show in 5dB step audiometry until about the age of 30. 2.6.1 Method of Categorization: An experienced medical specialist such as a specialist occupational physician or otolaryngologist (ENT) will not normally require assistance in assessing an audiogram. The categorization system exists simply to allow for simple triage by a non-specialist of audiogram. It allows, for example, for an occupational health nurse to identify those who might need further assessment, those who might require repeat testing and those who can safely be allowed routine follow up. It is NOT a diagnostic tool. It does not for example differentiate NIHL from hearing loss for any other reason. It is also NOT a means for assessing disability for compensation or other purposes and should never be used for that reason. Whilst the system will identify most persons who require follow up it is important to remember that these are guidelines only and if a tester has any concerns for any reason with

regard to an individual they should request further assessment or advice regardless of the classification. It should be noted that while broadly similar principles apply as did to the previous categorization system there are significant changes. The tables have changed in order to better identify those who would benefit from further action. In addition the numerical values have changed. It is appreciated that this may cause some initial confusion and will require some extra explanation to workers familiar with the previous systems. However the new system has the advantage that it will require less software adjustments to computerized audiometers which are now increasingly commonly used. Guidelines on Hearing Checks and Audiometry

Description of Exam Room in MEC Hearing testing is conducted in the audiometry room, located in Trailer #4 of the Mobile Examination Center (MEC). A special sound booth (manufactured by Acoustic Systems, model Delta 143) has been built into this room. This triangular-shaped booth is designed to ensure that the sound levels inside are sufficiently quiet to permit accurate hearing threshold measurements. In addition to the sound booth, the exam room has several other features designed to further reduce the sound levels in the room. These include sound dampening materials on the interior walls of the exam room and a rubber seal on the exterior door. The area outside the sound booth includes two separate work areas for the technician. One of the work areas is located in front of the audiometric booth just under the window, and consists of a small custom-built triangular table with the audiometer on top and the computer tower beneath. The placement of the table allows the technician to observe the examinee during air conduction testing, yet helps ensure that the examinee is unable to observe the technician in order to prevent any inadvertent cueing which would compromise the test results. The second work area is located to the side of the booth, and includes a desk area and upper and lower storage cabinets for supplies and spare equipment. There is an additional work area inside the sound booth which holds the remaining audiometric equipment as well as supplies needed during the examination. The computer display and keyboard are also located in this work area to facilitate data entry during the exam. The entire audiometric exam is conducted with the SP seated inside the booth. Examinees must step over a raised threshold to enter the sound booth. The threshold is approximately 4 inches high. A portable metal wheelchair ramp is available to facilitate the movement of examinees in wheelchairs or with other mobility problems in and out of the booth. The ramp can be lifted out of the way and stored by the work area to the side of the booth when not in use.

List of **Equipment and Supplies**

- 1) Audiometer
- 2) Bone conduction Ear phones.
- 3) Indicator
- 4) P.C
- 5) Tympanometer
- 6) Otoscope
- 7) Headphone selector box and audiometer patch cords
- 8) Standard photographic tripod „

- 9) Large and small flathead screwdrivers; small Philips screwdriver „
- 10) Hex wrench „
- 11) Petroleum jelly „
- 12) Pipe cleaners „
- 13) Alcohol (bottle or prep pads) „
- 14) Cotton-tipped swabs

The **Categorization system** has **4 separate steps**

STEP 1 — Categorization of hearing level Calculate the appropriate sum value for the hearing levels obtained at 1, 2, 3, 4 and 6 kHz frequencies so that a single value is obtained for each ear. This sum of frequencies has been chosen as being representative of the effects of NIHL. Although this scheme recommends a sum of hearing levels at specific frequencies, it is important that audiometry is still conducted at 0.5 and 8 kHz. Table 1 provides details of the four categories.

. If the sum for each ear is **BELOW** the Warning level, that individual is placed in **Category 1** (acceptable hearing ability) (this approximately equates to category 5 or 0 under the old system, but as the tables differ, there is not exact equivalence).

If the sum for either ear **EXCEEDS** or **EQUALS** the listed figure for the Warning level for the relevant age and gender the individual is categorized as **Category 2** (mild hearing impairment). The individual should be advised of results (this approximately equates to category 4 under the old system, but as the tables differ, there is not exact equivalence). Normally it is not necessary to refer all of these cases but they, of course, can be at the discretion of the responsible doctor. The Warning level corresponds with the 20th percentile i.e. hearing level normally experienced by 1 person in 5. It may indicate developing NIHL. If the sum for either ear **EXCEEDS** or **EQUALS** the listed figure for the Referral level for the relevant age and gender the individual is categorized as **Category 3 (poor hearing)**. The individual should be advised of results and should be referred for review by a medical specialist in Occupational Medicine or Otolaryngology (ENT) (this approximately equates to category 3 under the old system, but as the tables differ, there is not exact equivalence). The Referral level corresponds with the 5th percentile i.e. hearing level normally experienced by 1 person in 20. It may indicate significant NIHL.

STEP 2 — Categorization based on rapid hearing loss If a previous hearing test on the individual is available within the last 3 years, it is necessary to look at the **RATE OF CHANGE**. For this we add the sum of the hearing thresholds at 3, 4, 6 kHz only in each ear. If the difference between the sums in these frequencies is 30dB or more this is designated as **Category 4** (rapid hearing loss). The individual should be advised of results and should be referred for review by a medical specialist in Occupational Medicine or Otolaryngology (ENT) (this approximately equates to category 1 under the old system, but as the tables differ, there is not exact equivalence). It is of course possible that a single audiogram can satisfy the criteria for **Category 2 or 3 AND 4**. This in effect does not matter as it will require review by

a specialist in Guidelines on Hearing Checks and Audiometry 13 any event. For statistical analysis the audiogram can be classified as the highest number or if preferred can have dual classification i.e. **Category 3 and 4.**

STEP 3 — Classification on unilateral hearing loss for this we add the sum of the hearing thresholds at 1, 2, 3, 4 kHz only for both ears. If the difference between the ears is greater than 40dB, the individual should be advised of results and should be referred for review by a medical specialist in Occupational Medicine or Otolaryngology(ENT) (this approximately equates to category 2 under the old system, but as the tables differ, there is not exact equivalence). It should be noted that this does not attract a formal category but can be classified as **Category 5** if required for statistical analysis. This type of loss is rarely occupational but should be assessed urgently, unless old, to rule out pathology such as an acoustic neuroma.

STEP 4 — Overview of audiograms. When a number of hearing tests are performed it is advisable that a group review of results be made by a medical practitioner experienced in such an assessment to ensure no relevant patterns emerge which were not identified by assessment of individual assessments. For example it might be noted that one group such as maintenance, is showing more rapid loss than another even though no individual shows excessive loss. This however may be very relevant in preventing NIHL in the workplace.

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http://www.hsa.ie/eng/Publications_and_Forms/Publications/Occupational_Health/audiometry.pdf, Accessed on April, 16.

http://www.cdc.gov/nchs/data/nhanes/nhanes_03_04/AU.pdf, Accessed on April 16

Spirometry

Standard Operating Procedures

	Name	Designation	Signature & Date
Prepared by		Medical Officer	
Reviewed by		Industrial specialist /In-charge	
Approved by		Superintendent/Hospital In-charge	

PROCEDURE

1. OVERVIEW

1.1 Overview of the Spirometry Exam Component

Spirometry, which means “the measuring of breath,” is a routinely used pulmonary function test (PFT) that measures the amount and speed of air that a person can inhale and exhale. Results from the test can be used to estimate lung function and aid in the diagnosis of certain respiratory disorders.

Spirometry requires maximal effort from the patient and it takes time to perform quality spirometry.

It is essential the procedure is carefully and clearly explained and to actively coach, coax, and motivate the patient to perform maximally. The volume and flow parameters measured are defined in the terms of maximal effort and maximal exhaled volume. The performance of spirometry while seated upright in a chair with both feet flat on the floor is the preferred method as this is the most stable position should the patient experience dizziness during the test.

The **key steps** are to instruct the patient to:

- 1. Breathe in fully** (the lungs must be completely full)
- 2. Seal the lips** and teeth tightly around the mouthpiece and then immediately...
- 3. BLAST** the air out as fast and as long as possible until the lungs are completely empty (10 seconds is optimal), and then...
- 4. Breathe in** fully again without removing the mouthpiece from the patient’s mouth
- 5.** Repeat the test until three acceptable and reproducible results/tests are obtained (up to a suggested maximum of 8 efforts)
- 6.** The highest FEV1 and FVC should be reported (along with other tests measurements dictated by the ordering physician), even if these are from separate blows. But must be from the same overall series of tests on the same day.

*Nose clips to be used on all patients to prevent loss of measured volume through the nose.

Acceptable Results and Real-Time Display Acceptable results are those that were initiated at full lung inflation and with maximum expiratory effort (without hesitation at the start, no pauses, or coughing throughout the blowing phase) until no more air can be expired from the lungs. The results are reproducible if there is less than 200ml variation in the FEV1 and FVC between the two best blows.

A spirometer that allows you to see the graph of the flow-volume loop curve in real-time and provides alert messages about test quality and patient performance makes it much easier to determine the acceptability of each test. It is preferable to have both a flow-volume loop and volume-time graphic so that the acceptability of the results can be easily judged.

Common Causes of Poor Quality Spirometry

- Sub-maximal effort (due to poor coaching, full bladder or full stomach)
- Failure to fully inflate the lungs prior to performing the forced exhalation
- Incomplete expiration (removing mouth from mouthpiece, coughing, etc.)
- Hesitation at the start of expiration
- Leaks (between the lips and mouthpiece; lack of nose clips)
- Poorly calibrated/maintained spirometer
- Untrained or poorly trained operator
- Inability to comprehend the instructions
- Coughing
- Glottic closure
- Obstruction of mouthpiece by the tongue or teeth
- Vocalization during the exhalation
- Poor posture (slouching or leaning forward)

Contraindications for Spirometry

Spirometry is a very safe procedure. However, it is physically demanding as it requires maximal patient effort and involves the generation of high airway and intrathoracic pressures. It is advisable that spirometry be delayed or cancelled for:

- Recent eye surgery
- Recent thoracic and/or abdominal surgery
- Aneurysms (cerebral, abdominal)
- Unstable cardiac function
- Hemoptysis of unknown origin (tuberculosis)
- Untreated Pneumothorax
- Chest and/or abdominal pain
- Nausea and diarrhoea
- Inability to comprehend instructions.

Additionally, children below the age of 7 may have difficulty in performing the test consistently or at all.

List of Equipment and Supplies All of the spirometry equipment meets the current ATS guidelines for accuracy and precision of diagnostic devices. A complete list of the equipment and supplies for this component is provided as follows:

Equipment and Supplies

EQUIPMENTS

- Spirometer
- Calibration syringe
- Spirometer hoses
- Temperature/barometric monitor
- Cardboard mouthpieces
- Spirometer hoses
- Stadiometer
- Scale
- Stool
- Wastebasket
- Container for PFT kits
- Container for clean hoses

SUPPLIES

- Tissues
- PFT kit (mouthpiece, nose clip, filter)
- Padded nose clips
- Stopcock grease
- Germicidal wipes
- Non latex gloves
- 9-Volt Batteries
- Cardboard mouthpieces

Des

cription of Equipment and Supplies

1. Spirometer

The Spirometer must meet three basic requirements:

- (1) The system must be as accurate as possible using available technology;
- (2) The system must have sufficient backup to prevent loss of at least basic spirometric parameters; and
- (3) The system must be reliable for use in remote field locations where subject testing time is limited.

2. Calibration Syringe

A calibration syringe will be used to calibrate the spirometer prior to the start of every session. The syringe consists of a 3-liter metal cylinder with a rubber seal piston. The purpose of spirometer calibration with the syringe is to check the volume accuracy of the spirometer

3. Temperature/Barometric Monitor

Barometric pressure and room temperature will be obtained using the Perception II Unit for Temperature/Barometric Pressure Measurement device along with the Weather Link Software for Perception. The spirometry software system is designed to automatically capture the temperature and barometric pressure from the measurement device for each exam. The temperature is set in Celsius (C°) and the barometric pressure in millimeters of mercury (MM).

4. Spirometer Hoses

The spirometer hose is a plastic, accordion-style breathing tube that attaches to the spirometer. Attached at the end of the hose is the plastic hose adapter. During spirometric

testing the participant will exhale forcefully through the tube into the spirometer. Hoses will be changed on a daily basis.

5. Wastebasket

A wastebasket will be kept in the exam room.

6. Container for PFT kits

A plastic container will be available to hold unused PFT kits.

7. Container for clean hoses

Spirometer hoses and hose adapters will be stored in a container. The clean hoses will be stored in the container labeled “clean hoses” and, once used, they will be stored in a plastic bag.

Supplies

1. PFT kits

The PFT kits consist of a filter, a cardboard mouthpiece, and a nose clip. Prior to performing spirometric testing, the technologist will insert a new filter into the hose adapter and ask the participant to insert the cardboard mouthpiece into the filter. The participant will be asked to wear a disposable nose clip during spirometric testing. After testing is completed, the technologist will remove and discard the used filter, mouthpiece, and nose clip in preparation for the next participant.

2. Padded Nose Clips

Those who have difficulty with the nose clip from the PFT kits will be given the padded nose clip to wear. The nose clip ensures maximal exhalation through the spirotube and prevents the participant from inhaling additional air through the nose. Participants unable to keep a nose clip on their nose will have to pinch their nose with their fingers. Participants may discard the nose clip after the testing is completed.

3. Cardboard Mouthpieces

Cardboard mouthpieces are provided in case a participant needs additional ones or for the technologist to use when demonstrating the maneuvers.

4. Stopcock Grease

After cleaning and disinfecting the spirometer, the technologist will apply valve lubricant or stopcock grease on the rubber O-ring that fits in the groove of the spirometer snout plate. The technologist should lubricate the O-ring lightly with the stopcock grease. **IMPORTANT:** Do not allow any lubricant on the metal snout plate itself

5. Germicidal Wipes Disposable, germicidal wipes are used to clean and disinfect the spirometer, especially the inner cavity into which participants have exhaled. The technologist should wear gloves during this process (see Section 2.4).

6. Non latex Gloves

A box of nonlatex gloves will be kept in the spirometry room for use by the technologist when cleaning/disinfecting spirometry equipment.

7. 9-Volt Battery

The battery will be used for the weather station.

REFERENCES

1. <http://www.wvasthma.org/Portals/4/How%20to%20perform%20spirometry%20aapp%202010.pdf>, Accessed on April 9. West Virginia Asthma Education and prevention program.
2. http://www.cdc.gov/nchs/data/nhanes/nhanes_07_08/spirometry.pdf .National Health and Nutrition Examination Survey. Accessed on April 9

X-ray Services

Standard Operating Procedures

	Name	Designation	Signature & Date
Prepared by		Medical Officer	
Reviewed by		Industrial specialist /In-charge	
Approved by		Superintendent/Hospital In-charge	

PROCEDURE

1. OUT PATIENTS

- Doctor to handover case paper to the patient advising X-ray for the diagnosis.
- Patient to go to the registration where Case paper is prepared and fee is paid.
- Receptionist or duty nurse to guide patient to the Department.
- X-Ray technician will first check the case paper and prescribed X-ray and will take the X-ray as per requirement and will inform the time required for the particular report. Patient to wait for the report result in the waiting area of the hospital
- The X-ray is to be sent to the Radiologist by mail with the help of CR system for diagnosis.
- After the Report reaches the hospital, it is to be checked by the Consultant doctor and given to the patient.
- The Consultant will counsel the patient and give proper instructions according to the report.

• REFERRAL OF PATIENTS

- Patients are referred from companies and sent to DOHC with their case history report.
- General Patients come to reception with prescribed X-Ray request form and get registration number from the registration clerk.
- Prescribed fee per film is charged from patient by the registration clerk.

3. FOR PERSONAL PROTECTION

- The technician to wear a lead apron, personal protection badge.

- All females should be enquired about pregnancy and consulted by the Industry Specialist if necessary.
- The walls of the X- ray room should be as per the AERB guidelines.
- There should be sufficient area for the movement of trolleys and patients and movement.

REFERENCES

Nil.

ANNEXURES

Deepak Foundation X-ray services cost.

SR NO.	SERVICES	COST
1	General X-ray	200
2	Company X-ray	150

ECG Services

Standard Operating Procedures

	Name	Designation	Signature & Date
Prepared by		Medical Officer	
Reviewed by		Industrial specialist /In-charge	
Approved by		Superintendent/Hospital In-charge	

DEFINITION

An electrocardiogram (ECG or EKG) is one of the simplest and fastest procedures used to evaluate the heart. Electrodes (small, plastic patches) are placed at certain locations on the chest, arms, and legs. When the electrodes are connected to an ECG machine by lead wires, the electrical activity of the heart is measured, interpreted, and printed out for the doctor's information and further interpretation.

Reasons for the procedure

Some reasons for the doctor to request an ECG include, but are not limited to, the following:

- To determine the cause of chest pain
- To evaluate other signs and symptoms which may be heart-related, such as fatigue, shortness of breath, dizziness, or fainting
- To identify irregular heartbeats
- To determine the status of the heart prior to procedures such as surgery and/or after treatment for conditions such as a heart attack (myocardial infarction, or MI), endocarditis (inflammation or infection of one or more of the heart valves), or after procedures such as heart surgery or cardiac catheterization
- To assess the function of an implanted pacemaker
- To determine the effectiveness of certain heart medications
- To obtain a baseline tracing of the heart's function during a physical examination that may be used as a comparison with future ECGs, to determine if any changes have occurred

There may be other **reasons** for a doctor to recommend an ECG.

Risks of the procedure

An ECG is a quick, noninvasive method of assessing the heart's function. Risks associated with ECG are minimal and rare.

Prolonged application of the adhesive electrode patches may cause tissue breakdown or skin irritation at the application site.

There may be other risks depending on the patient's specific medical condition. The Doctor to discuss any concerns with the patient prior to the procedure.

Certain factors or conditions may interfere with or affect the results of the test. These include, but are not limited to, the following:

- Obesity, pregnancy, or ascites (accumulation of fluid in the abdomen)
- Anatomical considerations, such as the size of the chest and the location of the heart within the chest
- Movement during the procedure
- Exercise or smoking prior to the procedure
- Certain medications
- Electrolyte abnormalities, such as too much or too little potassium, magnesium, and/or calcium in the blood

Before the procedure:

- Your doctor or the technician to explain the procedure to the patient and offer the opportunity to ask any questions that he/she might have about the procedure.
- Generally, fasting is not required before the test.
- Doctor to note down and make a record of all medications (prescribed and over-the-counter) and herbal supplements that the patient is taking.
- Doctor to ask if the patient has a pacemaker.
- The Doctor to request other specific preparation based on the patient's medical condition.

During the procedure

An ECG may be performed on an outpatient basis or as part of your stay in a hospital. Procedures may vary depending on your condition and your doctor's practices.

Generally, an ECG follows this process:

- Technician to ask the patient to remove any jewellery or other objects that may interfere with the procedure.
- Technician to ask the patient to remove clothing from the waist up. He will ensure patient's privacy by covering him/her with a sheet or gown and exposing only the necessary skin.
- Patient to lie flat on a table or bed for the procedure. It will be important for the patient to lie still and not talk during the procedure, so as not to interfere with the tracing.
- If the patient's chest, arms, or legs are very hairy, the technician may shave or clip small patches of hair, as needed, so that the electrodes will stick closely to the skin.

- The technician to attach Electrodes to chest, arms, and legs.
- The lead wires will be attached to the skin electrodes.
- Once the leads are attached, the technician may key in identifying information about the patient into the machine's computer.
- The ECG will be started. It will take only a short time for the tracing to be completed.
- Once the tracing is completed, the technician will disconnect the leads and remove the skin electrodes.

After the procedure

- The patient should be able to resume your normal diet and activities, unless the doctor instructs differently.
- Generally, there is no special care following an ECG.
- Doctor to make notes of any signs or symptoms the patient had prior to the test (for example, chest pain, shortness of breath, dizziness, or fainting).
- The doctor to give additional or alternate instructions after the procedure, depending on the patient's particular situation.

REFERENCES

http://www.hopkinsmedicine.org/healthlibrary/test_procedures/cardiovascular/electrocardiogram_92,p07970/, accessed on April 17

General Patients

Standard Operating Procedures

	Name	Designation	Signature & Date
Prepared by			
Reviewed by			
Approved by			

Sr. No.	Contents	Page No.
1.	Purpose	1
2.	Scope	1
3.	Responsibility	1
4.	Definitions	1
5.	Abbreviations	2
6.	Procedure	2
7.	References	7

1. PURPOSE

The purpose of this SOP is to outline and streamline the OPD and IPD services of the Deepak Foundation hospital in relation to handling of patients and provide quality of care and facilities for patient satisfaction.

2. SCOPE

The SOP applies to all personnel responsible and involved in the OPD and IPD services and overall management of the hospital to ensure smooth running in a standard manner.

3. RESPONSIBILITY

- The nursing staff, doctors, medical officers and Hospital administrator is responsible for conducting preventive and promotive services for patients in OPD Department through health education.
- To treat on ambulatory and domiciliary basis all cases. This can be treated in Out Patient Department.

4. DEFINITIONS

Standard Operating Procedures (SOPs)

Detailed, written instructions to achieve uniformity of the performance of a specific function (ICH GCP 1.55)

5. ABBREVIATIONS

SOP Standard Operating Procedure

OPD Out Patient Department

IPD In Patient Department

SOAP subjective, objective, assessment, and plan

6. APPLICABLE REGULATIONS AND GUIDELINES

Nil.

7. PROCEDURES

a. Registration

At a minimum level all patients attending Deepak Foundation Hospital/clinic services should be registered in a dedicated register and should receive a unique registration number. The service is linked to record maintenance and thus patient's unique registration number should be reflected in all the records of the patient. It is also important for monitoring and evaluation purpose. A Case Record Form should be prepared for each patient with the unique registration number.

- Patients go to the registration counter and deposit the registration fee.
- The patient receives the OPD slip at the registration counter after submitting the charges.
- Patient with OPD slip goes to the respective Department.
- Patient consults the doctor/consultant/medical officer and is guided by a nurse in case they need help.
- Patient can be sent to Emergency directly if necessary.
- At the time of examining in the OPD, if the consulting doctor feels that the patient needs admission and treatment, he/she advises for admission on the OPD slip and patient gets admitted in the Inpatient Department after IPD registration.

b. Outpatient Treatment

The patient that visits the clinic or hospital or is referred for any adverse event should be provided health care as per the following procedure.

Assessment: All patients to undergo clinical assessment (i.e. history taking and examination) by a trained and competent doctor/ consultant. For the purpose, adequate infrastructure (material and equipment) should be available ensuring comfort and privacy.

Counseling: Parents of the newborns /neonates assessed by the trained doctor to receive

counseling as per the clinical needs from the attending doctor.

Treatment prescription: Every patient to receive a prescription of the treatment advised to him.

The outpatient services should have provisions for both – the new patients as well as for the old patients for follow-up.

c. Inpatient Treatment

Inpatient treatment will be provided only in the dedicated beds/area of the hospital. While the duration of the in-patient treatment may vary as per the individual needs of the patients, all efforts must be made to provide the in-patient treatment for an adequate length of time. During the in-patient stay, following services should be made available to the patient:

- Assessment by the doctor(s): at least once per day during the morning rounds
- Availability of nursing care: Round the clock
- Availability of emergency care (on call doctor /medical officer): Round the clock
- Psychological interventions: whenever required
- Medicines
- Facility to meet visitors during specified visiting hours
- Access to facilities like newspaper, television (optional), food for parents/guardian of the patient.

Since most patients admitted in ward would be suffering from withdrawal symptoms, all efforts must be made to make their hospital stay comfortable.

The in-patient treatment period should be used to formulate the plans for long-term treatment and the same must be discussed with the patient/parents or guardian of the neonate. *(Note: While there may be certain restrictions during the inpatient stay (i.e. restrictions on bringing certain items inside the ward / restrictions on movements outside the ward etc.), the entire treatment should be provided only with the explicit informed consent of the patient/parents or guardian of the neonate. The patient should have a right to leave treatment any time if not satisfied from the services. However proper guidance should be provided for further treatment)*

i. The Process of Indoor Treatment:

- Informed consent regarding various treatment procedures to be obtained from the parents or guardian of the patient or the patient himself by the treating doctor/consultant. The doctor should explain the details of the procedures before obtaining consent. Informed consent should be obtained from the patient and in case of neonates/children from their parents or guardians.
- Before undertaking any surgery or diagnostic procedures, the consent form to be checked before starting any process. The parents should be prepared according to the guidelines and instructions from the doctor for the necessary procedures.
- Patient /Neonate to be accompanied by a staff with the necessary emergency kits or emergency tray.
- After the procedure, the patient to be transferred back to the ward and vital parameters should be monitored
- In critically ill patients, continuous monitoring and supportive care to be ensured after admitting
- All visitors to contact or communicate with the reception desk and receive

authorization and directions for visiting as suggested by duty nurse

MEDICAL OFFICERS

- The Medical Officer to take the history of the patient and write the summary in SOAP format.
- He should discuss the case with consultant/ Physician and will act accordingly.
- House Officer should also consult the consultant as per requirement.
- He is supposed to write everything clear, medicines in capital letter and prescription and will sign the chit and also will write his / her name clearly.
- In case, the patient has to be referred, details to be clearly written in a referral form with the name and signature of the concerned Doctor/Consultant. Exact problem for which the patient is being referred should be written along with the area, documents and brief history.

CONSULTANTS

- All patients requested by the medical officer to be seen by the consultant.
- She/he to make a diagnosis of the disease will teach and train the medical officers and implement the training program for patient care.
- She/he should maintain the discipline and supervise every medical officer and other staff members.

8. REFERENCES

1. Muhammad Umar and Hamam-tul-Bushra, 2009 ‘Standard Operating Procedures For Health Professionals and Teaching Hospitals’, Holy Family Hospital, Rawalpindi, India. Accessed on April 7, 2015. <http://www.rawalianresearch.org/files/Standard%20Operating%20Procedures.pdf>
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3. Dr. N. C Das ,2011 ‘Organization and Management of OPD services. Accessed on April 7,2015. <http://hospiad.blogspot.in/2011/03/out-patient-department-opd-services.html>

Specialized OPD Services :

- 1) Vision Test
 - 2) Skin Test
-

Standard Operating Procedures

	Name	Designation	Signature & Date
Prepared by		Medical Officer	

Reviewed by		Industrial specialist /In-charge	
Approved by		Superintendent/Hospital In-charge	

VISION TEST

DEFINITION

A visual Acuity test is an exam that determines how well you can see the details of a word or symbol from a specific distance away. There are several different types of visual acuity test, most of which are very simple to carry out. Depending on the type of test and where it is conducted, the exam can be carried out by an optometrist, an ophthalmologist, an optician, a technician, or a nurse.

Visual acuity refers to the ability to discern the shapes and details of the things you see. It is just one factor in your overall vision, alongside colour vision, peripheral vision, and depth perception.

There are no risks associated with visual acuity tests, and no special preparation is required.

PURPOSE

A visual acuity test is one part of an overall eye examination. If one feels that he/she is experiencing a vision problem, or if vision has changed, an eye exam may be necessary.

Optometrists, driver's license bureaus, and many other organizations also use this test to check your ability to see.

PROCEDURE

One widely used visual acuity test is the **Snellen test**. This test uses a chart of letters or symbols of different sizes, arranged in rows and columns.

It uses the vision chart you are probably used to seeing in your school nurse's office or doctor's office. Viewed from a specific distance—usually 14 to 20 feet away—this chart can help determine how well you can see letters and shapes.

- The patient to sit at a specific distance from the eye chart and will be asked to cover one eye with his hand or a piece of cardboard or plastic.
- The Doctor to ask the patient to read out loud the letters that he can see with uncovered eye. This process is then repeated with the other eye.
- Typically, the patient will be asked to read smaller and smaller letters until he can no longer accurately make those letters out.

Another frequently used visual acuity test is called “**Random E’s.**” This involves the patient identifying the direction that the letter “E” is facing. Looking at the letter on a chart or projection, the patient points up, down, to the left, or to the right, depending on the direction that the letter is facing.

INTERPRETATION

Visual acuity is expressed as a fraction, such as 20/20. Having 20/20 vision means that your visual acuity at 20 feet away from an object is normal. Alternatively, say, 20/40 vision means that you need to be 20 feet away to see an object that people can normally see from 40 feet away.

If your visual acuity is less than 20/20, your vision may need to be corrected with eyeglasses, contact lenses, or surgery. You might also have an eye condition, such as such as an eye infection or injury, which may need to be treated. You and your doctor will discuss your test results, as well as any treatment or correction that might be necessary.

ISHIHARA’S TEST FOR COLOUR-BLINDNESS

- This is a colour perception test for red-green colour deficiencies.
- It is conducted to diagnose colour blindness in patients/employees.
- The employees are asked to interpret the number from a series of colour plates which have patterns of dots.
- If patient is found with a gross abnormality/ color blindness then he/she is to be referred to Government General Hospital/ Medical Board for further evaluation and diagnosis.

REFERENCES

‘Visual Acuity tests’ by Mike Harkin, July 2012. <http://www.healthline.com/health/visual-acuity-test#Results> Accessed on 22 April, 2015.

SKIN TEST

PROCEDURE

- 1) Patient to collect case paper from the Reception
- 2) The nurse to guide the patient to the department
- 3) The skin specialist to check the patient and accordingly diagnose the problem
- 4) Industry specialist to be consulted if necessary.
- 5) Case paper to be handed over to the patient and doctor to refer the patient if needed.

Nursing and Administrative services

Standard Operating Procedures

	Name	Designation	Signature & Date
Prepared by			
Reviewed by			
Approved by			

TABLE OF CONTENTS:

Sr. No.	Contents	Page No.
1.	Purpose	84
2.	Scope	84
3.	Responsibility	84
4.	Definitions	84
5.	Abbreviations	85
6.	Applicable regulations & guidelines	85
7.	Procedure	85
8.	References	87
9.	Annexure/Attachments	87

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1. PURPOSE

The purpose of this SOP is to outline and streamline the nursing & admin services of the Deepak Medical Foundation Hospital in relation to the handling of patients.

2. SCOPE

The SOP applies to nursing staff and hospital administrator involve in the management of the hospital and to ensure they are managed in a standard manner. This SOP is also applicable to all hospitals of Deepak Foundation.

3. RESPONSIBILITY

The, nurses, hospital administrator is responsible for conducting & completion of the entire assigning task by doctors.

4. DEFINITIONS

Detailed, written instructions to achieve uniformity of the performance of a specific function (ICH GCP 1.55).

5. ABBREVIATIONS

SOP Standard Operating Procedure

6. APPLICABLE REGULATIONS & GUIDELINES

Nil

7. PROCEDURE

Code of conduct

- All the nurses are expected to perform their tasks as per the duties assigned by the nurse in charge or hospital administrator.
- A nurse is expected to be punctual in attendance and duty timings. In case she/he is late for any genuine reason then the same should be presented to the nurse in charge or hospital administrator in writing.
- Nurses are liable to be transferred from one ward to another and must accept the decision of the nursing head (superintendent). In case of any genuine reasons for not accepting the transfer, the same would have to be stated in writing to the nursing superintendent.
- In case a nurse wants a transfer from one hospital to another, the same would have to be addressed to the nursing superintendent in writing.
- Nurses should not accept and/or demand any gifts in cash or kind from patients or their relatives.
- All patient information and other hospital information are to be considered confidential and should not be communicated in any form to any unauthorized staff/person.
- As employees of the hospital, nurses are strictly prohibited from giving any medicine to any person except to those it is ordered to be given by the treating doctor to the patients.
- Prior intimation about daily duties of the Nursing staff will be appropriately notified, in the duty schedule. Any changes in the duty would require prior written request and approval of the nurse in charge.
- The admitting nurse must carry out all the ward formalities promptly and courteously.
- Good nursing practice should be followed 24 hour schedule of nursing care from the time of admission to discharge.
- The nursing staff should ensure that effective patient care is being provided in the hospital.
- At the time of discharge the nursing staff should educate and counsel the patient regarding the post-operative instructions and care they need to take at home.
- On duty, nurses should be in station and be attentive all the time.
- Sleeping during duty hours is prohibited.

Dress Code

- On duty the nurses should wear clean and tidy uniforms as prescribed by the institution.
- All the nurses should always put on their respective identity cards for security purposes.
- Act with composure towards all the patients even if the patient is being troublesome and/or is in the wrong. Report the matter to the Nursing head (Superintendent) who would do the needful.

Equipment Maintenance

- Ensure that all the equipment's are in good working condition and are providing the correct information/data.

- All the equipment should be handled by the nurses, hospital administrator and/or technicians and no other unauthorized person should be allowed to handle any of the equipment's.
- All the required material for the functioning of the equipment should be requisitioned on a regular basis and inventory records for the same should be maintained.
- Nurse in-charge/hospital administrator/Technician should inform the Bio-Medical/Maintenance engineer, if the required periodic/annual maintenance of any equipment has not been carried out.

Record Keeping

Appropriate records are to be maintained for the smooth functioning of the hospital in the areas of:

- Inventory of drugs
- Cases of clients with the name of the treating physician/consultant
- Maintain a log book for recording the breakdown of any equipment (the data required would be equipment name, company name, if on maintenance contract (yes/no), time/date of failure, time/date of equipment made functional, reported to whom)
- Record has to be maintained, if the equipment is borrowed by any department and when it has been returned
- Other necessary records for management purposes should be maintained like: Ward rounds – timings.
- Ensure that all the clinical records are being maintained appropriately by the respective treating doctors

Ward Management

- The Nurse should know her ward thoroughly with detailed knowledge of the activities, equipment status, doctor visits, ward procedures etc. She/he must be completely aware of the hospital policies and their implications on the ward operations and the interrelated departments of the hospital.
- The nurses should be familiarized with ward/OT procedures, equipment functioning, furniture and fixtures, types of cases admitted -their criticality and level of care etc.
- The nurse in-charge is to draw a schedule of activities on a daily basis, to be followed by the other nurses.
- The nurse should not leave the station until and unless the next duty nurse has reported to duty and the new nurse being briefed.
- Orientation of all new nursing staff is required to guide and instruct them with the policies of the ward management, duty structuring, routine for emergencies, familiarize with the equipment, supplies, store and medicines of the ward.
- The New staff should be assigned to a senior staff nurse for one week to become conversant with the procedures of the ward.
- All the medicines and other items indented are to be maintained in a log book, which would enable check pilferage.

8. REFERENCES

Nil

9. ANNEXURES/ATTACHMENTS

Nil

Laboratory Services

Standard Operating Procedures

	Name	Designation	Signature & Date
Prepared by			
Reviewed by			
Approved by			

TABLE OF CONTENTS:

Sr. No.	Contents	Page No.
1.	Purpose	89
2.	Scope	89
3.	Responsibility	89
4.	Definitions	89
5.	Abbreviations	90
6.	Applicable regulations & guidelines	90
7.	Procedure	90
8.	References	90
9.	Annexure/Attachments	91

1. PURPOSE

The purpose of this SOP is to outline and streamline the laboratory activity of the Deepak Foundation Hospital in relation to the handling of patients.

2. SCOPE

The SOP applies to all personnel responsible for and involve in the management of patients in the laboratory and to ensure they are managed in a standard manner. This SOP is also applicable to all hospitals of Deepak Foundation.

3. RESPONSIBILITY

The laboratory technician is responsible for conducting the entire assigning laboratory tests by doctors for each new or old patient.

4. DEFINITIONS

Standard Operating Procedures (SOPs)

Detailed, written instructions to achieve uniformity of the performance of a specific function (ICH GCP 1.55).

5. ABBREVIATIONS

LT Laboratory Technician
SOP Standard Operating Procedure

6. APPLICABLE REGULATIONS & GUIDELINES

Nil

7. PROCEDURE

- Doctor to handover case paper to the patient prescribing tests required for the diagnosis.
- Receptionist or duty nurse to guide the patient to the Registration for payment of money.
- After payment, Receptionist or duty nurse to guide patient to the laboratory.
- Laboratory technician will first check the case paper and prescribed laboratory test and will collect the sample as per requirement and will inform the time required for the particular tests. Patient to wait for the laboratory result in the waiting area of the hospital.
- Laboratory technician will complete particular test suggested by duty doctor on receiving OPD case paper from patient.
- He will enter the lab details on laboratory register or computer for tracking process.
- In case of Emergency and urgent investigations, nurse will write “urgent” on the top of the case paper and inform the lab technician for collection of samples.
- After the completion of the tests LT will hand over the result to the patient and will send the patient to the consultant.
- The Consultant will review the test and provide necessary information.
- One female nurse should be present during the sample collection of the female child in absence of the mother or a female attendant.
- LT to go to the ward in case of bed ridden (post-operative) patient.
- If patient is unconscious or serious and unable to reach laboratory, duty nurse will collect the sample from the patient and he/she will hand over the same to the LT.
- Basic laboratory services which are available at Deepak Foundation and current laboratory rates are given in Annexure 1.

8. REFERENCES

Nil

9. ANNEXURES

Annexure 1: Deepak Foundation Laboratory Services Cost.

Annexure1: Deepak Foundation Laboratory Services Cost.

	DEEPAK MEDICAL FOUNDATION NANDESARI
	LABORATORY TEST LIST

S.no	Test Name	Tentative Market rate	D.M.F PRICE LIST RS. (rate)
1	CBC	200	80
2	HB	70	20
3	TC	70	20
4	BLOOD GROUP	30	20
5	ESR	50	20
6	MP	50	40
7	Platelet count	100	40
8	HIV	300	50
9	HBSAG	200	70
10	VDRL	150	50
11	URINE ROUTIN MICRO	70	40
12	RBS	40	30
13	FBS	40	30
14	PP2BS	40	30
15	WIDAL TEST	130	50
16	SEMEN TEST	150	100

	Biochemistry	Tentative Market rate	
17	SGPT	110	80
18	SGOT	110	80
19	ALP PHOSPHATESE	150	100
20	BILLIRUBIN	150	100
21	LFT	580	400
22	CHOLESTEROL	150	100
23	CREATINE	110	80
24	UREA	110	80
25	RBS	40	30
26	TRYGLYCERIDE	150	100
27	URIC ACID	120	100
28	CALICUM	250	120
29	CRP	250	150
30	PROTIENS/Albumin	120	80
31	RA Factor	250	100
32	LIPID PROFILE	450	350

Pharmacy Services

Standard Operating Procedures

	Name	Designation	Signature & Date
Prepared by			
Reviewed by			
Approved by			

TABLE OF CONTENTS:

Sr. No.	Contents	Page No.
1.	Purpose	94
2.	Scope	94
3.	Responsibility	94
4.	Definitions	95
5.	Abbreviations	95
6.	Applicable regulations & guidelines	95
7.	Procedure	95
8.	References	96
9.	Annexure/Attachments	96

1. PURPOSE

The purpose of this SOP is to outline and streamline the pharmacy activity of the Deepak Medical Foundation Hospital in relation to the handling of patients.

2. SCOPE

The SOP applies to all personnel responsible for and involve in the management of patients in the Pharmacy and to ensure they are managed in a standard manner. This SOP is also applicable to all hospitals of Deepak Foundation.

3. RESPONSIBILITY

- a. The Pharmacist is responsible for entire provision of medicines at hospital and assigning to patients as prescribed by doctors.

4. DEFINITIONS

Standard Operating Procedures (SOPs)

Detailed, written instructions to achieve uniformity of the performance of a specific function (ICH GCP 1.55).

5. ABBREVIATIONS

SOP Standard Operating Procedure
HA Hospital Administrator

6. APPLICABLE REGULATIONS & GUIDELINES

Nil

7. PROCEDURE

7.1 For OPD Patient

- Doctor to handover case paper to the patient prescribing medicines required for the treatment.
- Receptionist or duty nurse to guide patient to the Pharmacy counter.
- Pharmacy will first read prescribed medicines by doctors and check availability of medicines at pharmacy and enter details into the pharmacy software/ register and generate/make bill for tracking process
- Pharmacist will handover medicines to patient and also explain dosage how and when to take.
- He/she will provide bill and collect amount from patient.
- In case of Emergency and urgent investigations, nurse will write “urgent” on the top of the case paper and inform the pharmacist to provide medicines.
- Critically ill patient should be accompanied by nursing staff to the pharmacy.
- If patient is unconscious or serious and unable to reach pharmacy, duty nurse will support for getting medicines and medicine bill from the pharmacy and handover to patient
- Medicines available which are available at Deepak Foundation Hospital are given in Annexure 1.

7.2 For IPD Patient

7.2.1 IPD nurse to guide patient/attendant to the pharmacy for getting prescribed medicines.

7.2.2 Pharmacist to follow the same process as carried out for OPD patient.

7.3 For stock maintenance and dispensing

- 7.3.1 Pharmacists to physical verify the medicines stock in the last week of every month.
- 7.3.2 Prepare requisition as per need and stock availability and seek approval from Hospital In charge and submit to purchase department for order placement
- 7.3.3 Once the medicine stock is received, pharmacist will check expiry date of medicines, quantity and company name, if found ok then only accept otherwise inform HA for change procedure.
- 7.3.4 He/she will enter the medicine in the pharmacy software/register and store the medicine as per the instruction given on the medicine label.
- 7.3.5 Dispensing of medicine register to be maintained on daily basis
- 7.3.6 No expiry medicines to be stored in pharmacy
- 7.3.7 Proper process to be carried out for disposal of expiry medicines by HA

8. REFERENCES

Nil

9. ANNEXURES

Annexure 1: Deepak Foundation Pharmacy list

Annexure1: Deepak Foundation Laboratory Services Cost

Sr.No	Item Description	Category	Gynec	Pediatric	General+DOHC
1	Adrenaline	Inj	√		√
2	Anafortan	Inj			√
3	Anawin Heavy	Inj	√		√
4	Atropine	Inj	√		
5	Avil	Inj			√
6	Bacixone-S	Inj	√		
7	Betnesol	Inj	√		
8	Biocaine 2%	Inj	√		√
9	Calcium gluconate	Inj			√
10	Calmpose AMP	Inj			√
11	Campicillin	Inj			√
12	Carboprost	Inj	√		
13	Ciplox	Inj			√
14	Clavum 1.2 g	Inj	√		
15	Contramol	Inj	√		√
16	Cyclopam AMP	Inj	√		√
17	D 5 % 1000 ml	Inj	√		
18	D 5 % 500 ml	Inj	√		√
19	Dexona	Inj	√		√
20	Dextrose 25%	Inj	√		√
21	DNS 1000 ml	Inj	√		√
22	DNS 500 ml	Inj	√		√
23	Dolphen	Inj	√		
24	Dorcin 500 mg	Inj	√		
25	Dovion	Inj	√		
26	Duvadilan	Inj	√		
27	Dynapar AQ (30 ml)	Inj	√		√
28	Emeset	Inj	√		√
29	Epidosine	Inj	√		
30	Ethamo	Inj	√		
31	Febrinil	Inj	√		√
32	Ferikind	Inj			√
33	Fortwin	Inj	√		√
34	Glycopyrolate	Inj	√		
35	Haemacel	Inj	√		
36	Imferon	Inj			√
37	Inj. Calcium10%	Inj			
38	Inj. Dextrose 5%	Inj	√		
39	Inj. Medzol(10ml)	Inj	√		

40	Inj. Nirlyte P (250ml)	Inj		√	
41	Inj.Methealen blue	Inj			√
42	Intacaine gelly 2%	OINT	√		
43	Intagenta (Genticyn)	Inj	√		√
44	Jornac AQ	Inj	√		√
45	Ketmin (10 ml)	Inj	√		
46	Kistan 1.2 gm	Inj	√		
47	Lasix	Inj	√		√
48	Magnesium Sulphate	Inj	√		
49	Mephentermine	Inj	√		
50	Methargine	Inj	√		
51	Mezolam	Inj	√		
52	Mixogen	Inj	√		
53	Neurobin fort	Inj			√
54	Nirmet	Inj			
55	NS 100 ML	Inj	√		
56	NS 500 ML	Inj	√		√
57	Pencom 12	Inj			
58	Perinorm	Inj	√		
59	Phenergan	Inj	√		√
60	Propofol	Inj	√		
61	Rantac	Inj	√		√
62	Recocept 1 gm	Inj	√		
63	Recocept500gm	Inj		√	
64	Ringer Lactate (RL)1 lit.	Inj	√		
65	Ringer Lactate (RL)500 ml	Inj	√		√
66	Sintocinon (Oxytocin)	Inj	√		
67	Sodabicarb	Inj		√	√
68	Taxim 1 gm	Inj	√		
69	Tranostat	Inj	√		
70	Vit. K	Inj	√		
71	Vomiket	Inj	√		√
72	Vomikind	Inj			√
73	Water for Inj.	Inj	√		√
74	Xone 1gm	Inj	√		
75	Allvell	Tab	√		
76	Albendazole (armizole) 400mg	Tab	√		√

77	Alpha Dip	Tab	√		
78	Alphadopa 250 mg	Tab	√		
79	Argifil	Tab	√		
80	Atarax 20 mg	Tab		√	√
81	Avil 25 mg	Tab			√
82	Azithdor 250 mg	Tab			√
83	Beplex Forte	Tab	√		√
84	Bricanil	Tab			√
85	Calcium Lactate	Tab	√		√
86	Caldison 500 mg	Tab			√
87	Caldison 250 mg	Tab			
88	Calpol (500 mg)	Tab	√		√
89	Caniron 250 mg	Tab			√
90	Caniron 500 mg	Tab			√
91	Cefiket 100 DT	Tab	√		
92	Cefiket 200 mg	Tab	√		√
93	Cefpocket 100 mg	Tab	√		
94	Cefpocket 200 mg	Tab	√		√
95	Cetazet	Tab		√	
96	Ciplox 250 mg	Tab			√
97	Ciplox 500 mg	Tab			√
98	Clingen V	Tab	√		
99	Clotithem	Tab	√		
100	Cocef 100 DT	Tab			
101	Colispas	Tab	√		
102	Combiflam	Tab	√		√
103	Cronet plus	Tab	√		
104	Cyclopam	Tab	√		√
105	DAN	Tab	√		√
106	DAN-P	Tab	√		√
107	Deriphyllin	Tab			√
108	Deso 20 mg	Tab	√		√
109	Dio-1	Tab	√		
110	Diominic DCA	Tab	√		√
111	Doliprane	Tab			√
112	Domstal 10mg	Tab			√
113	Dorcal	Tab			√
114	Dorcical	Tab	√		
115	Dovion MD	Tab	√		
116	Doxinate	Tab	√		
117	Droxyl 500mg	Tab			√
118	Dubgeal	Tab	√		

119	Dulcolax	Tab	√		√
120	Duolaton L	Tab			
121	Duvdilan	Tab	√		
122	Dysmen	Tab	√		
123	Ecosprin 75 mg	Tab	√		√
124	Enzonop	Tab	√		√
125	Ethamstat 250 mg.	Tab	√		
126	FAS-3-KIT	Tab	√		
127	FDSON MP	Tab	√		√
128	FDSON-12	Tab	√		√
129	Feriket Z	Tab	√		√
130	Ferinop XT	Tab	√		√
131	Fix me 625 mg	Tab	√		√
132	FOL- 150	Tab	√		√
133	Folic Acid	Tab	√		√
134	Folinop	Tab	√		√
135	Folinop MD	Tab	√		√
136	Formalin	Tab	√		√
137	Forson	Tab	√		√
138	Fungnil V	Tab	√		√
139	G mox 250 mg	Tab	√		√
140	G moxil clav 625 mg	Tab	√		√
141	GC fer Z	Tab	√		
142	GC Trol	Tab	√		
143	Gravidol	Tab	√		
144	Iron-Folic	Tab	√		
145	Jornac Plus	Tab	√		√
146	Lariago DS	Tab			√
147	Lasix	Tab			√
148	Ledor	Tab	√		
149	Limcee	Tab	√		√
150	Livogen Z	Tab	√		√
151	Lynoral 0.01mg	Tab			√
152	Lynoral 0.05mg	Tab	√		
153	Maxical chewable tablet	Tab	√		√
154	Maxofen Plus	Tab			√
155	Mazical	Tab	√		
156	Mefcolic DP	Tab	√		
157	Meprate 10 mg	Tab	√		
158	Metrogyl 200 mg	Tab			√
159	Metrogyl 400mg	Tab	√		√
160	Metronidazole	Tab			√

161	Miprogen 200 mg	Tab	√		
162	Misoprost 100 mg	Tab	√		
163	Misoprost 25 mg	Tab	√		
164	Mox kid	Tab		√	
165	Moxiket CV 625 mg	Tab	√		√
166	Nevidic P	Tab			
167	Norflox 400	Tab			√
168	Oflox 200mg	Tab			√
169	Paracetamol	Tab	√		√
170	Parxyl 500 mg	Tab			
171	Perinorm	Tab			√
172	PID 400 mg	Tab	√		
173	Placenta MP	Tab	√		
174	Pramoulat N.	Tab	√		
175	Pyrido	Tab	√		
176	Rantac 150	Tab	√		√
177	Relaxsu SR	Tab	√		
178	Relaxsu-10	Tab	√		
179	Ridol	Tab	√		√
180	Rovixin 100 BP	Tab			
181	Rovixin 200 mg	Tab			√
182	Shelcal (500mg)	Tab			√
183	Siphene (25mg)	Tab			
184	Siphene (50mg)	Tab			√
185	SN-15	Tab			
186	Spinox 100 mg	Tab			
187	Spinox 200 mg	Tab			
188	Susten 100 mg	Tab			
189	Susten 200 mg	Tab			
190	T.AB Cefo	Tab	√		√
191	T.Recofol	Tab	√		√
192	Topcef 200 mg	Tab			√
193	Trenaxamic Acid	Tab	√		√
194	Uthral 250 mg	Tab			√
195	Valium 5mg	Tab			√
196	Vomilast	Tab			√
197	Zwitfer	Tab			√
198	ACQ-10	Cap			√
199	Amoxycillne 250 mg	Cap			√
200	Amoxycillne 500 mg	Cap			√
201	Autrin	Cap			
202	Axcel 250 mg	Cap			

203	Axcel 500 mg	Cap			
204	Becosule	Cap			√
205	Crolin DC	Cap			
206	Depin 5 mg	Cap			
207	Doxycycline	Cap			
208	GC-Force-CD	Cap			√
209	Mum Milk	Cap			
210	Placenta 100 mg	Cap			
211	Placenta 200 mg	Cap			
212	Qzyme forte	Cap			√
213	Alkaline	Syrup			
214	Ambrodil-s	Syrup		√	
215	Astagon	Syrup		√	√
216	Betonin	Syrup			
217	Brugesic P	Syrup			
218	Chericof	Syrup		√	√
219	Cofexit	Syrup			√
220	Cough Syrup	Syrup			√
221	Cremaffin	Syrup			√
222	Cystone	Syrup			√
223	Digene gel	Syrup			√
224	Domstal	Syrup		√	√
225	Dovion	Syrup		√	
226	Droxyl 30 ML	Syrup		√	
227	Flemiclav Forte	Syrup		√	
228	Flemiclav kid	Syrup		√	
229	G moxil clav	Syrup		√	
230	Gasex	Syrup	√		√
231	Gelucil MPS	Syrup	√		√
232	Koflet	Syrup	√		√
233	Linctus codein	Syrup	√		√
234	Monotex-O	Syrup		√	
235	Ossopan-D	Syrup		√	
236	Polybion	Syrup		√	
237	Sy.T minic	Syrup		√	
238	Tusqdx	Syrup		√	
239	Zental	Syrup		√	
240	Zifi readymix (100 mg)	Syrup		√	
241	Zifi readymix (50 mg)	Syrup		√	
242	Zupar	Syrup		√	
243	Zwitfer	Syrup		√	
244	Atarax	Drop		√	

245	Biocetamol	Drop		√	
246	Colicaid	Drop		√	
247	Hovite RB	Drop		√	
248	Nasoclear	Drop		√	
249	Rovixin	Drop		√	
250	Saline Nasal drop	Drop		√	
251	Taxim-O	Drop		√	
252	T-minic	Drop		√	
253	Toby Eye Drops	Drop		√	
254	Tonoferon	Drop		√	
255	Wikoryl AF	Drop	√		√
256	DPT	Vaccine		√	
257	DT	Vaccine		√	
258	Genvac	Vaccine			
259	M-vac	Vaccine			
260	Oral Polio	Vaccine		√	
261	Tubervac	Vaccine	√	√	
262	Typherix	Vaccine			
263	20ml syringe	Surgical		√	
264	50cc syringe	Surgical		√	
265	Adhesive Roll 3"	Surgical	√	√	√
266	Bandage 2"	Surgical	√	√	√
267	Bandage 3"	Surgical	√	√	√
268	BCG syringe	Surgical	√	√	
269	Boro set	Surgical		√	
270	Chromic catgut No. 1 1/2 circle heavy round bodied needle(NW 4259EP)	Surgical	√		√
271	Chromic catgut No. 2 with 1/2 circle heavy round bodied needle NW 4228EP	Surgical	√		√
272	Chromic catgut No. 2-0 with 1/2 circle round bodied needle (NW 4241 EP)	Surgical	√		√
273	Cidex	Surgical			
274	Cotton	Surgical	√	√	√
275	D.Syringe2ml24G	Surgical	√	√	√
276	D.syringe5ml24G	Surgical	√	√	√
277	Disposable Syringe 10 cc	Surgical	√	√	√
278	Disposable Syringe 2 cc	Surgical	√	√	√
279	Disposable Syringe 5 cc	Surgical	√	√	√
280	Dynaplast	Surgical	√	√	√
281	E.T. tube 2.5 no.	Surgical		√	

282	E.T. tube 3 no.	Surgical		√	
283	E.T. tube 3.5 no.	Surgical		√	
284	E.T. tube 4 no.	Surgical	√	√	
285	E.T. tube 6 no.	Surgical	√	√	
286	E.T. tube 7 no.	Surgical			
287	Ethilon No. 0 with 45 mm 3/8 circle reverse cutting needle (NW 3337)	Surgical	√		
288	Ethilon No. 0 with 60 mm straight cutting needle (NW 3389)	Surgical			
289	Foley's Catheter No. 12	Surgical	√		
290	Foley's Catheter No. 14	Surgical	√		
291	Foley's Catheter No. 16	Surgical	√		
292	Gauze	Surgical	√		
293	Infant feeding tube No. 6	Surgical		√	
294	IV Set	Surgical	√	√	√
295	Kaltex non sterile hand gloves	Surgical	√	√	√
296	Kaltex sterile hand gloves No. 6.5	Surgical	√	√	√
297	Kaltex sterile hand gloves No. 7	Surgical	√	√	√
298	Kaltex sterile hand gloves No. 7.5	Surgical	√	√	√
299	Mucus extractor	Surgical		√	
300	Needle No.24	Surgical			
301	Prolene No.1 (NW 843)	Surgical			
302	Romo ADK 32	Surgical			
303	Rubber catheter No. 5	Surgical			
304	Rubber catheter No. 6	Surgical			
305	Rubber catheter No. 7	Surgical			
306	Scalp Vein Set No. 22	Surgical			√
307	Spinal needle 23 G	Surgical	√		
308	Spinal needle 25 G	Surgical	√		
309	Spinal needle 26 G	Surgical			
310	Straight Needle No. 8	Surgical			
311	Suction catheter No. 6	Surgical			
312	Suction catheter No. 8	Surgical			
313	Surgical Blade 15 No.	Surgical			
314	Surgical Blade 22 No.	Surgical	√		
315	Sutupack No. 0 (Ethicon) SW 904	Surgical	√		√

316	Sutupack No. 1 (Ethicon) SW 905	Surgical	√		√
317	Suture needle round bodied half circle no.8	Surgical	√		√
318	Suture needle round bodied half circle no. 11	Surgical			
319	three way cock	Surgical		√	
320	Umbilical cord clamp	Surgical		√	
321	Urobag	Surgical	√		
322	Vaccu suction set	Surgical	√		
323	Vein Flow No. 18 green	Surgical	√	√	
324	Vein Flow No. 20 pink	Surgical	√		√
325	Vein Flow No. 24 (Paediatric)	Surgical		√	
326	vein-o-line 10cc	Surgical		√	
327	Vicryl No. 1 1/2 circle heavy round bodied needle (NW 2347)	Surgical	√		
328	Betadine sol (500 ml)	Misc	√		√
329	Allprot Powder	Misc			√
330	Apyprot Powder	Misc			√
331	Argipreg Sachet	Misc			√
332	Asthalin Nebulizer Solution	Misc		√	√
333	Baby Powder (Jhonson & Jhonson)	Misc		√	
334	Betnovate Cream	Misc			√
335	Boitral Powder	Misc		√	√
336	Dermacure Lotion	Misc			
337	Dettol	Misc			
338	Diclofenac gel	Misc			√
339	Disposable Cap	Misc	√		
340	Disposable Mask	Misc	√		√
341	Enema (Proctolusic)	Misc			√
342	Ether 500 ml	Misc			√
343	Formalin Liquid	Misc			√
344	Fresh Z powder	Misc	√		
345	Gloves powder 1 kg	Misc	√		√
346	Glycrine	Misc	√		√
347	Hexita Soln	Misc	√		√
348	HIV Kit	Misc	√		
349	Hydrogen Peroxide	Misc			√
350	Mediflone 18G	Misc	√		√
351	Mediflone 20G	Misc	√		√

352	Neosporin Powder	Misc		√	
353	Nipple shield	Misc	√		
354	ORS	Misc			√
355	Oxygen Hood	Misc			
356	Paper Tap 1 inch	Misc	√	√	√
357	Potassium Permanganate 400 gm	Misc			
358	Sanitary Napkin	Misc	√		
359	Satavrex Powder	Misc	√		
360	Silvicide 1000 ml	Misc			
361	Silvicide 2500 ml	Misc			
362	Simyl MCT Oil	Misc		√	
363	Skabcet Lotion	Misc			√
364	Softlaps Mop	Misc			
365	Spirit	Misc			
366	Sporlac Powder	Misc		√	
367	Sterilium (500 ml)	Misc	√		√
368	Teddy Nappie	Misc		√	
369	Ultra sound gelly	Misc	√		
370	UPT (Pregnancy Card)	Misc	√		
371	USG roll	Misc	√		
372	Vaseline petroleum jelly 1.5 kg	Misc			
373	Vital Z (210gm)	Misc			√
374	Xone 500gm	Misc		√	
375	Nazal Spron-A	Misc			
376	Nazal Spron-P	Misc			
377	Ride Cream	Cream		√	
378	Motodine ointment	Oint	√		
379	Neosporin Ointment	Oint		√	
380	Nipcare ointment	Oint	√		
381	Oint Lins Gel	Oint	√		√
382	Shield Ointment	Oint	√		
383	Sofradex-F Ointment	Oint			
384	ZADG Ointment	Oint			√
385	Biotral	Powder	√	√	
386	Cramp Powder	Powder	√		
387	D Cramp	Powder	√		
388	Daxtsine	Powder	√		
389	Recot Z powder	Powder	√		
390	Ride Powder	Powder	√	√	
391	CIPLOX D EYE DROPS	DROPS			√
392	I KOOL EYE DROPS	DROPS			√

393	EPSOLIN	INJ		√	
394	GARDINAL	INJ		√	
395	TOBA DM				√
396	CINIRONE 25MG				√
397	GLIMIP M1				√
398	MECOFOL OD				√
399	DEXON INJ 30 ML				√
400	SIVEREX CREAM				√
401	LOSATAN				√
402	RABICER-D				√
403	CIPZOX				√
404	TRAMACIP				√
405	GEMCIUM SOFT CAPSUL				√
406	ZEEBEE SUSP.			√	
407	BIOCAINE GELLY 2% OINT		√		
408	GERCILLIN 500 MG				√
409	DERIPHYLLIN INJ				√
410	PYREMOL SYP				
411	N FLOX TZ				
412	PHENOBARBITONE INJ.			√	
413	ONOFF OZ				√
414	OXO 200				√
415	PANTACON-D				√
416	L DIO				√
417	DAN-MR				√
418	B-FOLCIN GEL				√
419	SOFRACEN			√	√
420	ISO PROPYL ALKOHOL				
421	MVI INJ.				√
422	Lariago				
423	CYCLOGYL				
424	AFENAK PLUS				√
425	DEXONA		√	√	√
426	UNIENZYME				√
427	VITCOFOL				√
428	ZOXAN EYE OINT				√
429	NEBULIZER MASK			√	
430	TIMOFLOW EYEDROP				√
431	FLORISH-T				√
432	Z-TEARS				√
433	MOXISURE-K				√

434	CEFIKET INJ		√		
435	CALAGY				
436	A TO Z DROP			√	
437	LOGICAL SYP			√	
438	ASTHALIN SYP			√	
439	AZIBACT 100 SYP			√	
440	AZIBACT 200 SYP			√	
441	BECOSULE SYP			√	
442	COLIMEX DROP			√	
443	MOXVID SYP			√	
444	PERLICE LOTION			√	

Housekeeping & Laundry Services

Standard Operating Procedures

	Name	Designation	Signature & Date
Prepared by			
Reviewed by			
Approved by			

TABLE OF CONTENTS:

Sr. No.	Contents	Page No.
1.	Purpose	111
2.	Scope	111
3.	Responsibility	112
4.	Definitions	112
5.	Abbreviations	112
6.	Applicable regulations & guidelines	112
7.	Procedure	112
8.	References	114
9.	Annexure/Attachments	114

1. PURPOSE

The purpose of this SOP is to outline and streamline the housekeeping, laundry services & waste disposal management of the Deepak Medical Foundation Hospital in relation to the handling of patients.

2. SCOPE

The SOP applies to all personnel responsible for and involve in the housekeeping & overall management of the hospital and to ensure they are managed in a standard manner. This SOP is also applicable to all hospitals of Deepak Foundation.

3. RESPONSIBILITY

The housekeeping staff, nurses, hospital administrator is responsible for conducting completion of the entire assigning task by doctors.

4. DEFINITIONS

Standard Operating Procedures (SOPs)

Detailed, written instructions to achieve uniformity of the performance of a specific function (ICH GCP 1.55).

5. BBREVIATIONS

SOP Standard Operating Procedure

6. APPLICABLE REGULATIONS & GUIDELINES

Nil

7. PROCEDURE

The specific tasks expected to be completed when the area is cleaned, include the following:

- ✓ Routine cleaning tasks - Empty trash; dust furniture; vacuum; spot-clean carpeting (if any), doors, and walls; replenish supplies; dust and wet mop.
- ✓ Weekly cleaning tasks - Vacuum vents and grills; vacuum drapes and upholstered furniture; polish metals and furniture.

Time of Cleaning Standards:

- OPD: Routine tasks => 7am and 3pm. daily
- Weekly tasks => washing the area
- Ward: Routine tasks => twice a day (morning, afternoon after the lunch and as and when required)
- Weekly tasks => Washing and thorough infection control measures, Completed before 8.00 am
- OT: Routine Tasks => Prior (before 7.30 am) and after every procedure
- Weekly or after every infected case => thorough washing and cleaning
- Administrative Area: Routine tasks => once in a day after OPD hours
- Waiting area, Lobby and Corridors: Routine cleaning => every shift and as and when required

Quality Standards:

The following are quality standards of the housekeeping department, which should be followed by the attendants:

- Ceilings cleaning: Free of dust and spots, paint intact, ventilation clean and free of dust and lint, lights replaced.
- Room walls: Clean, paint intact, free of finger marks and spit stains.
- Floors: Free of dust, lint, and stains, no accumulation of dirt in corners.
- Doors and Window cleaning: doors edges, handle or knob, door-frame, window and frame should be free of marks and dust (inside and outside).
- Window drapes: Free of dust; properly hung on tracks; not faded; no stains or yellowing, or tears; pulleys and pull cords intact and working; pins installed correctly in drapes and on carriers.
- Beds: Headboards and foot boards clean, metal upright and horizontal frame members clean, linen clean and free of stains and tears, bed properly made, undercarriage free of lint and soil, wheels clean.
- Chairs: Clean, free of lint and dust.
- Toilets: Toilet bowl clean inside and outside; no stains, streaks, or residue; toilet seat clean, free of spots, stains, or streaks, plumbing fixtures clean, free of dust, spots, and base of toilet free of soil build-up and stains.
- Sinks: Clean, free of spots and streaks; plumbing connections to toilet free of alkali build-up.
- Bathrooms: Walls clean, free of soil build-up on caulking, caulking intact, fixtures free of spots and streaks.
- Refrigerators: Clean, free of dust spots and stains, freezer clear and free of stains, motor vent clean and free of dust and lint.
- Counter tops: Clean, free of dust, stains, and finger marks.

- Telephones: Clean, free of dust and lint; receiver, mouthpiece, and dial free of dust and lint.
- Water Coolers: Stainless steel free of spots and streaks.

Laundry:

- The linen after collected from the different wards/units has to be sorted out in the laundry. The soiled, stained, and normal dirty linen has to be sorted out.
- Warm water is recommended for washing machines, this can acts as disinfecting agent too. The time of linen in the washing machine depends on different types of linen. Usually it is recommended for 30 minutes in the mode of strong wash.
- The person handling the soiled, stained linen should use a thick rubber gloves that can tolerate bleach and Luke warm water.
- The washed linen should be put in the sun light for drying and pressing (if required)
- After drying, the linen is checked for wear and tears, the torn clothes should be sent for tailoring.
- The finished goods are to be stored in the clean storage before distribution.
- The clean linen should be checked for quantity before delivery.
- The linen should be distributed to different wards/units in separate trolley which are not used for collection.
- Laundry area should be cleaned in every shift before and after washing.
- Unauthorized personnel are not allowed to enter in the laundry.
- Uniform should be worn while working in the laundry provided by hospital. Gloves and Masks should be worn if required.

Infection Control and Waste Management:

- All health professionals should follow the infection control and waste management guideline and Implement good infection control measures

Key Requirement of Waste Disposal Management

- Segregate waste at source
- Use designated labeled color containers:
 - ✓ Yellow for infectious waste, like anatomical, pathological, soiled dressings like gauze, cotton, linen, etc. contaminated with blood or other body fluids.
 - ✓ Red for infected plastics like IV sets, tubing's, catheters micro-biological waste etc. Stainless steel or Translucent puncture proof container for metal sharps.
 - ✓ Blue for Glass
 - ✓ Black for cytotoxic drugs, incinerator ash, chemical waste and expired medicines.
 - ✓ White for all sorts of non-infected general waste which are dry and recyclable.
 - ✓ Green for collecting and transporting of food waste from wards, canteens and dining halls
- Transport the waste in designated vehicles by authorized personnel
- Treat infectious waste according to prescribed standards

Transportation of Waste

- They should be in the respective color coded bags or container
- Transport waste to the disposal site monthly or weekly as applicable

- Waste can be transported on specially allocated trolleys and to be collected room wise to the storage/ disposal van/area
- Care must be taken to ensure that the bags are not torn and spill the waste from the bag during transportation.
- All bags should be secured/tied at the neck prior to transportation.
- Any sharp found in the bags during transportation should be reported and follow the Sharps management policy.

8. REFERENCES

Nil

9. ANNEXURES/ATTACHMENTS

Nil

Reception Services

Standard Operating Procedures

	Name	Designation	Signature & Date
Prepared by			
Reviewed by			
Approved by			

TABLE OF CONTENTS

Sr. No.	Contents	Page No.
1.	Purpose	1
2.	Scope	1
3.	Responsibility	1
4.	Definitions	2
5.	Abbreviations	2
6.	Applicable regulations & guidelines	2
7.	Procedure	2
8.	References	3

1. PURPOSE

The purpose of this SOP is to outline and streamline the functions of the Reception and to receive, attend and guide all the visitors entering the hospital

2. SCOPE

The SOP applies to the receptionist for developing good public relations whether by meeting visitors face to face at the counter or over telephone.

3. RESPONSIBILITY

1. Inquiry
2. Registration
3. Reception and
4. Public Relation.

4. DEFINITIONS

Standard Operating Procedures (SOPs)

Detailed, written instructions to achieve uniformity of the performance of a specific function (ICH GCP 1.55)

5. ABBREVIATIONS

SOP Standard Operating Procedure

ER Emergency Room

OPD Out Patient Department

IPD In Patient Department

6. APPLICABLE REGULATIONS AND GUIDELINES

Nil.

7. PROCEDURE

- When a patient approaches the Reception, he should be attended in a very polite and sympathetic manner without wasting his time so as to get the treatment in minimum possible time.
- Patients should not wait for too long and should be attended as early as possible.
- Reception/Enquiry services will function round the clock.
- All patients except Emergencies will report to the Reception during OPD working hours. After that all patients should be guided to the Department of Emergency where a Doctor will be available round the clock.
- Emergency cases should be guided to the Emergency Department without any delay. Reception will provide all help such as Stretcher or wheelchair for transferring the patient without causing any trauma.
- Guide and give information to all the visitors in the hospital.
- Particulars of all admitted patients should always be available at the reception.
- A list of telephone numbers, mobile and residential, addresses of all the staff, doctors and consultants working in the hospital should be made available at the reception.
- All such vital statistics should be kept updated.
- Cash received, if any at the reception should be handed over to the Accounts Department person (Cashier) daily in the evening and in the morning.

8. REFERENCES

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<http://www.rawalianresearch.org/files/Standard%20Operating%20Procedures.pdf>
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Hospital Administrator

Standard Operating Procedures

	Name	Designation	Signature & Date
Prepared by			
Reviewed by			
Approved by			

TABLE OF CONTENTS

Sr. No.	Contents	Page No.
1.	Purpose	127
2.	Scope	127
3.	Responsibility	127
4.	Definitions	128
5.	Abbreviations	128
6.	Applicable regulations & guidelines	128
7.	Procedure	128
8.	References	129

1. PURPOSE

The Purpose of this SOP is to outline the functions and duties of the Hospital Administrator and to ensure smooth functioning of administration of Deepak Medical Foundation.

2. SCOPE

The scope of this SOP is for the hospital Administrator to abide by, formulate plan, organize and implement the various set of procedures.

3. RESPONSIBILITY

- To plan, strategize and coordinate the health services of a hospital
- To supervise all areas of a hospital, including physicians, health information technicians, nursing, medical records and more
- To create many reports to analyze the effectiveness of various departments and work to reach financial goals and maintain budgets.
- To work to improve the efficiency of care, keep up-to-date on new laws, represent the facility at governing boards and organize records of facility services.

4. DEFINITIONS

Standard Operating Procedures (SOPs)

Detailed, written instructions to achieve uniformity of the performance of a specific function (ICH GCP 1.55)

5. ABBREVIATIONS

SOP Standard Operating procedures

HA Hospital Administrator

6. APPLICABLE RULES AND GUIDELINES

Nil

7. PPROCEDURE

- To plan, organize, direct and control all resource departments and services of the centre.
- Administer the centre's total budget and actively participates in planning with all senior health centre and staff.
- To develop and direct the implementation of policies and programs in the resource departments and services of the centre.
- He/she acts as chief advisor to the Medical Director in development and implementation of centre's programs, policies and procedures.
- To promotes and maintains effective public relations with governmental and community agencies and individuals.
- To performs other duties as assigned.
- To control finance, supply and ordering of drugs
- Taking care of the smooth functioning of all the departments
- To form a bridge between the higher authority and the staff members.
- Personnel oversight
- Take active part in training of staff
- To assign duties to nurses, housekeeping staff and overseeing their work .
- To allocate work, grievance management and counsel if necessary.
- All equipments must be handled by the Hospital Administrator
- All the required material for the functioning of the equipment should be requisitioned on a regular basis and inventory records for the same should be maintained.

- He should inform the Bio-Medical/Maintenance engineer, if the required periodic/annual maintenance of any equipment has not been carried out.
- Appropriate records are to be maintained for the smooth functioning of the hospital in the areas of: Inventory of drugs, Cases of clients with the name of the treating physician/consultant
- He should strengthen organization culture by facilitating group tasks
- Taking care of logistics and supplies
- He/she should be adept with the Health Information System of the hospital and other legal and statutory responsibilities
- To ensure quality management and safety of the hospital
- To take care of manpower planning- Selection , rewards and promotion
- To design performance appraisal
- To get involved in marketing management and staff management
- Ensuring and encouraging two way communication
- Planning and decision making.
- Ensuring ethical practices for patients and staff
- To make sure the doctors , staff members are in sync with each other and to work for patient safety and increase efficiency of the hospital.

8. REFERENCES

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