Summer Training at

Fortis O.P. Jindal Hospital and Research Centre, Raigarh (C.G.)

(8th April, 2013 – 6st June, 2013)

- **Inventory Management of Drugs and Line in Operation Theatre and Intensive Care Unit.**
- **Capacity Utilization of the In-Patient Department**

By
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Under the guidance of
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Post Graduate Diploma in Hospital and Health Management
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Institute of Health Management Research,
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CERTIFICATE

This is to certify that DR GARIMA PANDEY student of the 17th batch of the post graduate Diploma in Hospital and Health Management (pgdhm) at Institute of Health Management and Research,Jaipur underwent the summer internship at FORTIS O P JINDAL HOSPITAL,RAIGARH,CHHATTISGARH from April 8th to June 8th 2013 and performed studies on

- Inventory management of drugs and linen in operation theatre and intensive care unit.
- Capacity utilization of the in-patient department.

The candidate successfully carried out the study assigned to her during summer training and her approach to the study was sincere,scientific and analytical.

We wish her success in all her future endeavours.

Dr Ashok Kaushik
Dean(academics and student affairs)
IIHMR,JAIPUR

Mr.Saumitra Joshi
Asst.Prof and student counsellor
IIHMR,JAIPUR

ACKNOWLEDGEMENT

I extend my sincere gratitude **to Dr Sachin Jain**, chief operating officer, fopjhrc, for giving me the opportunity to do this study and undergoing the process of learning at fopjhrc. I thank him for all the trust and faith she posed in me and I only hope that I have been able to live up to his expectations. His guidance and support was helpful in enhancing my work.

I extend sincere gratitude towards **Mr.Vikram Nigam**, who has been my mentor for the summer internship program & has been instrumental in helping me shape this study in a desirable way.

I would also like to thank **Mrs Alish** SR HR EXECUTIVE and **Mrs Geeta Mathew** HOD PCS, for supporting my work all along.

Last but not the least; I would like to thank the entire staff of FOPJHRC, RAIGARH for their support and guidance.

I would like to express my sincere thanks to **Dr. S.D. Gupta**, Director, IHMR, **Dr. P.R. Sodani**, Dean (Academics), **Dr Suresh Joshi** and all my faculty members for the proper guidance and cooperation extended by them. I am also grateful to my parents, my family and my friends for giving me moral support.

However, I accept the sole responsibility for any possible error of omission and would be extremely grateful to the readers of this project report if they bring such mistakes to my notice

Date – 5TH June, 2013 **Garima Pandey**

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PREFACE

Summer internship is an integral part of the PGDHM curriculum. As a part of the course; students of first year are required to undergo summer placement at any reputed organization to get in depth exposure of various departments in the organization and better understanding of the health care delivery system and its functions.

The major objectives of the summer training programme are as follows:

1) To understand and learn day to day operational management of a Hospital / Health Care Organization and its service centres.
2) To study identified issues/ problems associated with some specific operational area /programme.
3) To acquire more knowledge on roles and responsibilities of key players and stakeholders in the hospital.To understand various functions in hospital by interactions with key stakeholders, policy makers, academicians and researchers.
4) To work on the project/task assigned by summer training organization.

During the training period i had an **Overview of various departments of the hospital.** I also carried out a study titled " Study of bed utilization in a tertiary care hospital" and "sudy on the inventory management in icu and operation theatre.

The aim of the study was to assess and learn the admission and discharge process and the management of drugs and linen in the icu and ot and find the gaps in their management.

ABOUT THE ORGANISATION

FORTIS O P JINDAL HOSPITAL is a well known hospital in the Raigarh region of Chhattisgarh.of the country because of the fact that it is having the privilege of a brand Fortis attached to it which is INDIA'S best health care group. Fortis is a renowned name in the field of healthcare and they are the biggest chain of hospitals in INDIA.

O P JINDAL hospital was established in 2007 by the Jindal steel and power limited as an apex organization to cater to the health needs of the people of Chhattisgarh region mainly in the Raigarh district. Later this organization joined hands with the Fortis group and thus it is called the fortis O P JINDAL hospital.the hospital is situated near the Jindal steel plant around 12 kms from the main city of Raigarh.

Various departments in the hospital are

- ANAESTHESIOLOGY
- BURNS MANAGEMENT
- CRITICAL CARE
- DENTISTRY & MAXILLOFACIAL SURGERY
- DERMATOLOGY
- E.N.T
- GASTRO SURGERY
- GENERAL & LAPAROSCOPIC SURGERY
- GYNAECOLOGY & OBSTETRICS
- INTERNAL MEDICINE
- NEPHROLOGY
- NEUROLOGY
- NEURO SURGERY
- ORTHOPAEDICS & JOINT REPLACEMENT
- OPHTHALMOLOGY
- PAEDIATRICS
- PAIN MANAGEMENT

- PATHOLOGY & MICROBIOLOGY
- PHYSIOTHERAPY & REHABILITATION

- RADIOLOGY
- TRAUMA UNIT

SPECIALITIES:

- Anaesthesiology
- Burn & Plastic Surgery
- Blood Bank
- Cardiology
- Cardio Thoracic Vascular Surgery
- Critical Care
- Clinical Nutrition
- Dental Surgery
- Dialysis & Nephrology
- Dietetics & Therapeutic Kitchen
- Dermatology
- ENT
- Endocrinology & Diabetology
- Emergency Services
- Laparoscopic & General Surgery
- Internal Medicine
- Infertility
- Joint Replacement Surgery & Arthroscopy a
- Lab Medicine
- Maxillo Facial Surgery
- Nephrology
- Neuro Surgery & Neurology
- Obstetrics & Gynaecology
- Ophthalmology
- Orthopaedics
- Paediatrics & Neonatology
- Physiotherapy & Rehabilitation
- Psychiatry
- Radiology & Imaging
- Trauma Services

Duties and Responsibilities : fortis o p jindal hospital and research centre(fopjhrc) have been envisaged as an organization for improving the total effectiveness of health care delivery system by imparting good health care services at different levels. Specifically, fopjhrc are responsible for imparting services to the nearby villages who do not have the facility for basic health care. implementing skill-based training, provide guidance to various nursing and physiotherapy students and junior doctors.

OBJECTIVES

General Objective

- To determine baseline information about the levels of the services provided to the patients.
- To study the various departments of the hospital along with their functioning.
- To observe the functioning of the various departments.

Specific Objectives

1. To see the extent of the satisfaction of the staff.
2. To get the suggestions to help in the improvement of the management of the particular department.
3. To find out the gaps in the whole process.
4. To observe the working of that particular department keenly and find out ways to solve that problem.

DATA COLLECTION PROCESS:

- With permission from the Senior executives of the hospital.i observed and learned the functioning of all the departments of the hospital. This task was made difficult due to the scale of operations being conducted at th hospital, as I realized that a significant amount of time would have to be invested in each department in order to glean as much information as possible.
- After permission was secured and a schedule was made to observe the various departments of the hospital, I got the details of personnel who would guide us in these departments.

GENERAL FINDINGS ON LEARNING

The hospital opd functions well. On an average there are around 350 opd registrations in a day. Sometimes there is a chaos due to overcrowding of patients which requires attention. There are problems at times because of the delay in the arrival of the doctors. Confusion to the patients regarding the city opd schedule. Well equipped with the latest technology .Well trained physiotherapists. Good patient inflow. Fully equipped with latest technology machines.The hospital has tie ups with various tpas. There are total 44 opd consultation chambers. The opd is run between 8.30am to 1 pm and then 2.30pm to 6pm.the waiting area is situated near the reception infront of the front door and near the consultant chambers. Main waiting area is spacious with seating capacity of about 80 people. Consultation fee is rs 80 for the general people and it is free for the jindal steel plant employees who have the health card issued by the company. The reception has 5 front desks. Appointment system is computerized with the doctors schedule and availability entered into the system and the appointment is given on that basis.opd record keeping is done throught the hospital software and the patient details could be retrieved throught their mobile numbers or registration number or patient's last name. Refunds are done from the cash counter .refunds are done in case the patient got registered but is not ready to wait and also in case when the test prescribed by the doctor is not possible in the hospital at that time.

Conclusive learning ,limitations and suggestions:

- Requirement of a may I help you desk at the reception.
- City opd schedule must be displayed at the reception.
- One security guard must be placed near the entrance gate in order to prevent any accidents from the entrance door.
- Charging point required in the waiting area.
- Water supply near the waiting area is required.
- Financial counseling needs little more clarity.
- Regular maintenance of the water coolers.
- Guiding arrows for direction for the ease of patient movement.

Specific Project Learning:

These projects were assigned to me by Mr. Vikram Nigam, the Senior Administrator, as a part of the requirements for the betterment of the hospital.

I. Inventory management in intensive care unit and operation theatre.

The areas covered by me for this project are as follows:

- All intensive care units
- Operation theatre
- Nursing station

I.A Introduction:

Inventory management is the overseeing and controlling of the ordering, storage and use of components that a company will use in the production of the items it will sell as well as the overseeing and controlling of quantities of finished products for sale. A business's inventory is one of its major assets and represents an investment that is tied up until the item is sold or used in the production of an item that is sold. It also costs money to store, track and insure inventory. Inventories that are mismanaged can create significant financial problems for a business, whether the mismanagement results in an inventory glut or an inventory shortage.

Importance of inventory management:

The inventory management is needed as being a portion of supply chain network to guard the manufacturing program towards any type of disturbance. moreover ,it also prevents the system from working out of stock, components and products. basically, inventory handling focuses on asset management, replenishment lead time, inventory forecasting ,inventory valuation ,inventory carrying price. Another reason is being able to know exactly how many of each product you have in stock, so you know exactly how much needs to be ordered. Without proper inventory management, you may order too many of one thing, and not enough of something else. What does this translate too? Running out and having to order more, and having an over stock of other products, costing you not only money, but available storage space. Without inventory management it would be difficult for any company to maintain control and be able to handle the needs of their customers. Whether you use a fulfilment or ship products yourself you need to know where your inventory is and where it's going. Unless you can meet

the needs of your customers you will soon lose all of them to competitors who are able to meet their requirements, no matter how stringent.

I.B. Data Collection

The procedure followed is enumerated below:

i. A study of the duties of each individual was conducted to understand the roles and responsibilities involved.

ii. Senior personnel in each department were shadowed and interviewed in detail to know about the tasks that are performed by their team members in actuality. This was done as senior personnel, by virtue of their vast experience and knowledge, could be considered to be subject matter experts of the activities involved and would be in a position to know all the competencies that distinguish star performers from average performers.

iii. A semi-structured questionnaire was prepared which was used to interview the staff of the respective departments. which is given in the annexure.

Methodology:

Study Type – Cross-sectional Descriptive study which is quantitative in nature.

Study Area –various departments of the hospital, store ,nursing station, emergency ,wards, ICU, OT

Sampling method – Random sampling method

Study Participants : staff of the respective departments and store.

Sample size – 20 people from icu, operation theatre and store were selected.

Study Technique – Self administered questionnaire

Study Tool – Semi- structured questionnaire

Data Collection Plan – This study surveyed 20 staff members. For collecting the data,a self administered questionnaire was distributed after taking authorization from concerned authorities of these departments

Data analysis - The collected data, was handled confidentially, graphs and proportions were used to present the data.

Exclusion Criteria –

Ethical Considerations- purpose of the study was clearly explained. The respondents were assured of the data confidentiality.

I.C Data Analysis, Compilation and Interpretation

i. Out of the data collected, graphic representation was done, the format of which is attached in the annexure. These graphs were constructed according to the instructions given to me by my mentor in the hospital. Once this was constructed, the action plan and the gaps in the process were looked after in accordance with the instructions given to me by my mentor in the administration department. These new evaluations were then submitted by me to the mentor.

ii. According to which the action plan was prepared by the administrator.

3. I.D Conclusion and Recommendations

i. Buffer stock should be maintaine of linen and drugs in icu and OT.

ii. Replenishment stock should me maintained in the departments.

iii. There was no action plan in place to find out the reason of excess or obsolete stock.

iv. No color coding was found to be followed for storage and disposal of dirty and soiled linen.

v.

II. A Review of the capacity utilization of the Fortis O P Jindal hospital,Raigarh

The areas covered by me for this purpose are as follows:

i. Financial accounting.
ii. Billing and TPA
iii. Office of the Chief Operating Officer
iv. Emergency and Trauma Care
v. Housekeeping
vi. Laundry
vii. Security
viii. Patient Care Service
ix. Quality
x. Nursing

II.A Introduction

Admission to an acute hospital may be planned (elective) or may be required as a matter of urgency (emergency). Elective admissions are those which occur as a consequence of referral to hospital by a general practitioner, medical consultant, a visit to the hospital outpatient department or a planned transfer from another hospital. Some patients may confound these definitions e.g. Patients requiring chemotherapy who may be both urgent and planned.

A number of principles should underpin the development of an effective emergency and elective admissions and discharge planning function. These include:

- The provision of patient centred services, which are accessible to the population without compromising safety, quality and clinical standards, to the right people in the right location and at the right time.
- Patients should be consulted and included in all decisions about their care.
- Clinical practice and care should be based on the most up to date evidence.
- Co-operation and clinical networking between hospitals and between care groups are essential to optimise outcomes, particularly where complex care issues are involved.
- A service based on good clinical governance (i.e. Founded on continuous quality improvement, staff development, risk management and audit).
- Acute hospital services should be organised into three parallel streams of care

interdependent of each other. This involves a division of acute hospital services into emergency, elective and out patients department/day care.

- The pivotal role of the Primary Care Teams should be emphasized.
- Early induction training of healthcare professionals in relation to the principles set out above.

Effective management of hospital beds and associated resources. The effective management of hospital beds and associated resources is vital if the growing demand placed on hospital resources is to be met. Recognized impediments to patient “flow” in hospitals include:

- Difficulties in gaining access to inpatient beds (i.e. Insufficient bed capacity).
- The resulting congestion within Emergency Departments (eds)
- Inappropriate retention of patients in hospital beds.

The active management of admissions and discharges should ensure that:

- Beds are available for emergency admissions.
- Beds are available for elective patients; this assists in keeping waiting lists down.
- The quality and appropriateness of patient care is high.
- Patients get the care they require when they are discharged from hospital.
- Scarce financial resources are not wasted and value for money is achieved.

Quality and safety

To ensure that all patients admitted to hospital receive the high quality and safe service to which they are entitled, resources must be efficiently and effectively utilised. Services are organised so that patients, depending on their needs, can move smoothly between emergency care and the best and most appropriate inpatient care, primary care and continuing care. Effective quality assurance and safe care are essential rights of all users of the health services.

Emergency admissions

An emergency hospital admission is defined as one that is not planned and which results from trauma (injury) or acute illness which cannot be treated on an outpatient basis.
In order to manage the balance between elective and emergency admissions, the factors below have been identified as effective in improving the management of admissions and general patient flow in the Emergency Department (ED):

- Where there is a mix of elective and emergency admission in hospitals, occupancy levels should allow for flexibility in dealing with the natural ebb and flow of illness and injury in the community. Thus, a level of about 85% hospital bed occupancy is desirable.
- Having a senior medical presence in the emergency department at all times. Only appropriately assessed patients should be placed in a hospital bed options for outpatient, day care and primary care (including home care and ambulatory practice) should be maximised.
- Investment to support adequate provision of primary and community care so as to:
  - reduce avoidable attendances at the ED; and
  - support early discharge from hospitals where appropriate.

Elective admissions

Achieving the correct balance between the competing demands for hospital beds by elective and emergency cases of varying complexity is likely to remain a considerable challenge for the future.

In order to improve the experience of patients waiting for elective admission, the following priorities have been made:

- Local clinical consensus on the ratio of emergency admissions to planned elective procedures.
- Measures to review and monitor criteria for hospital admission and for lengths of stay.
- Greater emphasis on ensuring that in admitting elective patients, consideration is given to the length of time they have been waiting since the decision to admit was taken - taking account of their clinical needs.
- Greater standardization of waiting list
- Administration with consistent monitoring of cancellations, Suspensions and removal from lists without treatment.
- Emphasis on planning discharge from day of admission.
- The adoption of a whole systems approach to bed management.
- The appointment of a manager or clinician with sufficient authority and support to balance and monitor the competing demands of emergency and elective pressures ensuring all bed and theatre resources are fully utilized

A capacity utilization rate, for any entity, is the amount of output it has compared to the potential output it should be producing. This, stated in simpler terms, simply is the difference between what a company is producing and what it is capable of producing at any given time. This formula is used in many aspects of commerce, including the government, in determining the potential for a company or product.

Hospitals can benefit from capacity utilization rate data because they will be able to tell what types of services are most needed and what, perhaps, is a waste of the hospital's resources. Economic stability is often determined by the capacity utilization rate of any given entity. If a hospital determines it is running to low or too high it can adjust the operations accordingly to allow for a profit to be made. This also will allow a hospital to streamline its offerings to meet the public’s needs. A hospital that is over utilization in one department and way under in another may adjust this to fill

To determine a hospitals capacity utilization rate you may wish to break this down into specific departments so you can reach a credible number. For instance, to get accurate rates throughout the hospital divide the hospital into major areas such as ER, outpatient,

administration, long term or however you see fit. You can begin to determine each department's capacity much easier this way and get a better general outlook of the entire operation.

The proper formula for capacity utilization rate is:

$$\frac{\text{actual output} - \text{potential output} \times 100}{\text{potential output}}$$

So, if the ER has 100 beds and the hospital uses 70 beds you are looking at a 70% utilization rate and have room to grow to 100. On the other hand, if the hospital has 100 beds and is using extra beds to meet the demand, the hospital is over capacity and needs to increase its offerings. Capacity utilization rate can also be used to determine the cost of services. Hospitals can determine if the cost of treating patients will increase or decrease if they accept more patients. This determination will allow the hospital to view its current economic standings and see where prince increases or decreases may need to come into effect.

The main point behind determining capacity utilization rates is to determine if the amount of production available is actually being used. If a hospital is capable of treating 1000 patients a day and is only treating 500 there is a problem somewhere in the system. If the hospital is treating 1500 a day and is only realistically capable of treating 1000 effectively, again there is a problem. Constant review of capacity utilization rates will enable management to run the hospital at maximum capabilities and encourage growth where needed.

II.B. Data Collection

The capacity utilization plays a very important role in measuring the performance of any hospital.. The data collection procedure was as is listed below:

i. My mentor here at FOPJHRC gave me the guidelines for the collection of data.
ii. Since this was a study of the process flow, my mentor told me to observe and find the loop holes.
iii. Observation was to be done on the following processes : admission policy, discharge policy and bed allotment.

II.C Data Analysis, Compilation and Interpretation

The process flow was analyzed and compared to the ideal processes. The interpretation was found to be:

- . Delay was more in the process of discharge of patients which ultimately lead to the delay in the vacancy of the patient bed leading to a delay in the admission of the new patients.
- Measure need to be taken to reduce the delay in discharge process.
- The hospital was found to be over capacity as the activities performed by the hospital nursing staff and the doctors are at higher levels as compared to the ideal situations.
- More number of beds is being used in-order to meet the exceeding number of patients.
- This condition is arising because of the understaffing in various departments. Especially recruitments are required in the departments of nursing and housekeeping.
- This would substantially help in reducing the burden on every individual along with that it would reduce the turnaround time for bed allocation.

I.D Conclusion and Recommendations

Some recommendations and conclusions are as follows:

- There were communication gaps regarding the information of the discharge of the patient, which needs special attention.
- These communication gaps needs to be better addressed to reduce the delay in admission and discharge.
- Implementation of a central communication system is recommended regarding the information and status of the beds in the wards to convey the information as soon as the bed is ready.
- In order to improvise the delay in the discharge of the patients, the staff should be trained or more skillful persons must be recruited to increase the speed and accuracy of billing process.
- The discharge file has to go to the hospital head for the purpose of signature which sometimes caused a delay in conditions when the head is not available. So, in order to avoid such situations, this duty could be assigned to some other person or some replacement for this step is recommended.
- Housekeeping should always report to their head regarding the status of the bed. Reducing the delay regarding this is recommended.
- Recruitments of few more nursing staff is recommended.
- 24hr attendant and ward boys should be present on all the floors.

REFFERENCES

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ANNEXURE

ACRONYMS/ABBREVIATIONS

OT	Operation theatre
ICU	Intensive care unit
FOPJHRC	Fortis o p jindal hospital
TPA	Third party assurance
BS	Buffer stock
LFS	Life Saving Drugs

List of Activities Performed During the Training Period

SUMMER INTERNSHIP ACTIVITIES

Work Assigned By the Organization

Date	departments
9/04/2013-14/4/2013	Observation at Front office , registration desk, cash counter
15/4/2013-20/4/2013	Study the role of a floor manager (wards, nursing station)
21/4/2013-27/4/2013	Study the role of a floor manager (ICU,OT)

LIST OF PEOPLE INTERACTED WITH DURING THE TRAINING

Sr No.	NAME	DESIGNATION	PLACE
1.	Dr.Sachin Jain	Chief operating officer	fopjhrc
2.	Mrs Alish	Senior HR executive	fopjhrc
3.	Mrs Geeta Mathew	Head PCS	fopjhrc
4.	Mr.Vikram Nigam	Administrator	fopjhrc
5.	Mr Sandeep Soni	Administrator	fopjhrc
6.	Ms Deepika Soni	Jr HR executiv	fopjhrc

QUESTIONNAIRE

Name of the department: ICU (MICU/NICU/BICU/SICU) and OT.

Name of the in charge:

1. Are you aware about importance of substantial Stock of materials at your department?

- Yes - No.

2. Who has the custody of inventory in stock in departments (OT/ICU)?

   Name & Designation:

3. Do you maintain an inventory record for your department?
   - Yes - no

4. Do you maintain an inventory record for the life saving drugs in your dept.?
   - Yes - no

5 What are the common drugs used in your department?

6. Do you categorize your drugs and disposables stock into different categories for ease of recording and reporting like replenishment stock, safety stock and excess/ obsolete stock?
   - Yes - no

7. Do you maintain replenishment stock for commonly used drugs and disposables in your department or generate order for them whenever they are out of stock or close to out of stock?

   Yes - no

8. How do you calculate the replenishment level of the medicine stock for commonly used drugs and disposables when needed?

- By use of advanced software that predict the medicines used according to the pattern of usage and future trends.
- Decided by a team based on calculations from previously available data and future trends.
- Decided simply based on assumptions and estimation by a staff (according to rule of thumb like "X" medicine may last for 15 days so 15 days of stock is needed).
- Need based Medicine system

9. Do you re check your replenishment stock levels regularly to ensure they are up to date?

- Yes - no

10. The optimal level of stock and optimal frequency for ordering are decided by:

- The in charge/ nurses on duty based on their experience/ estimation/need.
- By the doctor based on individual patient's needs and experiences.
- Combined by the doctor and nursing in charge.
- Based on availability in the store or in market.
- By a cross functional committee (consisting of doctors, nurses, management executive and store executive etc.) based on set statistical methods, trends and future trends and usage.
- Others (please specify).

11. Is the optimal order and frequency calculated on regular basis as part of continuous improvement process?

- Yes - no - others (specify).

12. What is the Procedure for materials being issued and used/consumed in OT/ICU?

13. Do you regularly check your stock for excess and obsolete stock and prepare action plans to sell off or reduce this inventory?
    - Yes - no - others (specify).

14. Whether there is any plan in place to find out the reason for excess or obsolete drug stocks?
    - Yes - no - others (specify).

15. Do you apply this process to all the departments concerned in purchase, procurement, issuing and usage of medicines? (Like central stores, OT stores, ICU stores and wards as to maintain the uniformity in processes).
    - Yes - no - others (specify)

16. Where is the stock for drugs and disposables stored?
    - Safely in separate shelves for emergency stock, replenishment stock and daily usage.
    - In separate store room with different sections for different stocks.
    - In shelves but without any differentiation between different stock categories.
    - Others (specify)

17. Are separate records maintained for stock in department concerned?
    a. Narcotics
    - Yes - no - others (specify)
    b. Life saving Drugs
    c. …….
    d. …….
    e. …….Yes - no - others (specify)

18. What measures are taken to prevent unauthorized access to the inventory stored?

19. What is the procedure for returning unused/expired drugs to the stores?

20. Suggestions if any to improve the process of purchase, supply and issue of drugs to department:

21. Explain the procedure for issue and receiving of Fresh linens to the department?

22. Explain the procedure for issue and receiving of new linens to the department?

23. Do you maintain a linen record for your department with details like no. of linens Received, fresh linen quantity issued, no. of soiled linen going out and No. of dirty linen etc.?

- Yes - no

24. How are fresh linen issued to the department?

- By exchanging clean linen for dirty
- According to usage of linens decided on the basis of patients present
- **Topping** up of department stock daily
- Through sending trolley to the departments containing daily linen supply of department.
- Others (specify)

25. The dirty and soiled linen stored in separate containers/bags?

- Yes - no - others (specify)

26. If any color coding followed for storage and disposal of dirty and soiled linen?

- No.
- Yes: *What is the practice?*

27. Where are fresh linens stored in the department?

- In separate shelves designated for storage of fresh linens.
- In separate storage area for fresh linens.
- In storage area along with stock of other items
- Others (specify)- Running Trolley System

28. What are the measures to stop loss of linen stock due to pilferage, abusive usage, theft and storing linens in places other than the designated place? ***Please outline:***

29. Are separate staff designated for collection and cleaning of soiled linen?
    - Yes - no.

30. Whether Buffer stock of linen is maintained in the department?
    - Yes - no

31. Can you please rate the following Qs. On a scale of 1-5 where:
    1- Strongly agree
    2- Agree
    3- Neutral
    4- Disagree
    5- Strongly disagree
    - The process of issue of fresh linen is satisfactory and needs no improvement?
    - The process of collection of linen from the dept. is satisfactory and needs no improvement?
    - The process of segregation and cleaning of soiled and dirty linen is satisfactory?
    - The laundry dept. is performing its functions efficiently?

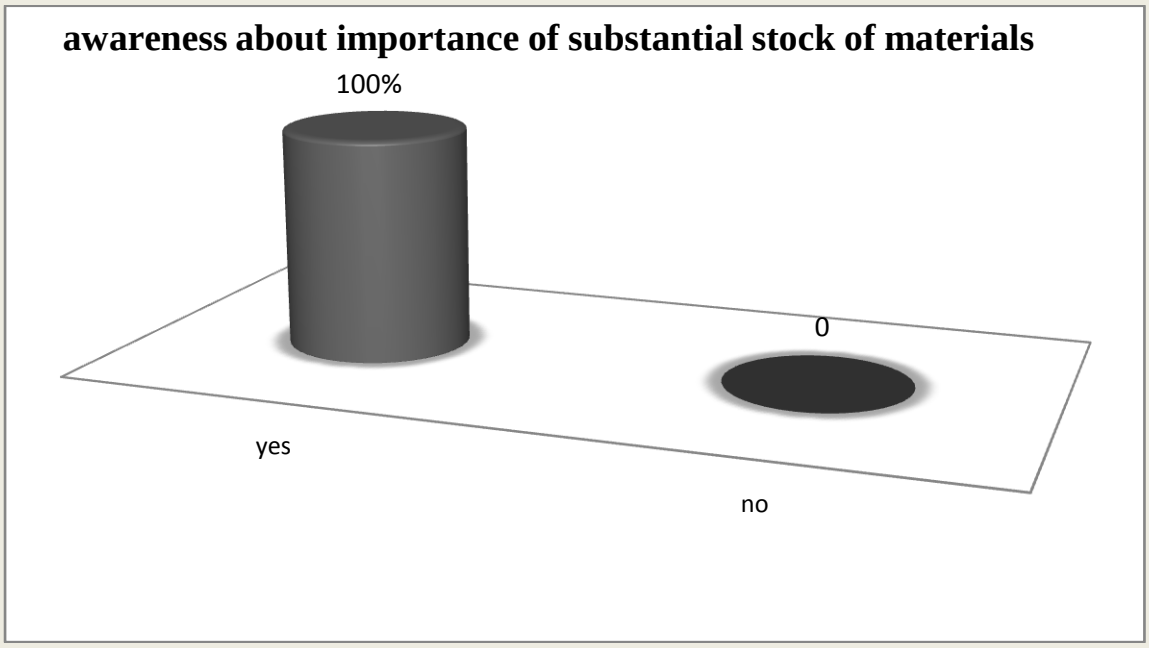
32. Suggestions if any for improvement:

DATA ANALYSIS

Project 1- Inventory management:

1. **Are you aware about the importance of substantial stock of materials at your department?**

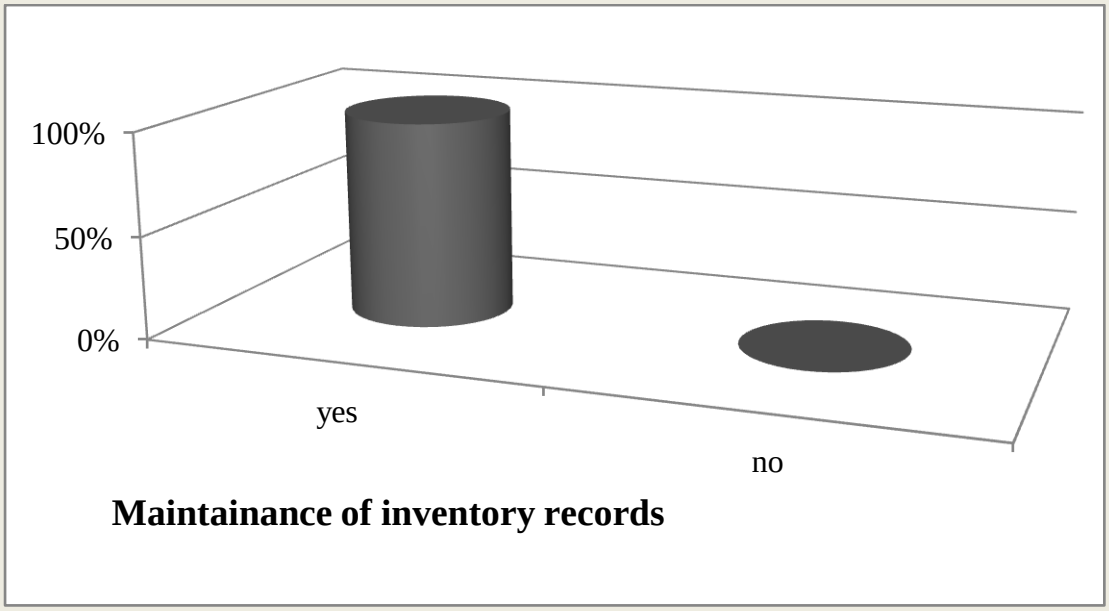
Responses	No. of people	Percentage
Yes	20	100%
No	00	00%
Total	20	100%



- All of the staff was aware about the importance of substantial stock for the department.

2. Do you maintain an inventory record for your department?

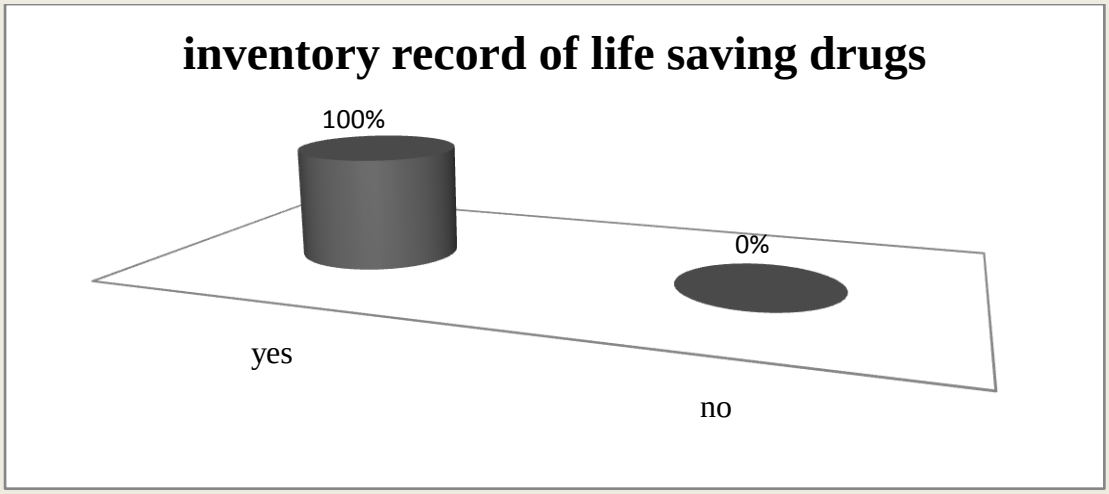
Responses		Percentage
Yes	20	100%
No		
Total	20	100%



- As we can see that all of the staff maintained inventory record for the department.

3. Do you maintain inventory record for life saving drugs in your department?

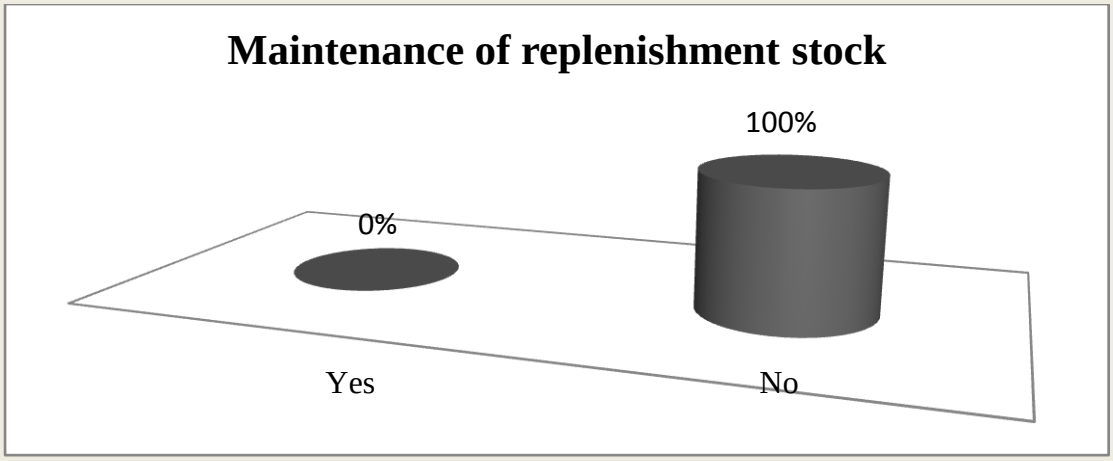
Yes	20	100%
No	00	00%
Total	20	100%



- The staff maintained inventory records for Life saving drug in the department.

4. Do you maintain replenishment stock for commonly used drugs and disposables in your departments?

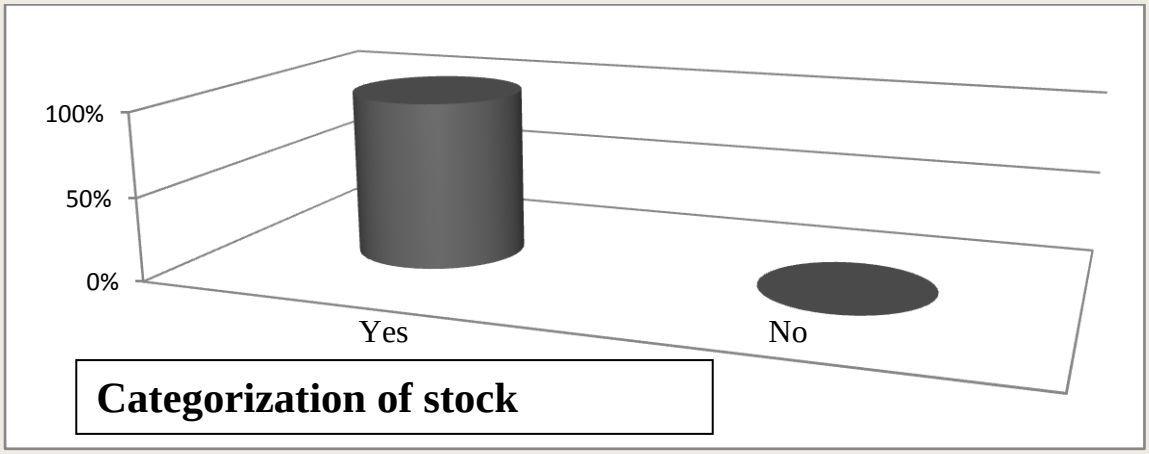
Responses	Number of people	Percentage
Yes		
No	20	100%
Total	20	100%



-As we can see that replenishment stock was not maintained in departments.

5. Do you categorize your drugs and disposables stock into different categories for ease of recording and reporting like replenishment, safety stock and excess/obsolete tock?

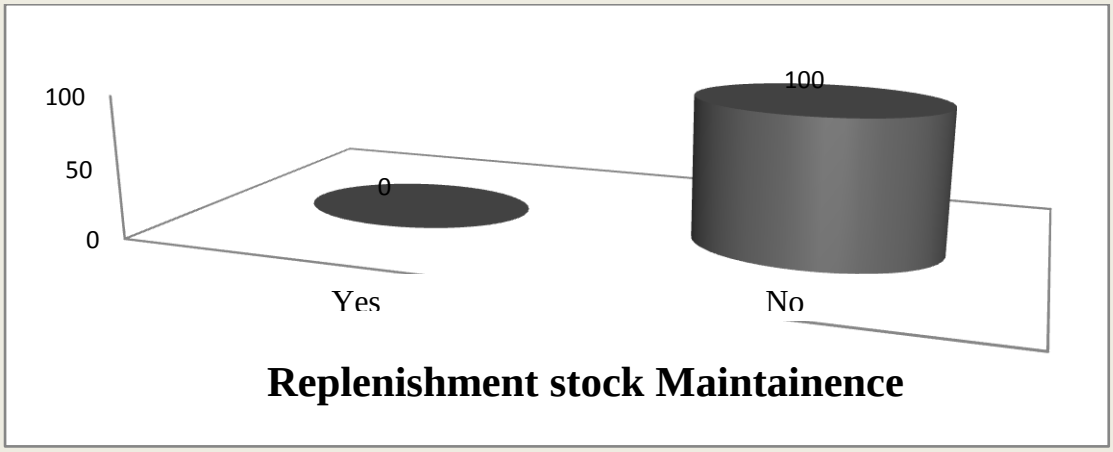
Responses	Number of people	Percentage
Yes	20	100%
No	00	00%
Total	20	100%



- The staff was aware and categorized their drugs and disposables in different categories for ease of recording.

6. Do you maintain replenishment stock for commonly used drugs and disposables in your department or generate order for them whenever they are out of stock or close to out of stock?

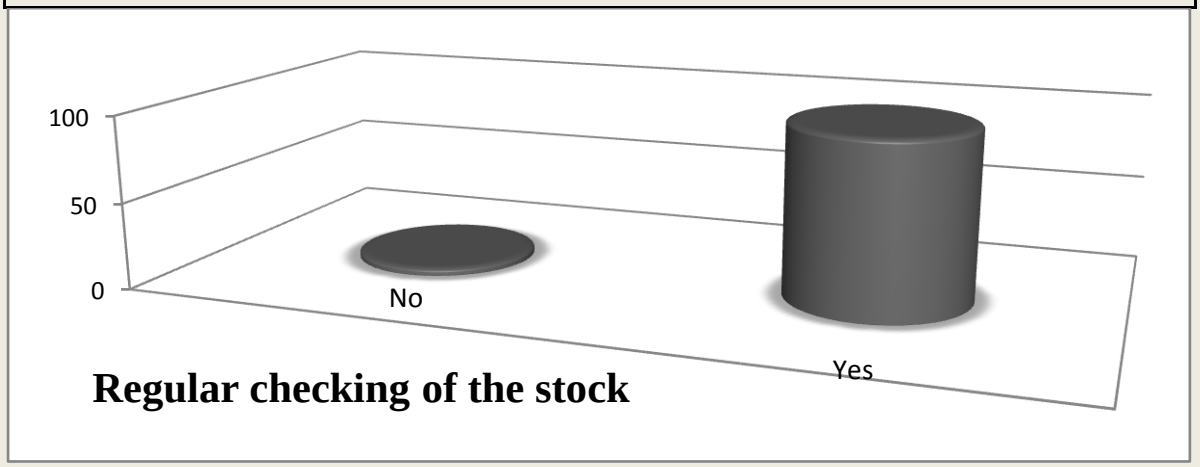
Responses	Number of people	Percentage
Yes	00	
No	20	100%
Total	20	100%



-The staff did not maintained replenishment stock for drugs and disposables.

7. Do you recheck your stock level regularly to ensure they are up to date?

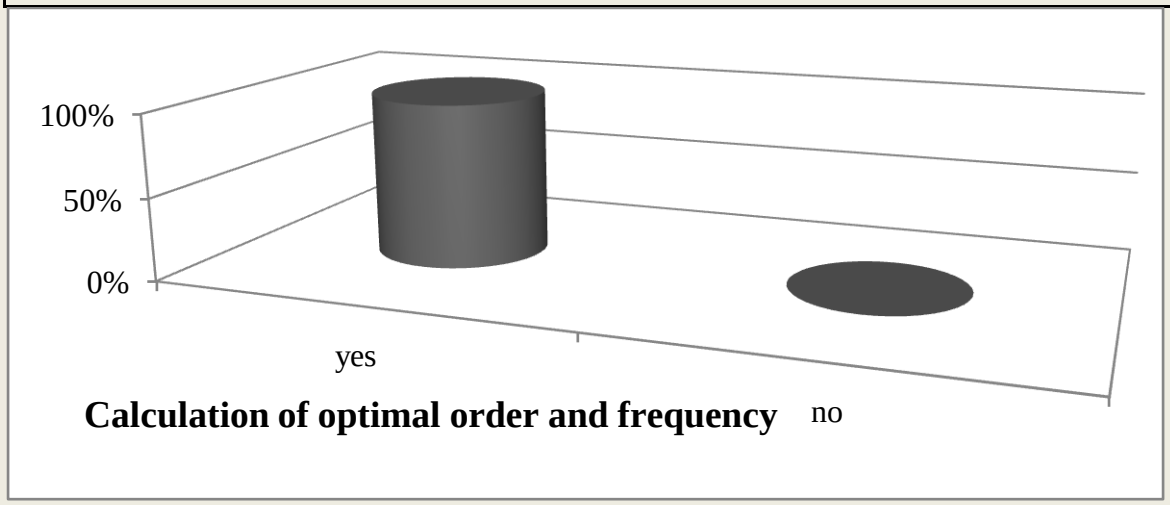
Response	Number of people	Percentage
Yes	20	100%
No	00	00%
Total	20	100%



- The staff checked the stock regularly to ensure they are up to date.

8. Is the optimal order and frequency calculated on regular basis as a part of continuous improvement process?

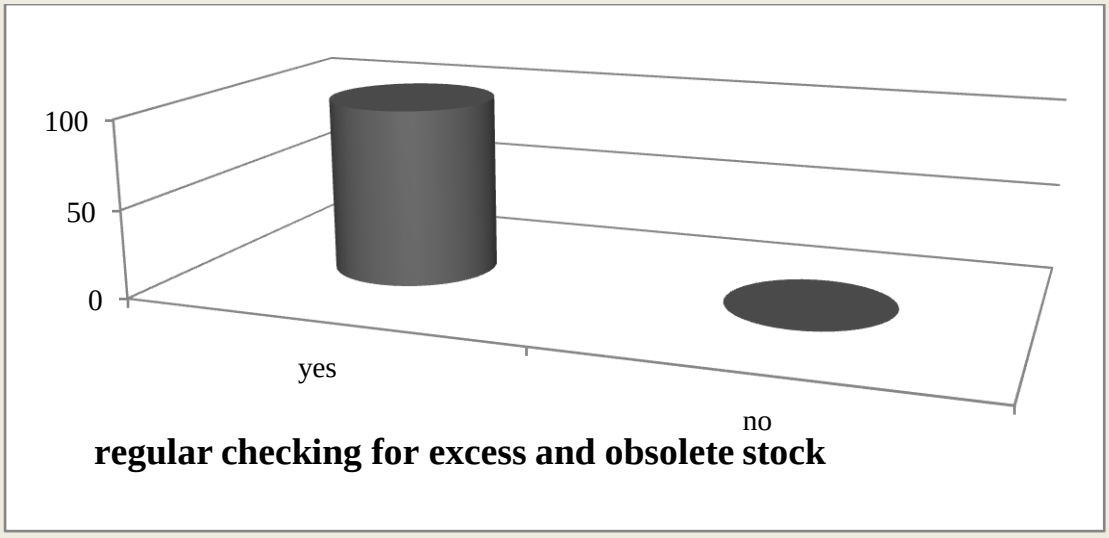
Response	Number of people	Percentage
Yes	20	100%
No	00	00%



- Optimal order frequency was calculated on a regular basis.

9. Do you regularly check your stock for excess and obsolete stock and prepare action plans to sell off or reduce this inventory?

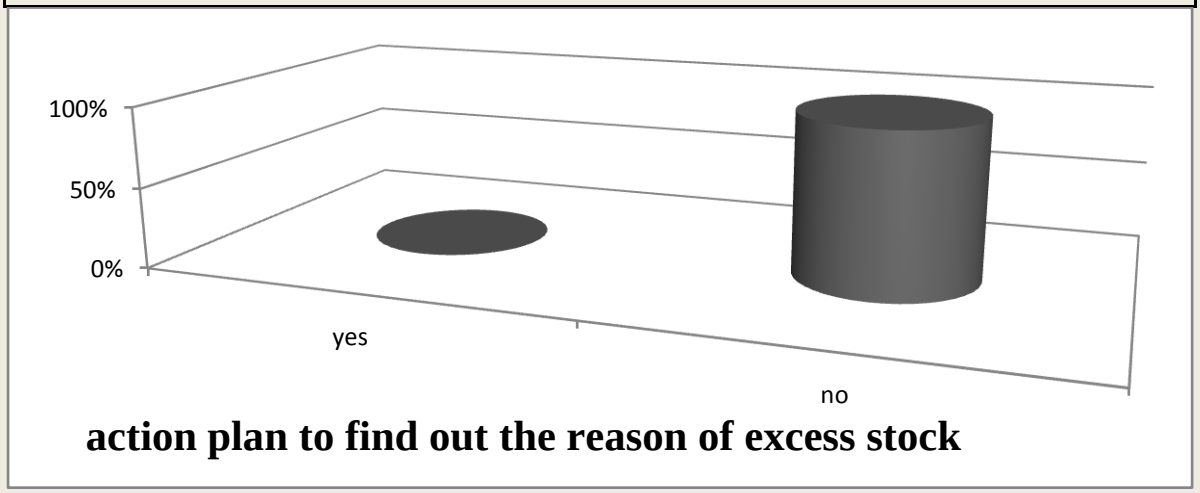
Response	Number of people	Percentage
Yes	20	100%
No	00	00%
Total	20	100%



- The staff checked regularly for excess and obsolete stock.

10. Whether there was any plan in place to find out the reason for excess or obsolete drug stocks?

Response	Number of people	Percentage
Yes	0	0
No	20	100%
Total	20	100%



action plan to find out the reason of excess stock

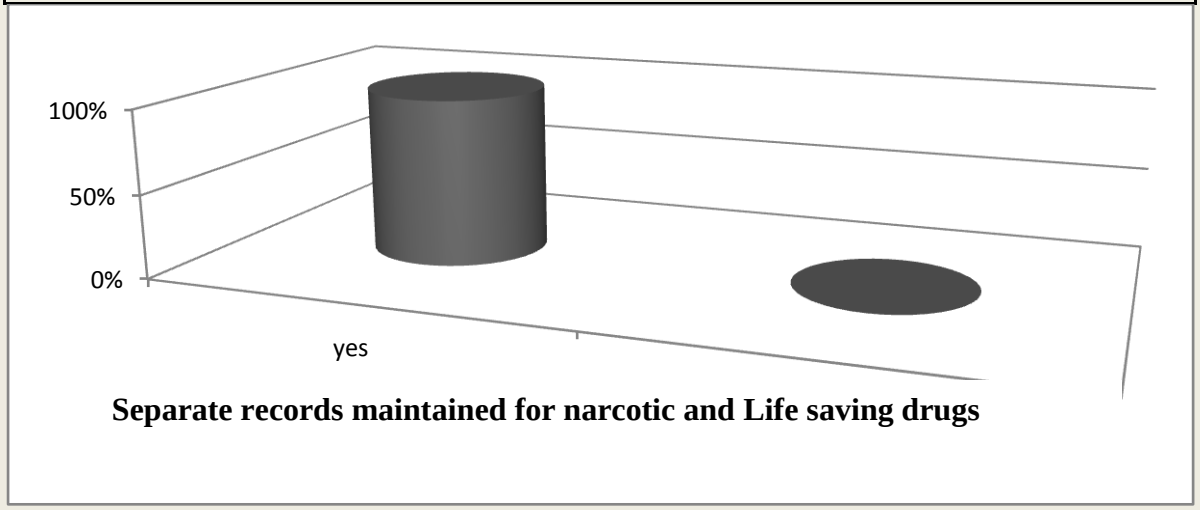
- There was no action plan in place to find out the reason of excess or obsolete stock.

11. Are separate records maintained for stock in department concerned?

a. Narcotics

b. life saving drugs

Response	Number of people	Percentage
Yes	20	100%
No	00	00%
Total	20	100%

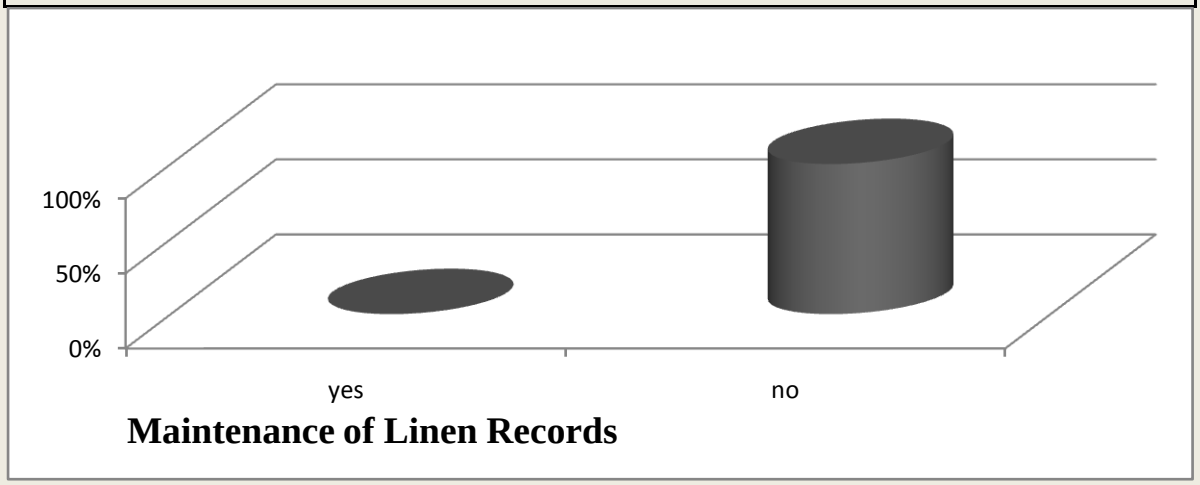


Separate records maintained for narcotic and Life saving drugs

- Separate records were maintained for Life saving and narcotic drug.

12. Do you maintain a linen record for your department with details like no. of linens received, fresh linen, quantity issues, number of soiled linen going out and number of dirty linen etc?

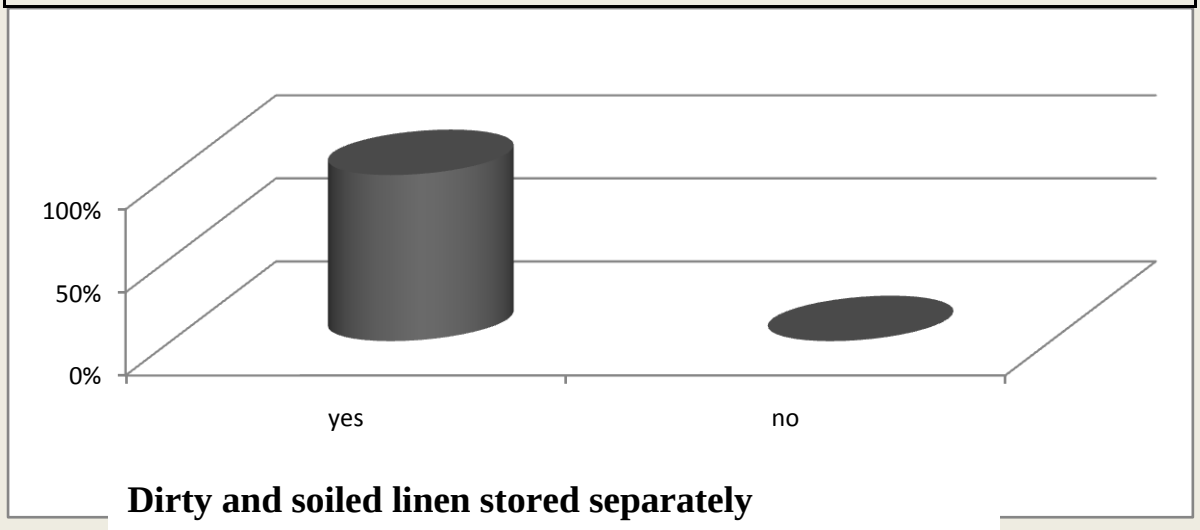
Response		Percentage
Yes	0	0%
No	20	100%
Total	20	100%



- The staff maintained a linen record for the department including details about the linen.

13. The dirty and soiled linens are stored in separate containers or bags?

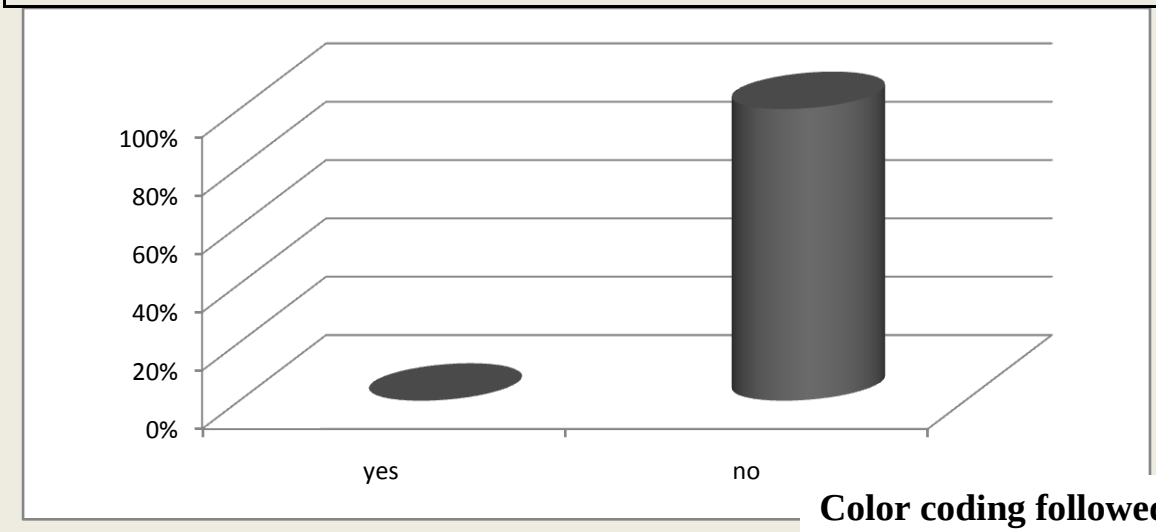
Response	Number of people	Percentage
Yes	20	100%
No	00	00%
Total	20	100%



- The dirty and soiled linens were stored separately in different containers.

14. If any color coding is followed for storage and disposal of dirty and soiled linen?

Response	Number of people	Percentage
Yes	0	0%
No	20	100%
Total	20	100%

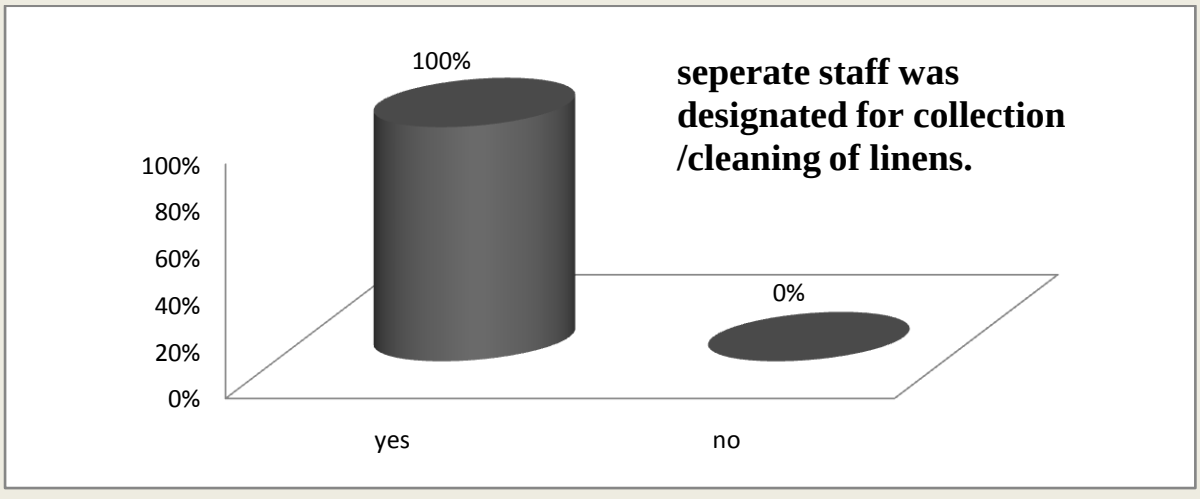


Color coding followed for disposal of dirty and soiled linen

- No color coding was found to be followed for storage and disposal of dirty and soiled linen.

15. Whether separate staff designated for collection and cleaning of soiled linen?

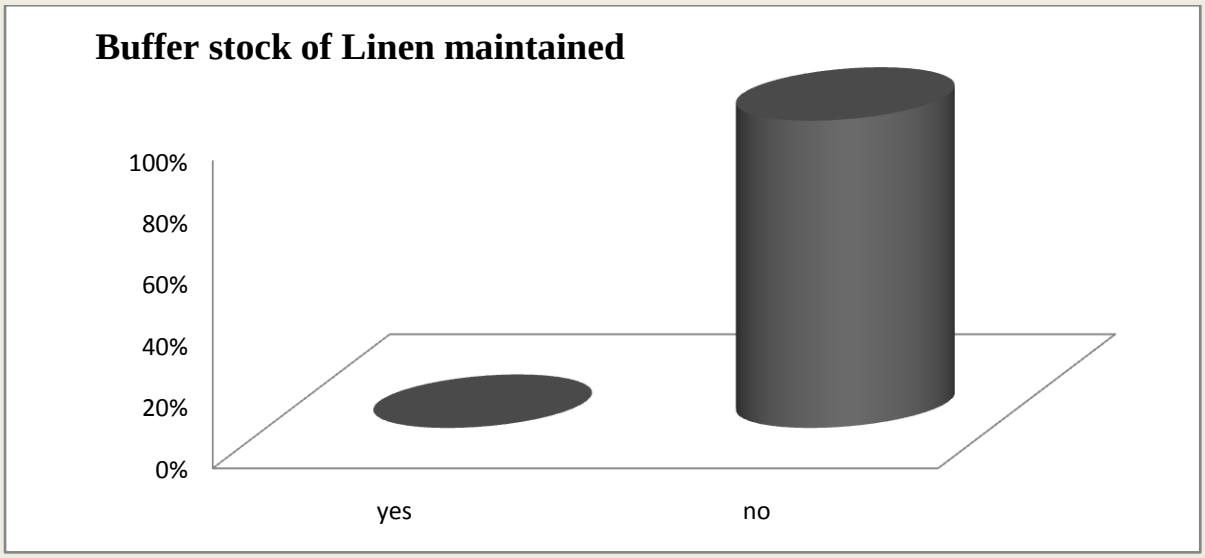
Response	Number of people	Percentage
Yes	20	100%
No	00	00%
Total	20	100%



- Separate staff was designated for collection and cleaning of soiled linen.

16. Whether buffer stock of linen is maintained in the department?

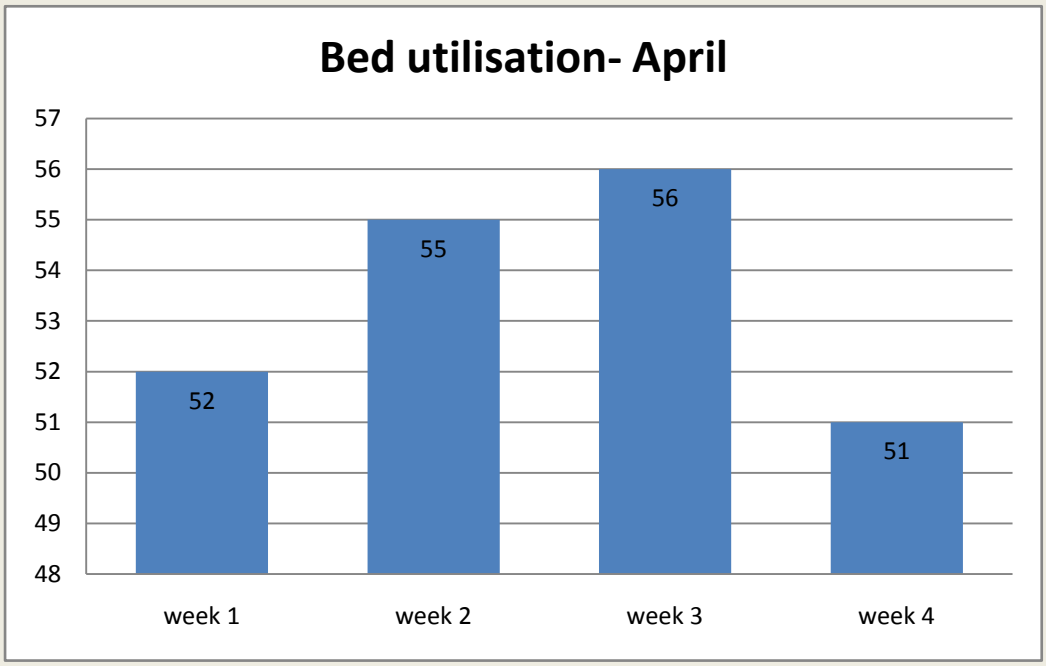
Response	Number of Nurses	Percentage
Yes	0	00%
No	20	100%
Total	20	100%



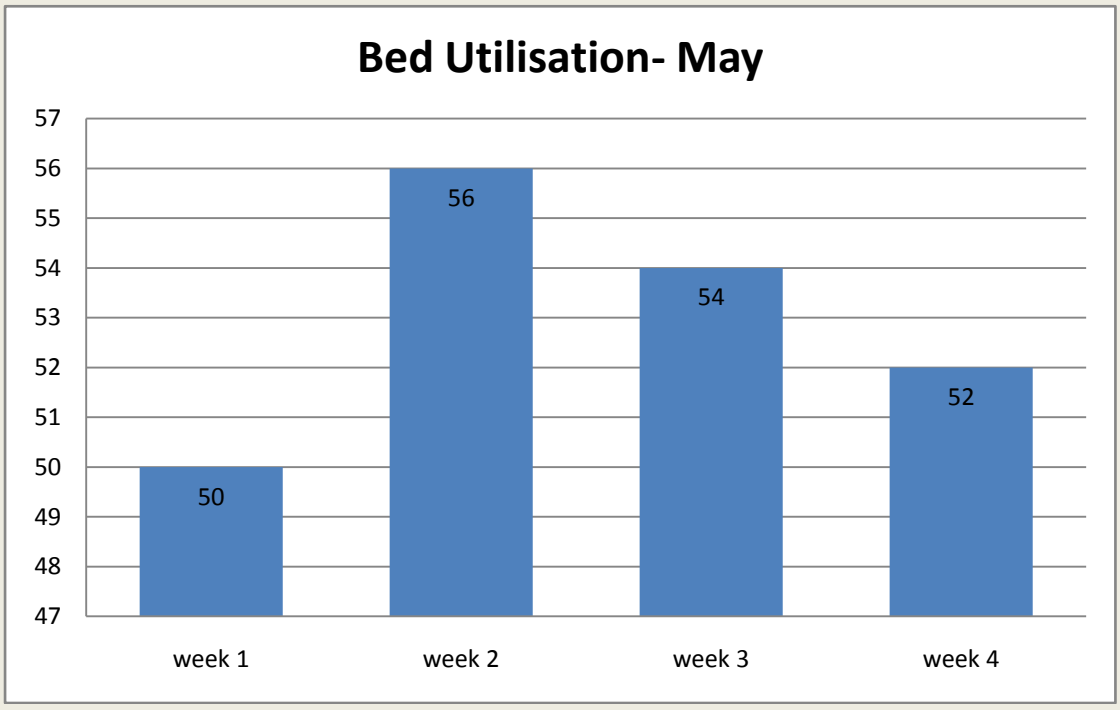
- No buffer stock of linen was maintained in the department.

Project 2 Capacity utilization of beds:

The bed utilization for the month of April is shown below (out of 51 operational beds):



The bed utilization for the month of May is:



- We can clearly see above that there was over utilization of Hospital resources during the 2 months of the study.

Thank You