

Dissertation Presentation

Submitted by :-
Rachana Kashyap
MHA - 19
IIHMR, Jaipur

INTRODUCTION :

Topic of the Study :

“Time motion study of Basic Health Check up and conversion of all health checkups into OP diagnostics and IPD admissions”.

About the hospital :

- Wockhardt hospital, Nagpur is a 118 bedded super speciality hospital with a modern cath-lab, 4 operation theatres, 50 beds of ICCU and SICU and with In-house diagnostic facilities like CT scan, MRI, EEG and EMG.
- It is the first NABH accredited hospital in Central India.
- It provides medical care in the areas of Cardiac and Cardiac Surgery, Interventional Radiology, Orthopaedics and Joint replacement Surgeries, Minimal access Surgery and Critical care besides other specialities like Urology, Nephrology, Endocrinology, Gynaecology, Paediatrics, Emergency care, Preventive Healthcare and various high end surgeries like Kidney Transplant Surgery, Bariatric Surgery and Minimal Invasive Surgeries.

List of Health Check ups offered by hospital :

- Basic Health Check up
- Executive Health Check up (Basic)
- Executive Health Check up (Premium)
- Well women Health Check up
- Diabetes Health Check up
- Cardiac Health Check up
- Comprehensive Cardiac Health Check up
- Cancer Screening Health Check up
- Gastro Intestinal Health Check up

Aim of the project :

- To conduct a time motion study of basic health check up patients.
- To suggest ways in order to complete the process on time, if the process is taking longer time than usual.
- To study the conversion rate of health check up patients converted into OP diagnostics and IPD admissions.

Objectives of the project :

- To map the processes involved in basic health check up.
- To streamline the process.
- To conduct a gap analysis.
- To study that how many patients of health check ups are being advised further OP diagnostics and IPD admissions.

Rationale :

- Long waiting hours and wastage of valuable time makes people reluctant in investing time for their health.
- Customer experience is more important than customer service.
- People coming to hospital for health check up should get the value for money and a good experience.
- If customer experience is good, there will be more footfalls in hospital for health check up thus increasing revenue.

Literature Review :

- The primary goal of tertiary care hospital is to provide best possible health care to the patient. The modern era where it is right of every patient to demand best possible care. It is the duty of every staff member of the hospital to deliver his optimum efforts to the entire satisfaction of the patient.

Luthans-F, Organizational behavior

(Human Resources Development Oxford and IBH, New Delhi.)

- Time constraints limit the ability of doctors to comply with preventive service recommendations. Despite evidence of the effectiveness of preventive services and the development of published national guidelines, actual rates of delivery health care services remain low. Several studies have investigated why preventive services delivery rates are low. The most common barriers identified are lack of time during the office visit, inadequate insurance reimbursement, patient refusal to discuss or comply with recommendations, and lack of physician expertise counselling techniques.

- Consistent with the finding that time is a salient barrier, Zyzanski and colleagues have shown that high-volume physicians perform fewer preventive services. Although a recent study showed that time spent in office visits has increased slightly in the past decade, doctors continue to claim that not having enough time is a barrier to performing preventive services. Most patients require more than 1 or 2 preventive services each year.

Research Questions :

- What is the actual time taken to complete a basic health check up?
- What are the reasons of increased time in basic health check up, if any?
- How many patients of all health check ups are advised further OP diagnostics or IPD admissions?

Research Methodology :

- Type of study: Prospective(Active mode),Retrospective
- Nature of study: qualitative and quantitative both
- Location of study: Wockhardt Hospitals, Nagpur
- Study subjects: Patients, patient care staff, Consultants, housekeeping staff
- Sampling process: Stratified Random Sampling
- Sample size: 100
- Duration of study: three months

- Data (information) to be collected:
 - (i).Primary data - observations
 - (ii).Secondary data - Patient related documentation records, Books, Journals, Internet.
- Data collection tools: Qualitative(Observations) and quantitative(value stream mapping, process mapping)
- Data analysis: SPSS , Fish bone analysis, Process Mapping

In hospital, Basic health Check up is done at Rs. 1,500/- and includes following tests :

Blood test includes :

✓ Diabetic Evaluation :

- Fasting Blood Sugar (FBS)

✓ Lipid Profile :

- Cholesterol

✓ Thyroid Profile :

- Thyroid Stimulating Hormone (TSH)

✓ Liver Profile :

- Bilirubin and SGPT

✓ Kidney Function Test (KFT) :

- Creatinine

✓ General Investigations :

- CBC with ESR and Urine Routine Examination

✓ Cardiac Risk Evaluation includes :

- ECG

✓ Imaging includes :

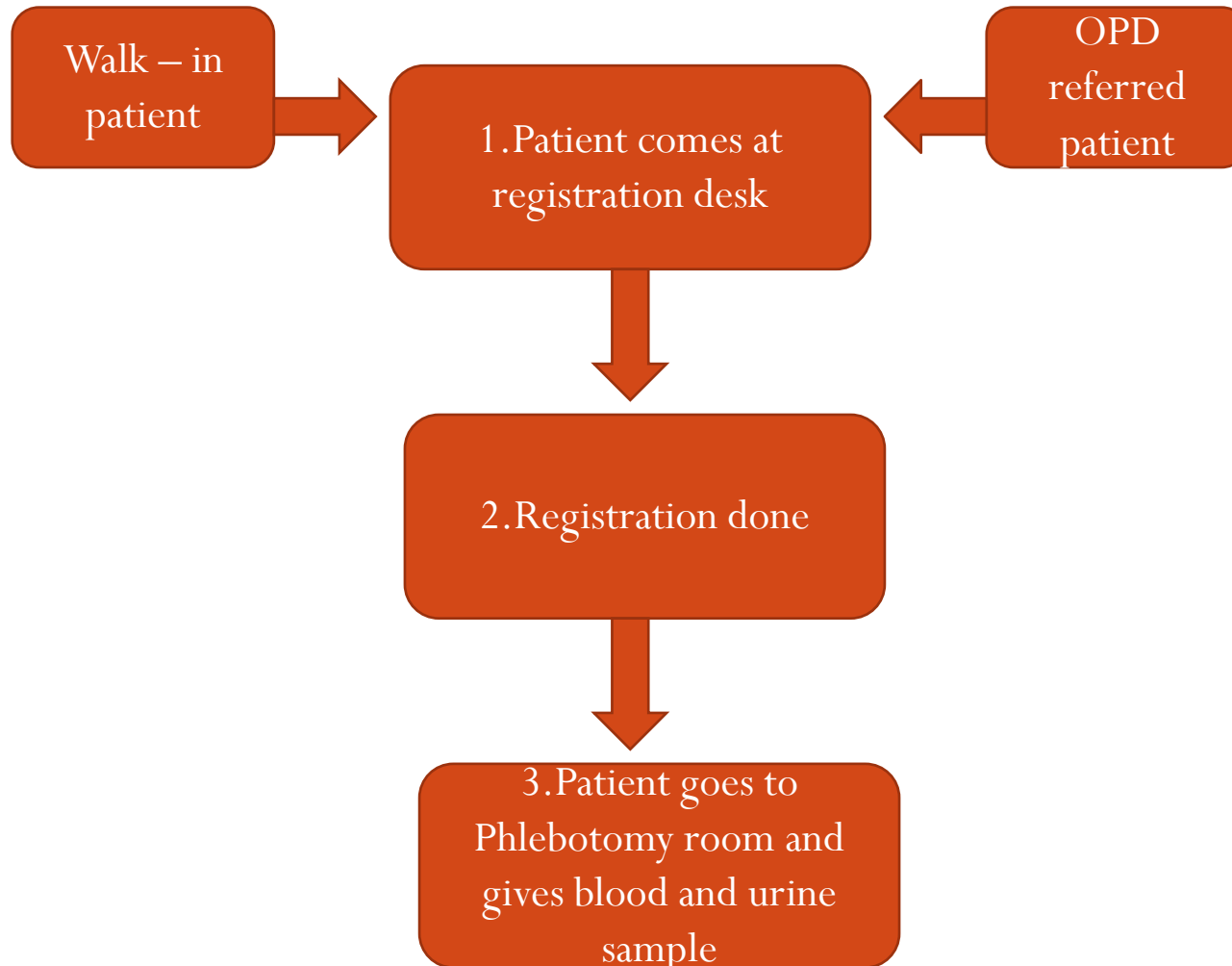
- Chest X- Ray

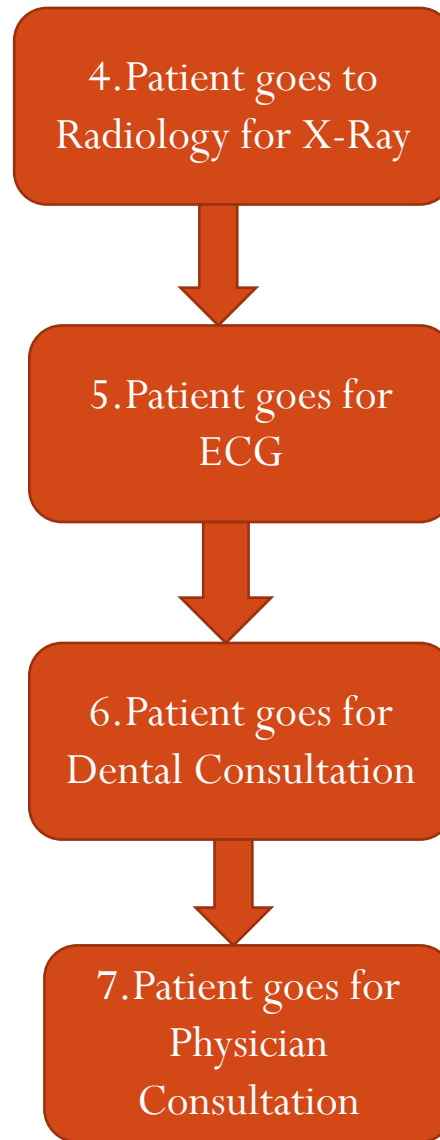
✓ Consultation includes :

- Physician

- Dentist

Process Flow :





Note : Process 4,5 and 6 can be shuffled and go simultaenously for different patients.

Steps	Process	Manpower	Technology
A	Registration	Customer care staff	HIS
B	Sample Collection	Lab technician	
C	Sample Transportation to lab	Housekeeping staff	
D	Sample run in lab	Lab technician	Centrifuge machine, Integra 400 machine
E	ECG	ECG technician	ECG machine
F	X-Ray	X-Ray technician	X-Ray machine
G	Dental	Dentist	
H	Lab reports ready	Lab technician, Pathologist	
I	Radiology reports ready	Radiology technician, Radiologist	
J	All reports sent to customer care desk	Housekeeping staff	
K	Physician consultation	Physician	

SWOT Analysis :

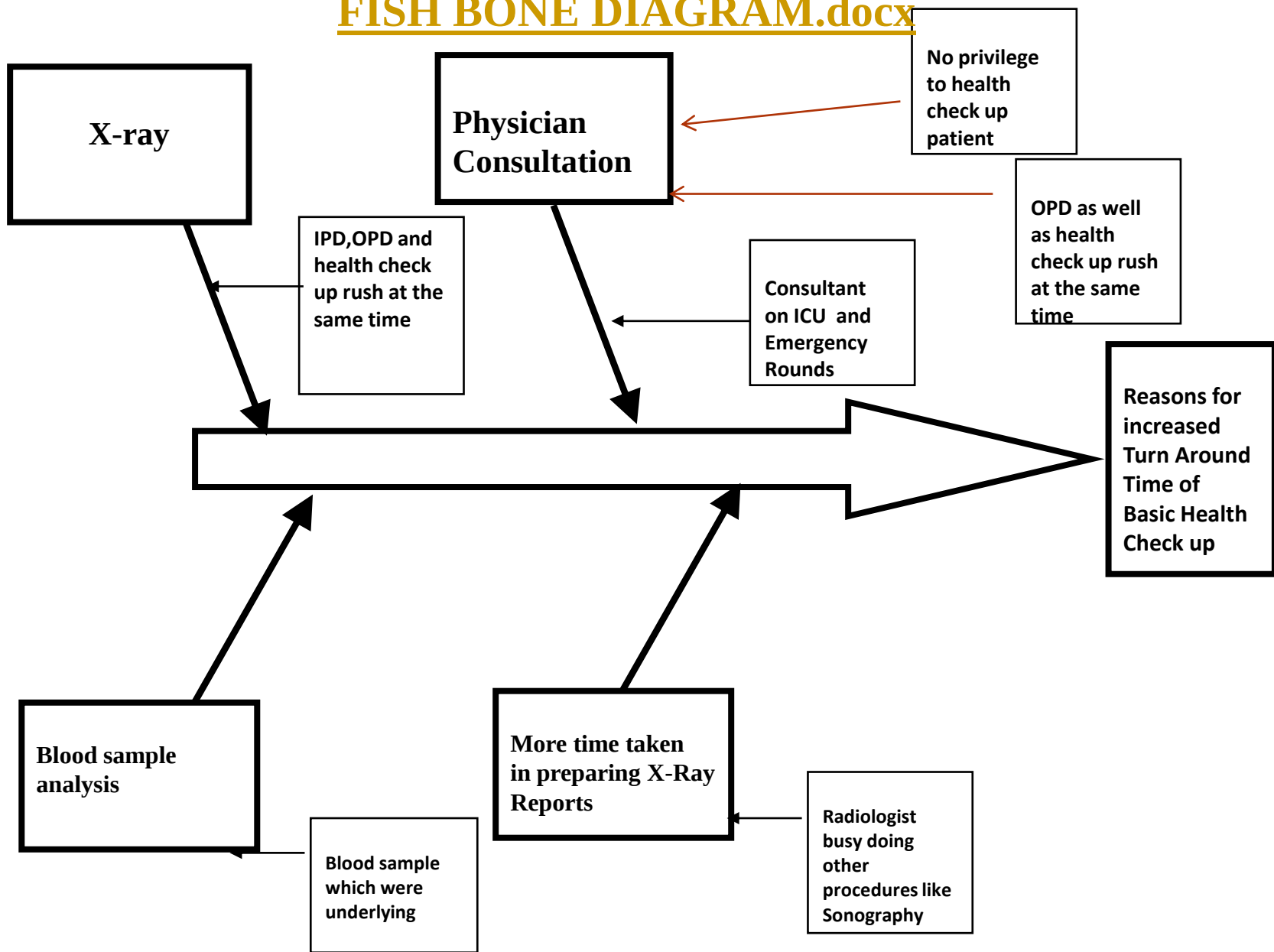
Strength : Expertise
Consultation, Well versed
employees, Brand name,
Technology

Weaknesses : More waiting
time, Decentralization

Opportunities : Can raise
level of patient satisfaction
by efficient time
management

Threats : Other hospitals
providing health check up
facility

FISH BONE DIAGRAM.docx



Parameters in track sheet :

- Customer care :

- (i). Patient arrival
- (ii). Patient departure
- (iii). Requisition time
- (iv). Procedure time
- (v). Waiting time
- (vi). Total time

- Phlebotomy :

- (i). Patient arrival
- (ii). Patient departure
- (iii). Procedure time
- (iv). Waiting time
- (v). Total time
- (vi). Sample remained in phlebotomy

- Lab :

- (i). Sample reached lab

- (ii). Sample run in lab

- (iii) Reports generated

- (iv). Reports Printed

- (v). Reports sent to Customer Care desk

- ECG :

- (i). Patient arrival
- (ii). Patient departure
- (iii). Procedure time
- (iv). Waiting time
- (v). Total time

- X-Ray :

- (i). Patient arrival
- (ii). Patient departure
- (iii). Procedure time
- (iv). Waiting time
- (v). Total time

- Dental :

- (i). Patient arrival
- (ii). Patient departure
- (iii). Procedure time
- (iv). Waiting time
- (v). Total time

- Physician Consultation :

- (i). Patient arrival
- (ii). Patient departure
- (iii). Procedure time
- (iv). Waiting time
- (v). Total time

VALUE STREAM MAPPING

Patient comes for registration at registration desk

Cycle time = 7.78 minutes

Waiting time = 4.43 minutes

Value added time = 3.35 minutes

Patient comes for giving blood sample in phlebotomy
room

Cycle time = 11.53 minutes

Waiting time = 6.29 minutes

Value added time = 5.24 minutes

Patient comes for ECG in ECG room

Cycle time = 13.48 minutes

Waiting time = 8.24 minutes

Value added time = 5.24 minutes

Patient comes for X-Ray in Radiology room

Cycle time = 27.09 minutes

Waiting time = 21.29 minutes

Value added time = 5.8 minutes

Patient comes for Dental Consultation

Cycle time = 17.92 minutes

Waiting time = 8.95 minutes

Value added time = 8.97 minutes

Patient comes for Physician Consultation

Cycle time = 2 hours 47 minutes

Waiting time = 2 hours 36 minutes

Value added time = 11 minutes

Total Time Taken in completing Basic Health Check up (avg.) =
6 hours

Results :

- Average time taken in completing a basic health check up is 6 hours. Benchmark is 4 hours.
- Average time taken in registration is 7.78 minutes. Benchmark is 10 minutes.
- Average time taken in sample collection is 11.53 minutes. Benchmark is 20 minutes.
- Average time taken in ECG is 13.48 minutes. Benchmark is 20 minutes.
- Average time taken in X-ray is 27.09 minutes. Benchmark is 18 minutes.
- Average time taken in dental consultation is 17.92 minutes. Benchmark is 20 minutes.
- Average time taken in physician consultation is 2 hours 47 minutes.

- 20 % of basic health check ups were completed within 4 hours.
- 70 % of basic health check ups were completed within 6 hours.
- 10 % of basic health check ups were completed within 8 hours.
- Main reason for delay was Physician Consultation.
- Other reasons were radiology reports, lab reports.
- Process was streamlined.
- Out of 100 health check up patients, 46 i.e. 46.00 % were advised additional OP diagnostics and 7 i.e. 7 % were converted into IPD admissions.
- Conversion of health check up patients into In-patients were real as well as planned.

Suggestions :

- Doctor's on call for health check up should not be clubbed with emergency and ICU rounds.
- Appointment of a doctor exclusively for health check up.
- Patient should be told on a continuous basis to come to OPD desk after the completion of one process. In other words, proper tracking of patient.
- Health check up patients should be given some privilege in case of consultation.
- There should be a separate time for seeing health check up patients and OPD patients.
- Some rewards to employees if they are able to complete health check up within time limits.

Dissertation Presentation

Submitted by :

Rachana Kashyap

Master in Health Administration (MHA)

IIHMR , Jaipur

Topic of the project :

“Study of Actual vs Estimate Billing of CABG Package in Wockhardt Heart Hospital, Nagpur.”

About the hospital :

- Wockhardt Heart Hospital, Nagpur is a 48 bedded (12 ICU and 5 SICU) cardiac care unit which performs all kinds of critical cardiac surgeries. It has full time expert team of cardiologists and cardiac surgeons to drive its cardiac services. It is one of the pioneers of Angiography by the radial method. Apart from other procedures it does around 250 CABG procedures in a year.

Introduction :

- Before any surgery or clinical procedure, estimate is the primary mode to make patient understand that how much they need to spend on a particular procedure and if there is any fluctuation, it ultimately leads to patient dissatisfaction.

Aim of the Project :

- To find out whether there is any difference between estimate and actual bills of CABG package.

Objective(s) of the Project :

- To study actual bills and estimate of CABG procedure in detail.
- To list out the critical components contributing in deviation from estimate to actual.

Research Methodology :

- Type of study : Retrospective mode of study
- Location of study : Wockhardt Heart Hospital, Nagpur
- Study subjects : CABG actual bills and estimate
- Sampling process : Stratified Random Sampling
- Sample Size : 100 (cash and credit)
- Data (information) to be collected:
 - (i).Primary data : CABG actual bills from Hospital Information System.
 - (ii).Secondary data : Books, Journals, Internet.
- Data collection tools : quantitative

Research Questions :

- Is there any deviation between actual bill and estimate of CABG procedure?
- What are the critical components due to which there is a deviation (if any)?

Estimate of CABG in Wockhardt Nagpur

ROOM CATEGORY	MULTI BED	TWIN SHARING	SINGLE
Basic hospital charges (2 ICU, 6 Ward)	101300	113000	142000
Pharmacy, Consumables, Investigation, OP/IP Procedure	128700	137000	143000
CSSD and Cardiologist charges	5000	5000	5000
Total	235000	255000	290000

Actual of CABG in Wockhardt Nagpur

ROOM CATEGORY	MULTI BED	TWIN SHARING	SINGLE
Basic hospital charges (2 ICU, 6 Ward)	101300	113000	142000
Pharmacy, Consumables, Investigation, OP/IP Procedure	131879	151000	171987
CSSD and Cardiologist charges	5000	5000	5000
Total	238,179	269,000	318,987

Parameters in analysis of CABG bills :

- IP number
- Bed category
- Length of stay
- Stay in days
- Total basic hospitalization charges
- OP/IP procedures
- Pharmacy
- Consumables
- Blood transfusion
- Other investigations

- CSSD and Cardiologist charges
- Diet consultation
- Admission
- Registration
- Physician consultation charges
- Bed rentals
- Bed charges

Results :

- In case of analysis of cash bills, it was found that 26 % of the total bills were exceeding the estimate (if we take alos as 8-10 days)
- After this, we did critical analysis of these 26 % bills and the results were :
- Maximum deviation was due to investigations done.
- In investigations done, blood gas analysis was most critical.
- Bed rentals was also one of the critical components.
- Average ICU stay was 3 days.

- In case of analysis of credit bills, it was found that 48 % of total bills were exceeding the estimate.
- In critical analysis of these 48 % bills, components which were responsible for deviation were as follows:
 - (i).Investigations done (blood gas analysis and blood transfusion).
 - (ii).Consumables.
- In both the cases i.e. cash as well as credit, variation in twin sharing was more than multi bed and single bed.

Suggestions :

- ICU stay can be increased in the package by one day i.e. 3 days from 2 days.
- Length of stay in package can be increased from 8 days to 10 days.

THANK YOU