

Internship

At

GBH American hospital, Udaipur

By

DR. Sonal Patni

Time & motion study in executive health check-ups

PGDHM

2012-2014



International Institute of Health Management Research

Internship Training

At

GBH American hospital, Udaipur

Time & motion study in Executive Health check-ups

By

Dr. Sonal Patni

Under the guidance of

Dr. Superna pal

Post Graduate Diploma in Hospital and Health Management

Year 2012-14



International Institute of Health Management Research

New Delhi

The certificate is awarded to

Dr. Sonal Patni

In recognition of having successfully completed her
Internship in the department of

Insurance & corporate marketing

and has successfully completed her Project on

Time & motion study in Executive Health check-ups

Date 20 Feb To 20 May

GBH American hospital, Udaipur

She comes across as a committed, sincere & diligent person who has a
strong drive & zeal for learning

We wish him/her all the best for future endeavors


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CERTIFICATE BY SCHOLAR

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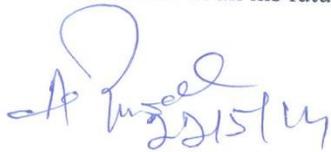
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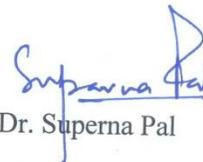
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The Candidate has successfully carried out the study designated to him during internship training and his approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements. I wish him all success in all his future endeavors.



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Area of Dissertation: Corporate marketing & insurance

Attendance: 90%

Objectives achieved: yes

Deliverables: yes

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To Whomsoever it may concern

This is to certify that Dr. Sonal Patni B.A.M.S student of International Institute of Hospital management research, Delhi has completed dissertation as hospital Administrator from the period 20 Feb to 2014 to 20 May 2014.

During her tenure we found her efficient, honest and hardworking.


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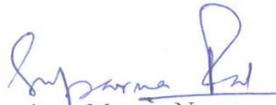
This is to certify that **Dr. Sonal patni**, a graduate student of the **Post- Graduate Diploma in Health and Hospital Management** has worked under our guidance an supervision. She is submitting this dissertation titled

“Time & motion study in Executive Health check-ups

GBH American hospital, Udaipur

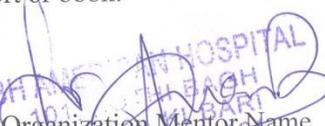
” in partial fulfillment of the requirements for the award of the **Post- Graduate Diploma in Health and Hospital Management.**

This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.


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CONTENTS

	Table of contents	Page
1	Acknowledgement	2
2	Abbreviation	5
3	Introduction	6
4	Review of literature	7
5	Organization profile 4.1 Vision 4.2 Mission 4.3 Accreditation	10
6	Objective	12
7	Methodology	13
8	Findings of the study	17
9	Recommendations	31
10	Discursion	33
11	Conclusion	35
References		
Annexure		

List of figure

Sr no.	Figure		Page no.
1	Fig.1	Time gap in Comprehensive health check-ups	17
2	Fig.2	Time gap in Pre-employment health check-ups	18
		For comprehensive Health checkups	
3	Fig.3	Registration & basic assessment	19
4	Fig.4	Blood sample collection	20
5	Fig.5	Radiology test	21
6	Fig.6	Food & beverage	22
7	Fig.7	Cardiology tests	23
8	Fig.8	Physician check-ups	24
		For Pre-employment health check-ups	
9	Fig.9	Registration & basic assessment	25
10	Fig.10	Blood sample collection	26
11	Fig.11	Radiology test	27
12	Fig.12	Food & beverage	28
13	Fig.13	Cardiology tests	29
14	Fig.14	Physician check-ups	30

2. ABBREVIATIONS

- EHC - Executive Health Check-up
- ECG - Electro cardiograph
- ECHO - Echocardiogram
- F&B- Food and Beverages Department
- HR- Human Resource
- ICU -Intensive Care Unit
- IPD- In-Patient Department
- OPD- Out-patient Department
- PCS- Patient Care Services
- TMT - Tread Mill Test
- TAT- Turnaround time
- USG - Ultra Sonography
- LFT- Liver Function Test

1. INTRODUCTION

“PREVENTION IS BETTER THAN CURE” is a well known adage; It is always recommended that one goes through a Executive check, once a year to detect the disease early. Today, the health consciousness of people reached a top, to dream about a stress-free life with good health. This makes Executive Health check up significant.

For the present scenario, of executives with busy schedule and stressful lifestyle, our skilled team had designed health need oriented package for various groups, with a special care. Health check-ups not only assess your present health-status, but also screen you for any risk factors and thus help you to take necessary steps in prevention or early detection of any major illness.

Recent statistical data reveals that the health check is complete within the ideal time for completion of the entire EHC process (4 hours) but the SDR is less than two every day. Patient has to come again for post check up consultation after few days of the health check tests, which dissatisfies the patient especially corporate clients. So we are assigned to analyze the process flow and calculate the time taken for each tests and finally to give suggestions to rectify the delay in follow up consultation of the EHC patients. . We took the time motion study of EHC patients for 30 days.

TIME AND MOTION STUDY

A time and motion study would be used to reduce the number of motions in performing a task in order to increase [productivity](#).

Productivity Gap

Productivity gap is the difference between the time it “should take” and time it “ did take”.

RATIONALE OF STUDY

- ✘ Tool for implementing necessary things and decision making.
- ✘ To improve the quality of hospital
- ✘ To know the attitude of patients attending Executive health check-ups in various aspects

2. REVIEW OF LITERATURE

Time study establishes standards looked at the average time it took by an average worker. Motion Study Improve methods and measures distance, or how much you move to do a job, and how much you get done in a period of time.¹

The Master Health Check (MHC) is a series of tests to screen each functional area closely to detect even the smallest symptom of a major illness. It also helps to identify the reason for minor ailments, which are constant. MHC is considered to be the most comprehensive prevention check. Master Health Check consists of five permanent packages, which are as follows:

- Master Health Check,
- Executive Health Check,
- Heart Check,

Whole Body Check and Well Women Check.²

In Greek Mythology, Zeus gave Tithonus immortality. That sounds pretty darn good. But there was a catch. Tithonus got eternal life — but not eternal youth. He lived so long and became so frail that he begged Zeus to take back his gift. In this issue — our first of six Health Checkups this year — we don't promise you immortality (which, as Zeus showed, might turn out to be a mixed blessing), but we do focus on the science of longevity and explain how you can live both longer and better.³

Most patients have explicit desires when they visit their physicians. Identification of patients request and need is starting points of a patient centred approach to care. No. Of subjects associated with patient satisfaction were examined for 243 patients with chronic diseases in general medicine clinics of the Department of the Veterans Affairs Hospital. Average 67% were meeting their expectations. However Many patient's desire for information and most of their desires for help with emotional and family problems were not meet.⁴

In “A study of patient's expectation and satisfaction in Singapore hospital” described that In today's competitive healthcare environment, hospital increasingly realize the need to focus on service quality as a means to improve their competitive position. Customer based determination and perception of service quality therefore play an important role when choosing the hospital. An analysis covering 252 patients revealed that there was an overall service quality gap between patients expectation and perception⁵

In the group with a serious disease medical history, overall satisfaction was significantly associated with the explanation of the person in change of the examinations and interview time with physicians. In the group without serious disease medical history overall satisfaction was significantly associated with age, the technical level of the person in change of the examinations, the time spent for examinations, the content of the interview with physicians and interview time with physician.⁶

This is the most ideal executive check-up package of all. It is an inpatient package in which a comprehensive and detailed examination on most organ systems of the body is examined. With the use of the latest technology and procedures to screen and detect most diseases, this is the package of choice for all age groups.⁷

Good health is by itself of great value. It enhances market earnings by increasing the number of healthy days an individual has available for work (Grossman 1972) and increases nonmarket productivity allowing more time for household production (Becker 1976). Health checkups help to secure and maintain good health. However, the 1995 *National Survey of Life (Kokumin Seikatsu Kiso Chosa)* in Japanese; (Statistics and Information 1998), administered by the Japanese government, shows that only about half of Japan's population undergoes health checkups.

There are at least two additional benefits of health checkups that will be important in the analysis of demand for these checkups. First, a check-up will likely give an individual a more objective diagnostic health analysis, in addition to his or her own subjective evaluation of health, made under uncertainty. Second, health checkups lead to further demand for preventive medical care when necessary. Early medical care often curtails serious illness. In this respect, the demand for health checkups differs from the demand for health. The former is a derived demand, whereas the latter is a final demand. That is, health checkups appear in the demand for health, which in turn appears in the individual utility function. However, similar socioeconomic and demographic factors appear as determinants in both reduced-form demand functions (Grossman 2000). In particular, individuals demand more health information as age increases (Kenkel 1990). Time costs are also major determinants of the demand for health checkups, which exhibits a larger time-price elasticity than the demand for other medical inputs (Phelps and Newhouse 1974; Coffey 1983). Income has a positive effect on the demand for preventive medical care (Kenkel 1994). A better knowledge of one's own health also increases the demand for preventive medical care (Hsieh and Lin 1997). However, better health gives individuals less incentive to collect health information. Furthermore, lack of knowledge about health leads individuals to adopt unhealthy consumption patterns (Kenkel 1991). Thus, uncertainty plays an important role in determining the demand for health checkups, as well as the demand for health itself (Arrow 1963). This study focuses on the demand for health checkups rather than the demand for health. Its Purpose is to clarify the reasons behind the low demand for health checkups in Japan. There are few empirical studies that analyze this issue using micro data from the *National Survey of Life* (Statistics and Information 1998). This study takes an original sample of about 630,000 observations from the twenty-to-sixty-four age group. Of this number, we focus on the thirty-to sixty age group because this group is more homogeneous, consisting mainly of working people. We find a gender differential in the demand for health checkups even after controlling for other Socioeconomic and demographic

characteristics. This differential tends to disappear as age increases. Age is a major factor in determining the demand for health checkups within the thirty to-sixty age group, but it is less significant within smaller age groupings. The type of health insurance coverage and employer size is also robust factors that affect an individual's health check-up demand. Finally, we identify a strong negative correlation between the health check up rate and the probability of becoming ill, as well as the duration of hospitalization. Over the years health surveillance has developed and expanded exponentially and due to this there are many definitions for the term health surveillance. But the idea behind health surveillance has always remained the same and concentrates on the well being of the employee. It concentrates specifically on how certain work practices and activities can adversely affect the health of any employee in the work place.

3. ORGANISATION PROFILE

It is a dream come true for the founder Dr Kirti kumar jain (CMD) GBH American hospital is NABH Accredited and ISO 9001:2008 certified state-of-the-Art Multi super speciality hospital, extending its services to the people of Rajasthan. GBH American Hospital is committed to quality care and not only addresses the illness but concentrates on the overall well being of the patients. GBH American hospital is only one NABH Accredited hospital in whole Rajasthan except Jaipur.

GBH American Hospital draws a benchmark in healthcare sector by:

- NABH Accredited
- Multi Super Specialty Hospital
- Providing state-of-the-art world standard healthcare that exceeds expectations of patients and families.
- Providing expert training for medical, paramedical, nursing and other professionals in the field of health care.
- Networking with other organizations to promote health and well being in society through education, Executive checkups and community outreach programs.
- A team of highly qualified and trained management Professionals, world class doctors, caring paramedical staff, technicians and patient care personnel to provide the highest level of care.
- Clean, hygienic and comfortable OPD and In-patient facilities.
- Intensive Care Unit (ICU)- Medical, Surgical, Neuro and Cardiac.
- Pharmacy, Ambulance, Diagnostic, Trauma and Emergency Services available round the clock.
- Regular educational and health camps to help educate patients on various health issues so that they make informed choices.
- Total Quality Management (TQM) & Continuous Quality Improvement.
- A complete preventive healthcare program.
- Family participation in patient management.
- In house cafeteria for staff and patients supervised by a well qualified dietician to offer tailor made meals to patients.

Vision of the hospital

“To Provide the highest Quality tertiary medical care, exceptional service and best value to all its local and global patrons, through dedicated, highly skilled and compassionate doctors and staff ; using state-of-the art technology

“To serve, To Heal, To Grow”.

Mission of the hospital

“We are committed to the growth, development and welfare of our people, & creation of value for our stakeholders, upon home rely to make the mission tour patients happen.

Accreditation of the hospital

National Accreditation Board for Hospital and Healthcare Providers (NABH)

4.Primary objective:

To identify the gap between the actual time taken and the ideal one as given by hospital in case of Executive Health check- ups and suggests appropriate measures for reducing it.

Secondary objective:

- To study the process flow of Executive Health check -ups at the hospital.
- To assess the average time taken for health checkups package.
- To compare the current process time with the standard process time and find out the gap.
- To identify the reasons for the delays and proposed measures to overcome the existing problems.

5. METHODOLOGY

STUDY TYPE- Descriptive and Observation study.

STUDY SETTING – Executive health check up centre, GBH American hospital, Udaipur

SAMPLE SIZE- 60 Patients of Executive Health Check Program

SAMPLING METHOD- Purposive sampling

- **INCLUSION CRITERIA-**Patients for Executive Health check-ups with Executive pre-employment Health Check-ups & Standard health check-ups packages

METHODS OF DATA COLLECTION-

Method Of data collection is Primary as well as secondary

- The data will be collected mainly through. Primary is by observation Checklist,
- Secondary is by seeing the time on files; Registers kept at the executive health check-ups centre, various test labs and tracking patients under sample of the study.

STUDY PERIOD: 25 Feb to 10 March Observation of the process

10 March - 20 April - Data collection

20April-20 may - Data analysis and report preparation

Tools & Techniques:

Quantitative data Analysis from observational Checklist by using - Mean and percentage was calculated.

6. OBSERVATION

It is very significant that, GBH American hospital is paying much attention to the proper planning, designing, organization and functioning of the outpatient department as any other department.

The outpatient department of GBH American hospital is situated near the heritage lobby with one area dedicated entirely for Registration. Other area of the GBH American has all the important services X-ray, TMT, Echo, ECG, Surgical OPD, consultation, Emergency department, blood bank etc. It has no lab facilities but the sample are collected in the sample collection room and sent directly to the laboratory and the patients can collect the reports from the report room at the back side of the imaging centre . The EHC is done in the GBH American hospital, for the patient's convenience is made on the ground floor.

GBH American hospital offers a wide range of Executive Health check packages for various mindset. This area is exclusively designed for providing complete body check-up for.

- Corporate executives.
- Pre-employment check-ups
- General health check-up for walk-in patients.

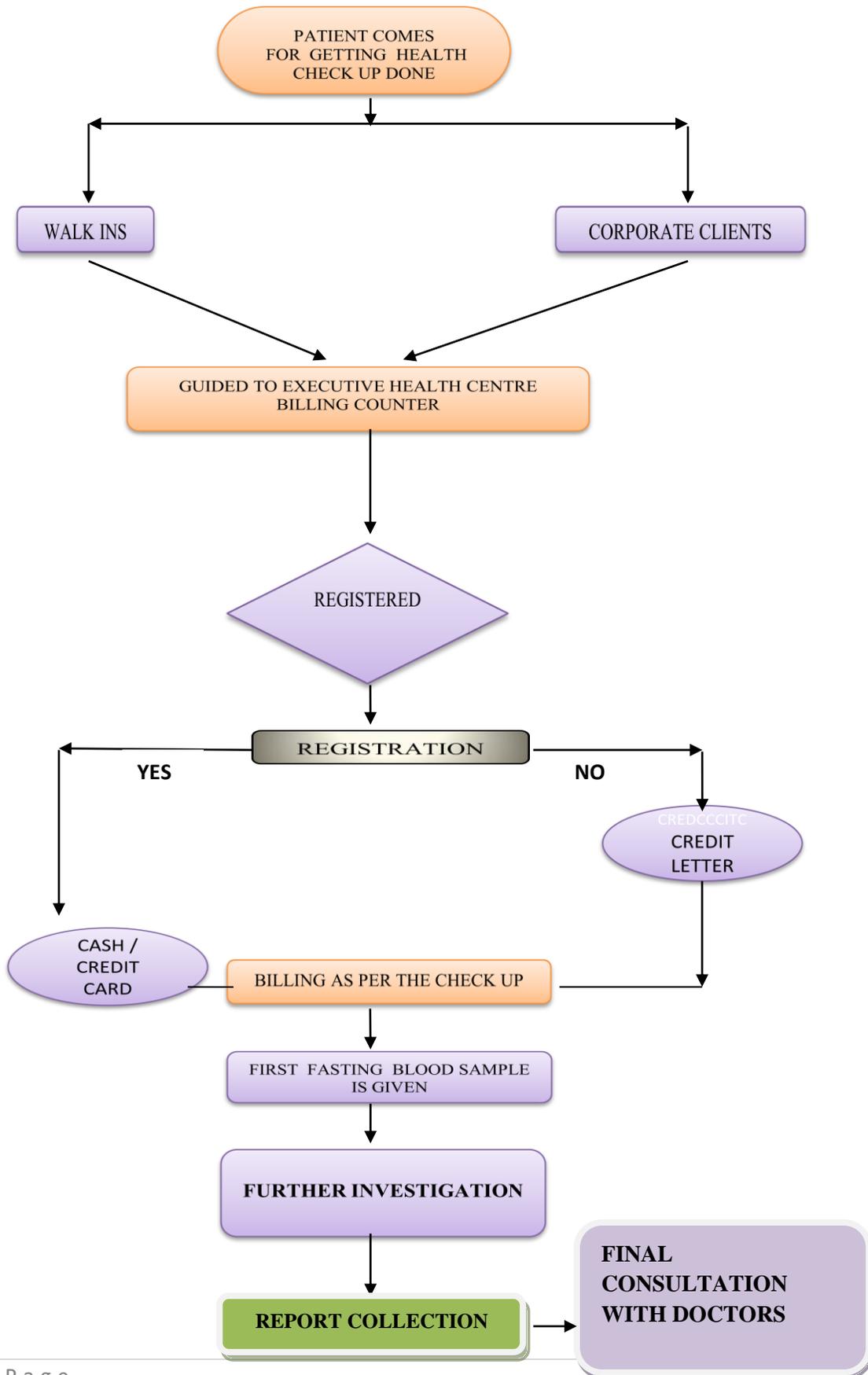
For corporate clients, GBH American hospital have various health check packages that are pre-designed and customized by the respective company, according to their policies.

This registration is conducted at the EHC desk, GBH American hospital. The patients usually come with a prior appointment, empty stomach that is then undergone through a series of tests under the supervision of doctors. The package includes complimentary breakfast and doctors consultation both pre-post. Executives coming from empanelled companies are required to bring along a letter of reference from their office, duly authorizing the check.

EXECUTIVE HEALTH CHECK PACKAGES

- **Executive pre-employment Health Check**
- **Comprehensive health check-ups**
- **Standard health check package for men**
- **Cardiac health package**
- **Senior citizen health check package**
- **Different customized packages for different corporate companies.**

7. PROCESS FLOW:



As soon as the patient enters the executive health check-area, he firstly chooses the package of tests he wants to undergo and the billing is done. In case of a company patient, the package is pre-decided according to the company's norms and their respective companies reimburse the payment. A file is prepared for the patient containing all the forms of the consultations which he will have during the check-up. As per the health-check package, a tracker is prepared enlisting all the tests and consultations the patient will undergo. The tracker is given to the patient .Also, the staffs maintain a tracker (copy of the receipt). A tick mark is put against each test when they are consecutively completed. If a patient wants to undergo a separate test (out of package), they are also performed with an additional payment. The reports of all respective tests are collected from the report room and are compiled and given according to the company's criteria. Post- consultation appointment is fixed within 5 days of patient's visit. Reports for the standard, Comprehensive, Preventive, Well women Check up and pre-Employment packages are suppose to be made available to the patients within 4 days as the reports for PAP smear(female patients) takes approximately 2-3 days. Patient could collect complete report from EHC desk (from Insurance department). Patients have to do the post-check-up consultation with all reports on the same day or within few days from check- up date. Every patient coming for executive health check with standard, Comprehensive, Preventive, Well women Check up and pre-Employment packages was considered and observed throughout all the procedures he/she undergoes, till the time their reports are compiled at the EHC counter. Average time taken for each package was calculated by combining the time spent by the patient for the tests, since the time his billing is done till he undergoes the last test and finally the time at which the reports are available.

The data was collected about 60 patients visiting the executive health check, which consist of company executives and the walk-in patients. The total time for each package per patient was calculated. Time spent by the patients at various department was studied and comparative study of the standard time and actual time was done to find out the productivity gap.

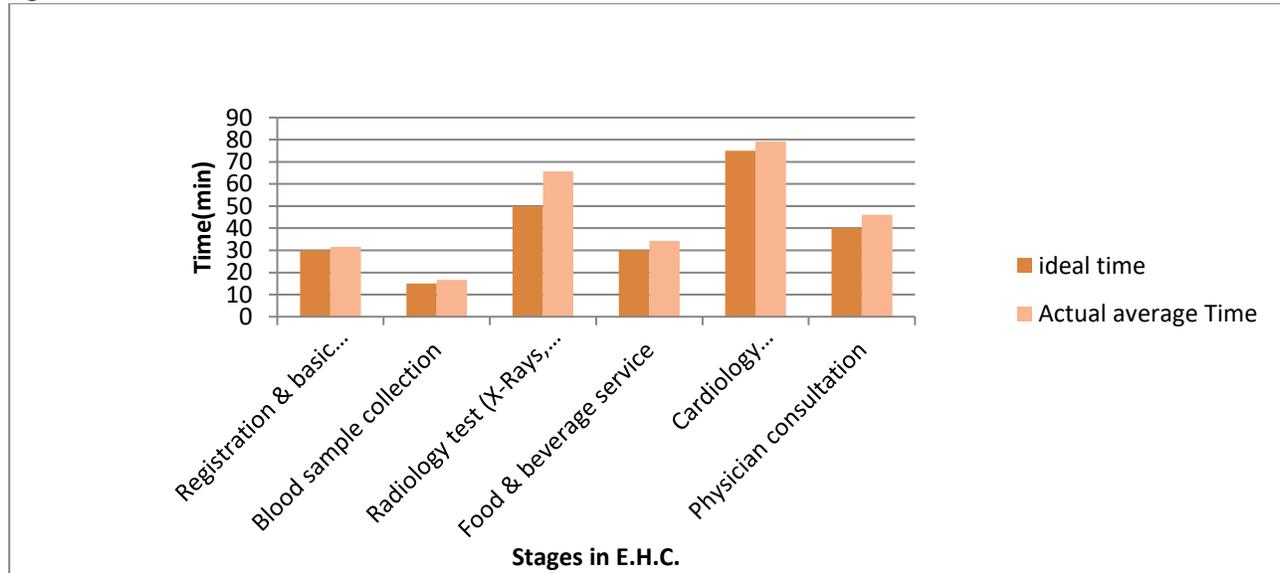
8. RESULTS

Every alternate patient was monitored continuously for the sequence of medical tests he/she underwent according to their chosen package.

Time Gap of Comprehensive health checkups

	Ideal time	Actual average Time	Productivity gap
Registration & basic assessment	30	31.56	1.56
Blood sample collection	15	16.6	1.6
Radiology test (X-Rays, USG)	50	60.6	10.6
Food & beverage service	30	34.32	4.32
Cardiology test(ECG,TMT,2DEcho)	75	79.2	4.2
Physician consultation + report collection	40	46.12	6.12
Comprehensive health check-up	(240 minutes) 4 hours	268.4 minutes	28.4

Fig.1

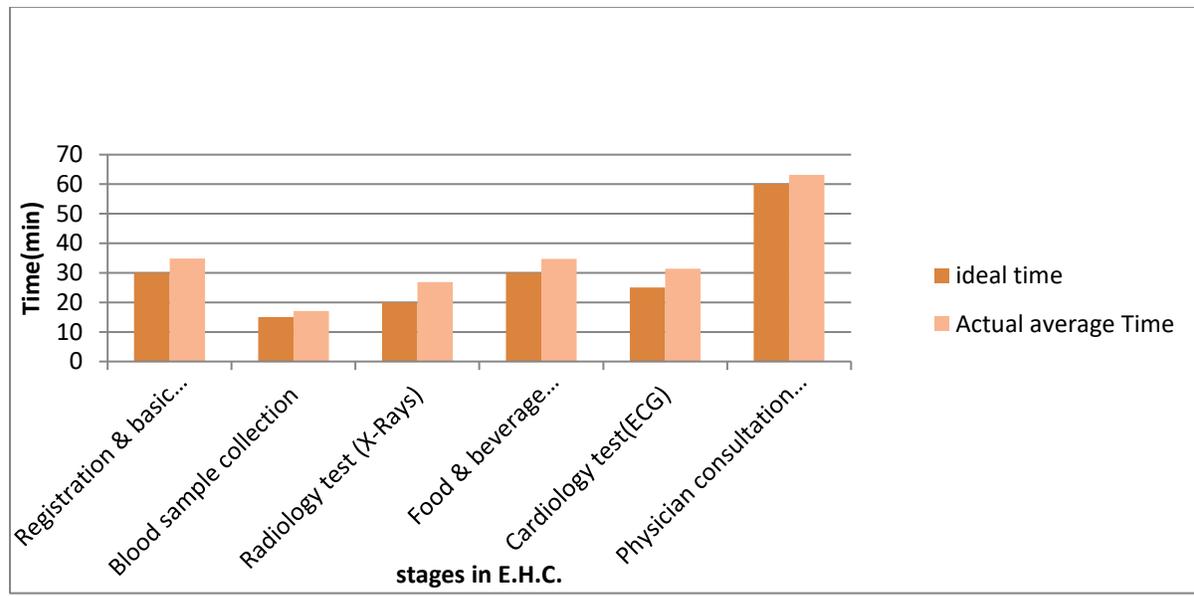


The total time taken for comprehensive health checkups is 240 minutes and the actual average time is 268.4 minutes & Productivity gap is 28.4 minute

1. Time Gap of pre-employment health checkups:

	ideal time	Actual average Time	Productivity gap
Registration & basic assessments	30	34.8	4.8
Blood sample collection	15	17.01	2.01
Radiology test (X-Rays)	20	26.8	6.8
Food & beverage service	30	34.8	4.8
Cardiology test(ECG)	25	31.4	6.4
Physician consultation + report collection	60	63.1	3.1
pre-employment health checkups	180 minutes (3 hours)	208.14 minutes	28.14

Fig.2



The total time taken for pre-employment health checkups is 180 minutes and the actual average time is 195.9 minutes & Productivity gap is 36.3 minutes.

9. OBSERVED DELAYS IN COMPREHENSIVE HEALTH CHECKUPS

1. DELAY IN REGISTRATION & BASIC ASSISTMENT:

	Patient get registered
0 to 30 minutes	48%
Above 30 minutes	52%

Fig.3

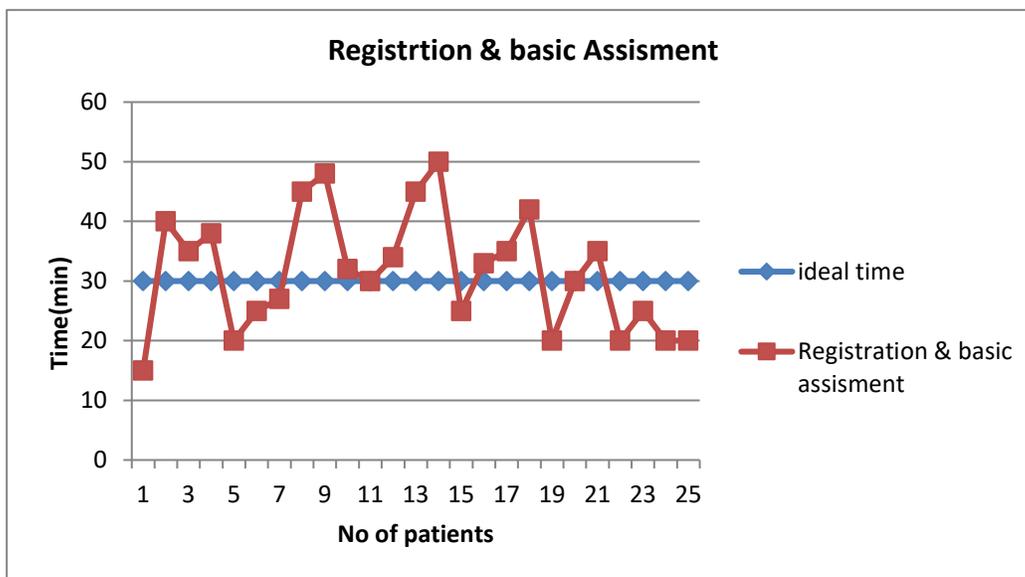
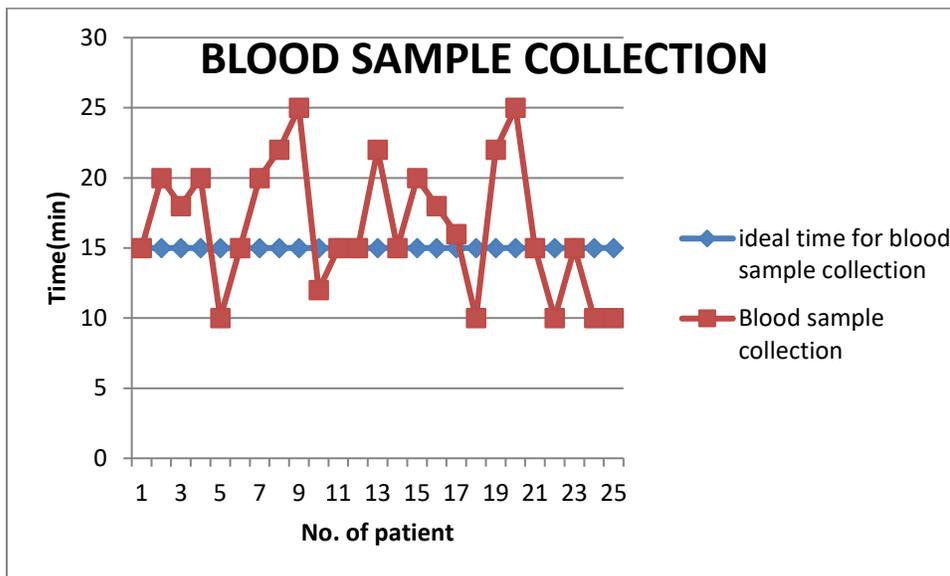


Fig.. It can be observed from the above graph that 52% of the cases deviate from the standard time, which is 15 minutes. This is mainly due to the same registration counter for the O.P.D. and E.H.C. patients so it takes time for the patients to get their registration done. Also, there was not enough staff on the billing counter to register the patients .As a result, the patients had to wait in queues to clear the payments. Management could make the provision of shifting the staff from the areas where there is fewer requirements of staff to the front office in peak O.P.D hours.

2. BLOOD SAMPLE COLLECTION

	Blood sample collection
0 to 15 minutes	52%
Above 15 minutes	48%

Fig.4



The above graph shows that 48% of the patients were not able to give blood sample in the standard time, which was 15 minutes.

3. TIME TAKEN FOR RADIOLOGY TESTS:

	Radiology Test
0 to 40 minutes	40%
Above 40 minutes	60%

Fig.5

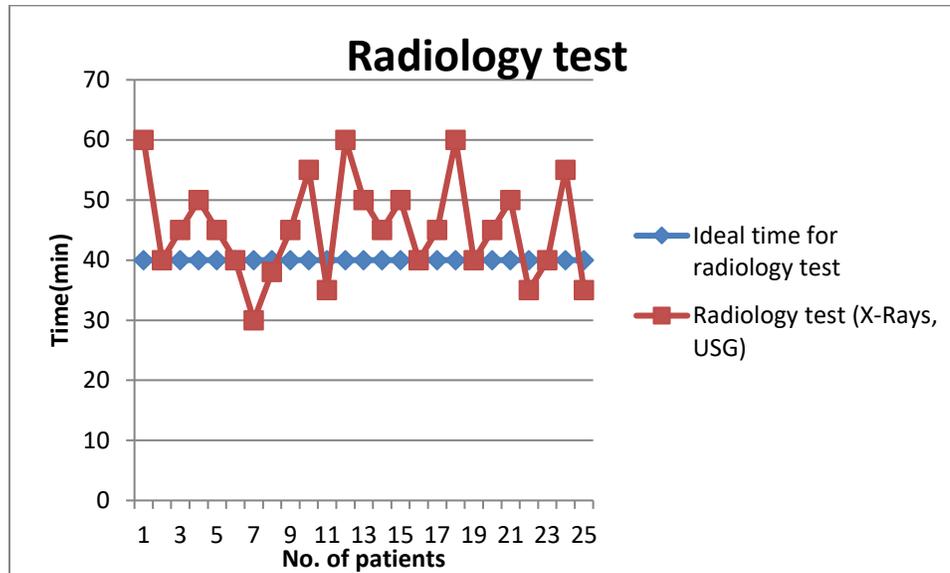


Fig.5. It is evident from the shown graph that the 60% of the E.H.C. patients had to experience a long waiting time to get their X-Ray & ultrasound done. The main reason for this delay is that the X-Ray & ultrasound facility is availed by O.P.D., I.P.D., Emergency and E.H.C. patients at the same time. This could be rectified by allotting an hour specifically to the E.H.C. patients when there is less rush in the department.

4. Food & Beverage Service:

	Food & beverage service
0 to 30 minutes	43.4%
Above 30 minutes	56.6%

Fig.6

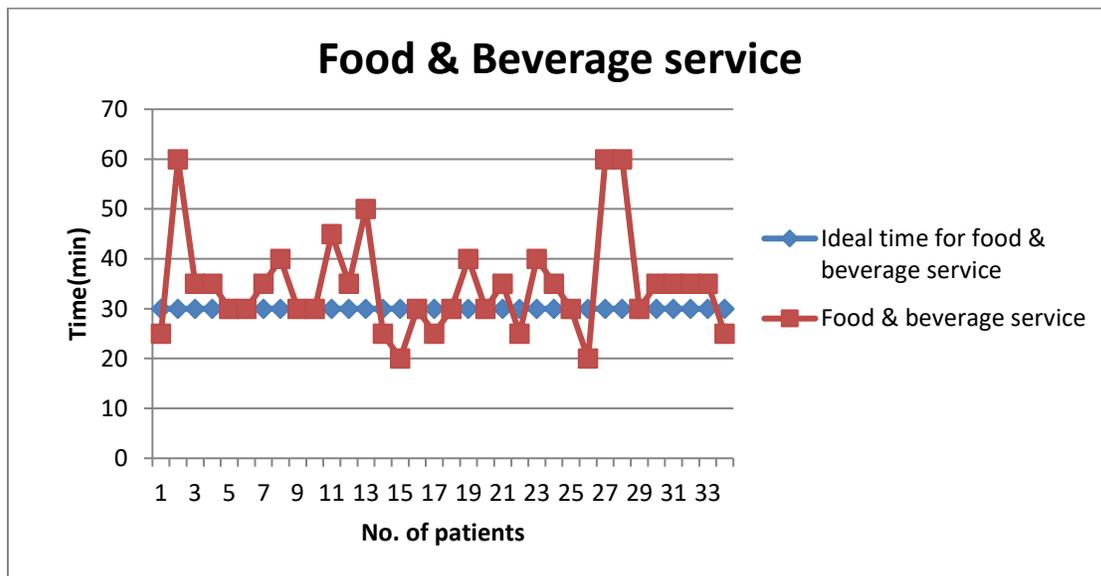


Fig.6. The above graph shows that 56.6% of the patients were not able to complete their breakfast in the standard time, which was 35 minutes. This was due to the delays observed in serving the food by the staff of F&B department. The delay was due to the lack of communication between the staff of F&B department, Patients and E.H.C. executive. The staffs were not informed priory about the number of patients coming for the check up. This delay can be taken care of by the improving the communication between all of them.

5. Cardiology tests:

	Cardiology tests
0 to 60 minutes	36%
Above 60 minutes	64%

Fig.7

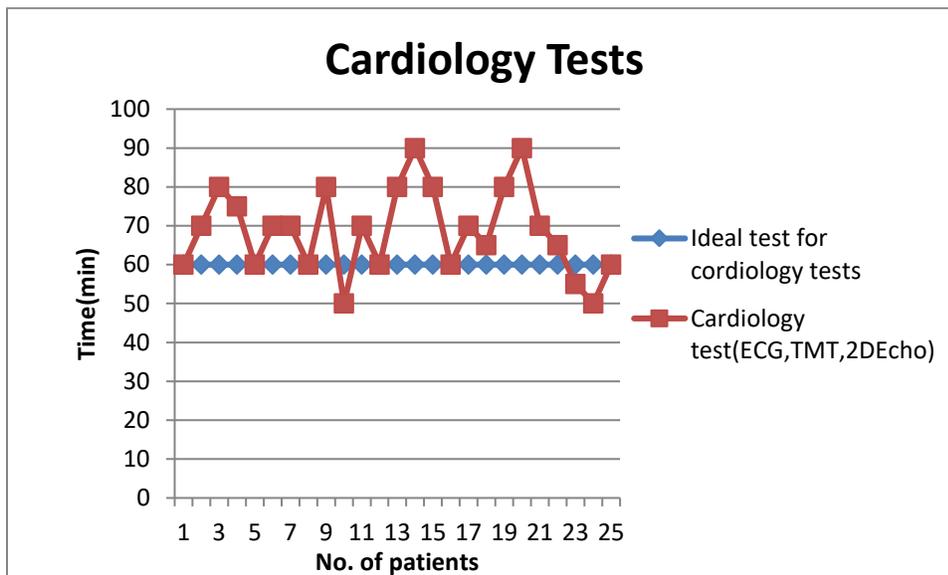


Fig.5. It is evident from the shown graph that the 64% of the E.H.C. patients had to experience a long waiting time to get their ECG, TMT & 2 D ECHO. The main reason for this delay is that the ECG, TMT & 2 D ECHO facility is availed by O.P.D., I.P.D., Emergency and E.H.C. patients at the same time. This could be rectified by allotting an hour specifically to the E.H.C. patients when there is less rush in the department.

6. Physician consultation

	Physician consultation
0 to 40 minutes	40%
Above 40 minutes	60%

Fig.8

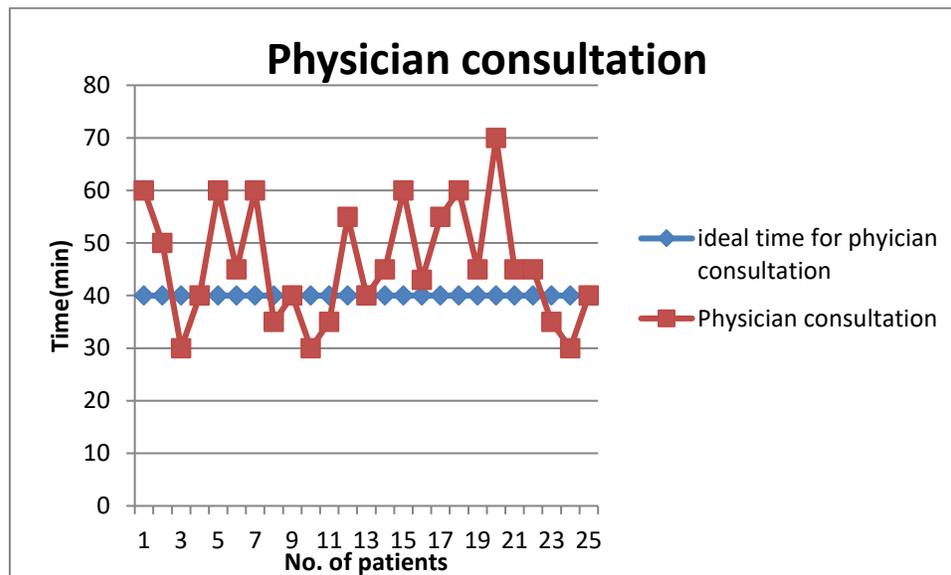


Fig.5. It is evident from the shown graph that the 60% of the E.H.C. patients had to experience a long waiting time to get their Consultation. The main reason for this delay is that the Consultation facility is availed by O.P.D. and E.H.C. patients at the same time. This could be rectified by allotting an hour specifically to the E.H.C. patients when there is less rush in the department.

Usually the E.H.C. staff adhered to the **rigid pattern** made for investigations. As a result, the patient had to **wait for long period** for a specific investigation and again had to wait for further investigations leading to **dissatisfaction in the patients**.

PRE-EMPLOYMENT HEALTH CHECK-UPS

1. Registration & basic assessments:

	Registration & Basic assessment
0 to 30 minutes	30%
Above 30 minutes	68.5%

Fig.9

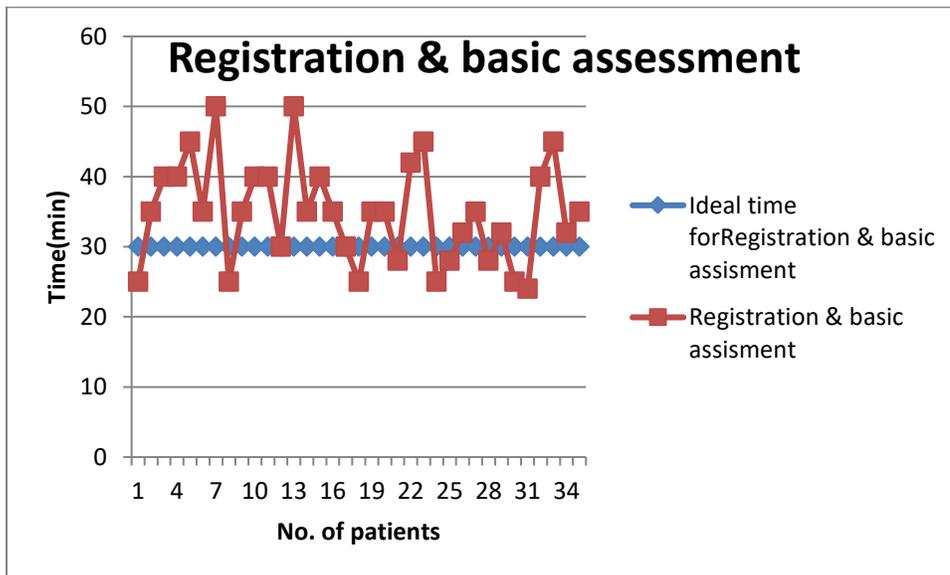
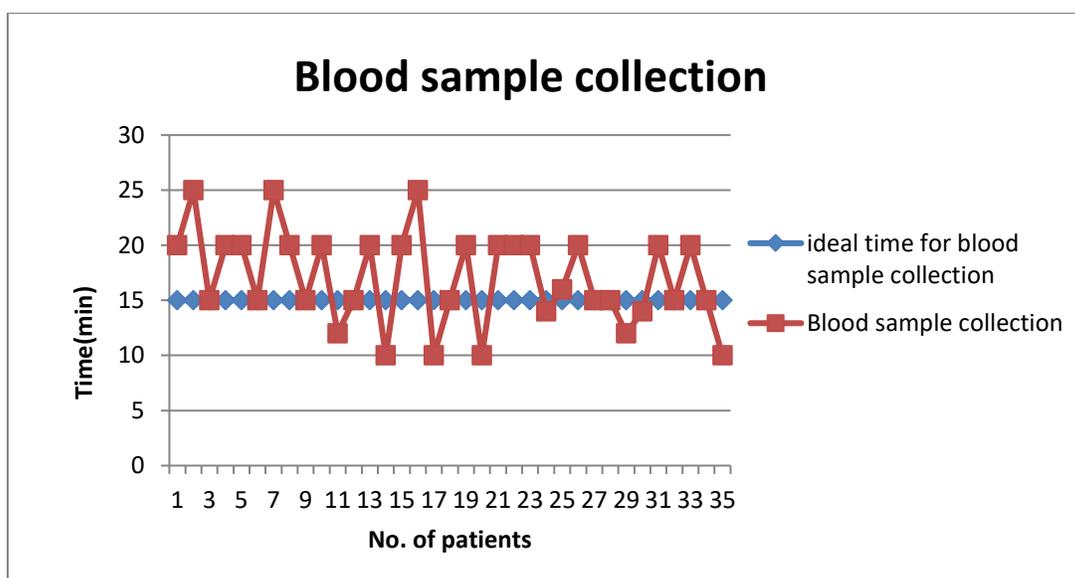


Fig..It can be observed from the above graph that 68.5% of the cases deviate from the standard time, which is 15 minutes. This is mainly due to the same registration counter for the O.P.D. and E.H.C. patients so it takes time for the patients to get their registration done. Also, there was not enough staff on the billing counter to register the patients .As a result, the patients had to wait in queues to clear the payments. Management could make the provision of shifting the staff from the areas where there is less requirement of staff to the front office.

2. Blood sample collection:

	Blood sample collection
0 to 15 minutes	69%
Above 15 minutes	31%

Fig.10

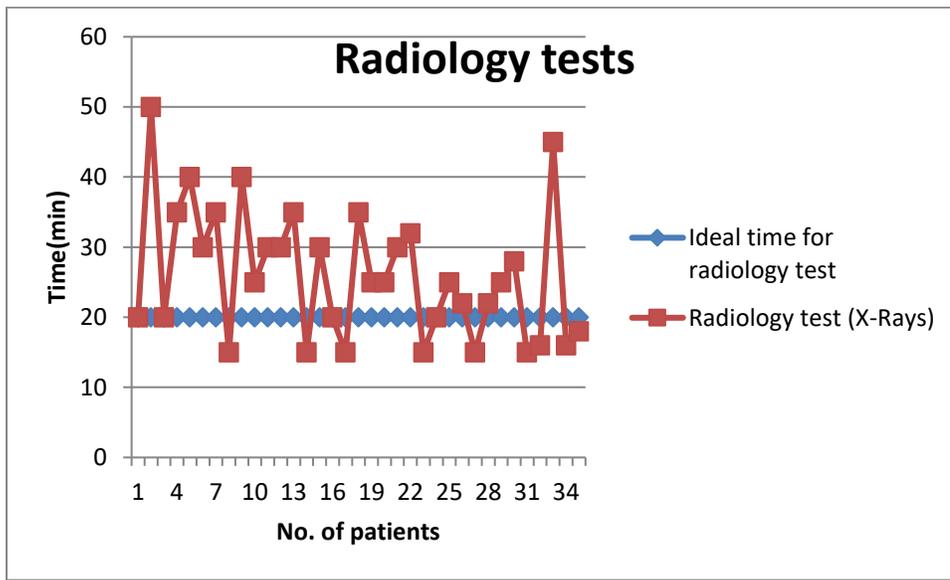


The above graph shows that 51.42% of the patients were not able to give blood sample in the standard time, which was 15 minutes.

3. Radiology tests:

	Radiology Tests
0 to 20 minutes	28.2%
Above 20 minutes	62.8%

Fig.11

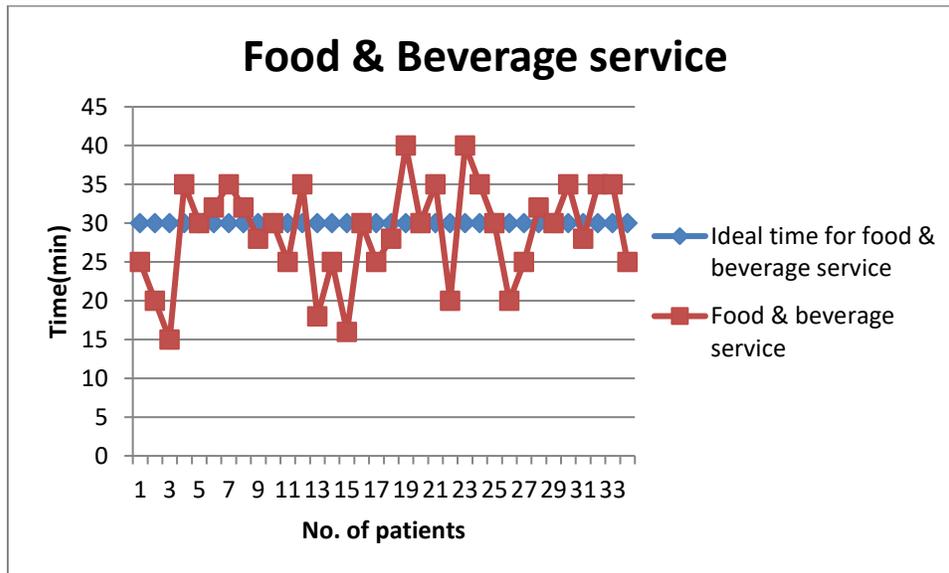


It is evident from the shown graph that the 62.8% of the E.H.C. patients had to experience a long waiting time to get their X-Ray. The main reason for this delay is that the X-Ray & ultrasound facility is availed by O.P.D. I.P.D., Emergency and E.H.C. patients at the same time. This could be rectified by allotting an hour specifically to the E.H.C. patients when there is less rush in the department

4. Food & beverage services

	Physician consultation
0 to 30 minutes	60%
Above 30 minutes	40%

Fig.12

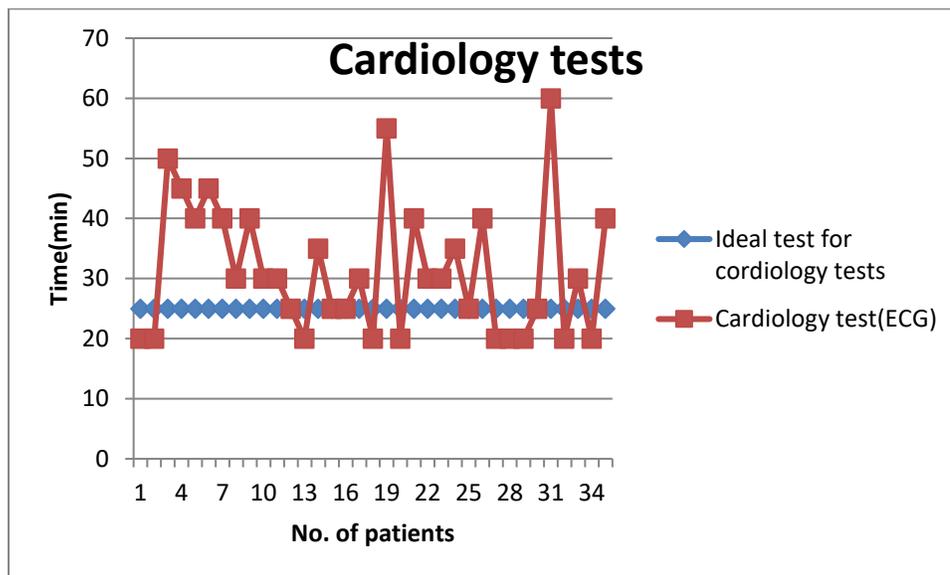


The above graph shows that 40% of the patients were not able to complete their breakfast in the standard time, which was 35 minutes. This was due to the delays observed in serving the food by the staff of F&B department. The delay was due to the lack of communication between the staff of F&B department, Patients and E.H.C. executive. The staffs were not informed priory about the number of patients coming for the check up. This delay can be taken care of by the improving the communication between all of them.

5. Cardiology tests

	Physician consultation
0 to 25 minutes	42.9%
Above 25 minutes	57.1%

Fig.13

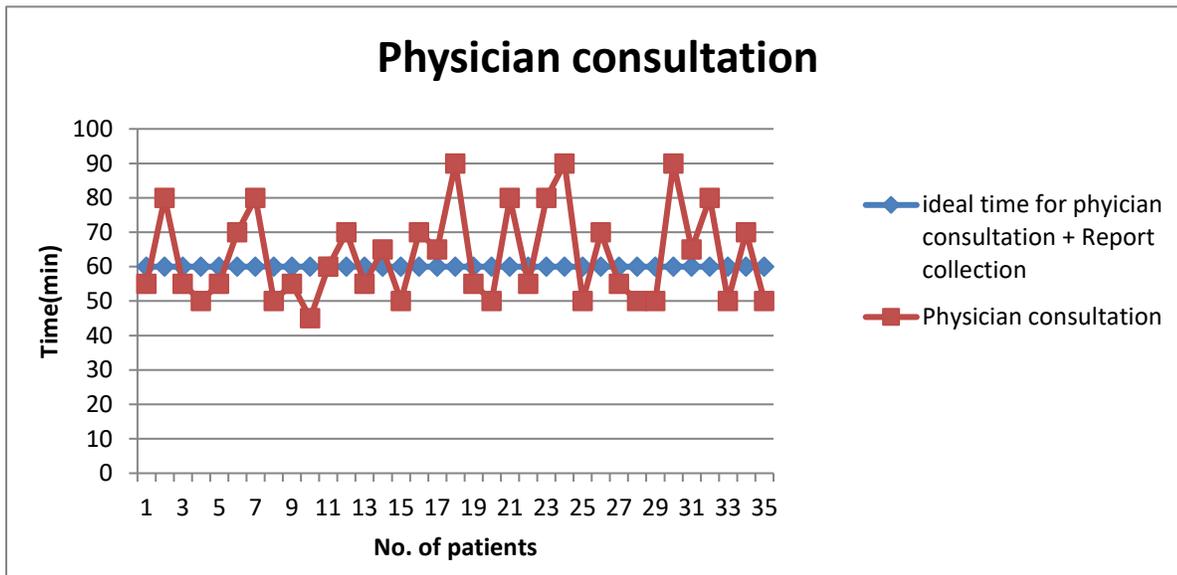


It is evident from the shown graph that the 57.1% of the E.H.C. patients had to experience a long waiting time to get there. The main reason for this delay is that the ECG facility is availed by O.P.D., I.P.D., Emergency and E.H.C. patients at the same time. This could be rectified by allotting an hour specifically to the E.H.C. patients when there is less rush in the department.

6. Physician consultation:

	Physician consultation
0 to 60 minutes	54.28%
Above 60 minutes	45.7%

Fig.14



It is evident from the shown graph that the 45.7% of the E.H.C. patients had to experience a long waiting time to get their Consultation. The main reason for this delay is that the Consultation facility is availed by O.P.D. and E.H.C. patients at the same time. This could be rectified by allotting an hour specifically to the E.H.C. patients when there is less rush in the department.

12. RECOMMENDATIONS

1 . REGISTRATION

Sometimes there occurs delay in the registration because the billing executive is not aware of the code of health package for the corporate individuals, which is to be known to register the person according to his/her company. Provision of billing from the E.H.C. counter could be made to avoid this confusion and for registration without delay. Also the recruitment of the front office staff should be done to overcome the problems caused by understaffing.

2-TO REDUCE DELAY IN IMAGING CENTRE

Executive health check gets delayed because of the delay in the imaging centre for doing ultra sound as there are O.P.D., I.P.D. or emergency cases lined up during the same time of health check. To avoid this delay, a particular time should be allotted to the E.H.C. patients in the morning hours so that they do not have to wait for their turn to come, and thus can reduce the TAT of the health check.

3. FOOD AND BEVERAGES DEPARTMENT

The staff of F&B department should be made informed priory about the number of patients coming for the health check-up in a particular day so that they can arrange for their breakfast in advance and the patients do not have to wait to get it served.

Other recommendations:

- **TO REDUCE DELAY IN ARRIVAL**

Advise patients coming for the check-up to come between 8:30 and 9:30 at the time of appointment. For this proper instructions should be mailed or leaflet given to the patients coming for the check-up. .

- **SIGNAGE FOR THE E.H.C. COUNTER**

There should be a proper signage for the directions of E.H.C. counter as it is at the end of the O.P.D. and many patients find difficulty in reaching there.

Some **quick win** for the hospital:

1. There should be a separate registration counter for E.H.C. with deployment of minimum two executives, near to the O. P D. Registration counter.
2. Written pre- investigation instructions can be handed over to the patients at the time of registration in the form of pamphlets and also provide this pamphlets to those organisations which are empanelled with the hospital.
3. The pattern followed for the investigations should be made flexible so as to minimise over- crowding and optimum utilization of resources.

Discussion:

Delay in registration & basic assessment:

The delay is mainly due to the time taken in getting their registration done. This delay is due to the understaffing of the department also, the billing staffs is not aware about the different package code required to get the registration done. Registration is also delay on peak OPD hour.

Blood sample collection:

Generally delay occurs because sampling occur on peak OPD hours.

Food & beverage:

The food and beverages department also, delays the process by serving the breakfast late due to miscommunication between the staff members. Some patients brought their food for their home so productivity gap in such patients is less.

Radiology tests:

The Radiology machines is common for O.P.D, I.PD. Emergency and EHC patients coming to the hospital, these increase the waiting time & productivity gap. For USG full bladder condition is required so the patient wait till their bladder full. They generally call patient after 9:30 am because Radiologist is come after 9:30 am. It is peak time for Opd patients. Therefore patients wait for more time and following processes also become late because of peak hours.

Cardiology test:

ECG of EHC patients in done in emergency department. When any emergency patient come EHC patient have to wait for more time. For TMT & 2 D ECHO Tests are also common for all patient so the EHC patient have to wait.

Physician consultation & Report collection:

OPD & EHC patient comes at same time so they have to wait for more time. These areas need to be worked for the better results and achieving patient centred services. To make these improvements, deployment of the staff in the front office, improvement in interdepartmental communication and managing the patient flow by allotting

different time for the EHC patients. In pre-employment Physician consultation & ideal time is more because pre-employment health check-ups usually complete in 3 hours the blood investigation process take prolong time therefore the patient have to wait more time to collect therefore report but comprehensive health check-ups usually complete in 4 hours so the patient got its blood report till the comprehensive check-up is over.

The recommendations to reduce the delay are explained with statistical backup. Hope that, with the special consideration of SWOT ANALYSIS and the implementation of sound suggestions, we will be able to streamline the Executive health checks in near future.

CONCLUSIONS

- The total time taken for comprehensive health checkups is 240 minutes (4 hour) and the actual average time is 268.4 minutes & Time gap is 28.4 minutes .
- The total time taken for pre-employment health checkups is 180 minutes and the actual average time is 208.14 minutes & Productivity gap is 28.14 minutes.
- The productivity gap is more in radiological investigation in comprehensive health check-ups and cardiology investigation in pre- employment health check-ups.

REFERENCES:-

1. Daniel, L.; Fung, H.;Hedley, A.J., Time studies in A&E departments- a useful tool for management, Journal of Management in Medicine, Hong Kong publishers, Vol. 10,1996, Issue 3.
2. Author(S): B.Krishan Reddy, G.V.R.K. Acharyulu Customer Relationship Management (Crm) In Health Care Sector - A Case Study On Master Health Check Vol. 14, No. 1 (2002-01 - 2002-06)
3. Richard Stengel, "Health Checkup: How to live 100 years", Feb 12, 2010
4. http://www.time.com/time/specials/packages/article/0,28804,1963392_7963785,00.html
5. Joos SK, Hickam DH and Borders LM "Patient's desires and satisfaction in general Medicine clinics" Public Health Rep.1993 Nov.-Dec.; 108 (6): pp-751-59. (Www.pubmed.com)
6. Lim PC and Tang NK "A study of patient's expectation and satisfaction in Singapore hospital" International Journal Health care quality Assurance Inc. Leadership Health Services. 2000; 13(6-7): pp-290-99
7. Author(s):Yasushi Kudo, Kaori hosoi Factors associated with satisfaction among participants in a periodic worksite health checkup in Japan, Journal of Occupational Health, 2004;46:461-469