

Outpatient Department Laboratory Services in Private Hospital

Dr. A. Kanchana Lakshmi Prasanna¹, Dr.D.S.S. Girijavani²

Assistant Professor, Department of Biochemistry, GIMSR, Vishakhapatnam, Andhra Pradesh, India¹

H.O.D, Department of Biochemistry, GIMSR, Vishakhapatnam, Andhra Pradesh India²

ABSTRACT:

INTRODUCTION

The hospital laboratory is an important area on which modern medical practice heavily depends for accurate diagnosis and effective treatment. For the hospital administration also it is an important area as its effective use can substantially reduce pressure on hospital beds as many investigations and diagnostic work can be carried out as outpatient.

OBJECTIVES OF THE STUDY 1. To assess the work load in relation to organization staffing pattern, physical facilities and location. 2. To study the system of specimen collection, transportation to the laboratories and disposal of reports to the OPD (outpatient department).

METHODOLOGY

1. Prospective study of the records for the 8 weeks was done to determine work load.
2. Prospective study arrival pattern.
3. Method study of the present flow of specimens and requisitions forms, by means of outline process chart, from OPD central collection room to the laboratories and the distributions of the reports OPD was carried out.

OBSERVATIONS: OP sample collection is located near to OP reception in a small room 1. Two Phlebotomist; 2.No privacy for female patient's 3.In adequate staff for present work load, 4.LIS (laboratory information system) application training inadequate. 5. Transport delivery by housekeeping staff (HK)

CONCLUSION: 1. Location and space of sample collection area are to be relocated 2. Training courses technicians 3. Manpower improvement to the work load is to be made. 4. Training and proper usage of laboratory information system (LIS)

KEY WORDS: OPD-Outpatient Department, LIS – Laboratory information system, HK -housekeeping

I. INTRODUCTION

“Health is a state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity.” –World Health Organization.

Health care is the diagnosis, treatment, and prevention of disease, illness, injury, and other physical and mental impairment in human beings. Health care is delivered by practitioners in allied health, dentistry, midwifery, medicine, nursing, and other health professions. It refers to the work done in providing primary care, secondary care and tertiary care, as well as in public health.

Health is a dynamic process because it is always changing. We all have times of good health, times of sickness, and maybe even times of serious illness. As our lifestyles change, so does our level of health.

Those of us who participate in regular physical activity do so partly to improve the current and future level of our health .we strive toward an optimal state of well-being. As our life style improves, our health also improves and we experience less disease and sickness.

Many people do not realize the importance of good health, and even if they do, they may still disregard it. Whether we work at home or in an office, we need good health in order to perform our duties well.

Everything we eat does one of two things:It either nourishes us or poisons us.

International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Website: www.ijirset.com

Vol. 6, Issue 8, August 2017

Food that has been over-processed and contains preservatives acts like slow poison. The entire modern food handling process, where emphasis is on long shelf life, is turning our food into poisons. In order to keep the body health, it is fundamental to follow a wholesome diet, sufficient sleep, fresh air, and proper physical exercise.

Thanks to the advancements of modern medicine, people around the world are living much longer lives. But now the goal of medicine is not just to improve the longevity of life but **its quality as well**. And get accreditation¹

Regular health exams and tests can help find problems before they start. They also can help find problems early, when your chances for treatment and cure are better. By getting the right health services, screenings, and treatments, you are taking steps that help your chances for living a longer, healthier life. Your age, health and family history, lifestyle choices (i.e. what you eat, how active you are, whether you smoke etc), and other important factors impact what and how often you need health care.

So how does one get to know more about the inner-workings of this or her own body? Without doubt, the best tool we have for doing this is the periodic health check-up. With the growing appreciation of the importance of early-detection and diagnosis of illness, the periodic check up has become a central part of primary prevention health care

The clinical and laboratory examinations performed in a check-up provide health information which, when analyzed from an epidemiological view, can be invaluable in predicting unforeseen health events such as heart attacks, strokes, cancer and other health complications that can reduce the quality and length of our lives.

The periodic check-up also tells us what we are doing wrong with our bodies. Once these unhealthy lifestyle habits and other risk factors are identified, the check-up experience can become the launching point of a drastic life style transformation and improvement.

So the check-up is much more than just simple series of clinical tests. It is a rare opportunity for us to learn more about our own body and gain the inspiration to improve our health and quality of life.

Here hospital laboratory services play an important role in delivering results to patients to the requirement.

The hospital laboratory is an important area on which modern medical practice heavily depends for accurate diagnosis and effective treatment. For the hospital administration also it is an important area as its effective use can substantially reduce pressure on hospital beds as many investigations and diagnostic work can be carried out as outpatient.^{2,3}

The hospital laboratory service (clinical pathology and clinical chemistry).

In today's quality-conscious climate, the success of hospital service depends on their ability to improve productivity while reducing errors. In the hospital-based laboratory, medical technologists are well trained in basic statistics and quality controls. The process-based quality control methods are in place in the clinical laboratory for decades.^{4,5,6}

Quality control chart methodology has many applications, one of which is the early detection of variations in hospital processes; unexpected patterns of occurrences of laboratory values can be more readily detected. The specific laboratory data proposed here is patient critical values. In life-threatening situations, laboratory values at variance with life or normal organ function are called panic, or critical values^{5,6}.

II. NEED FOR THE STUDY

Hospitals in Vishakhapatnam not only serve patients of Andhra Pradesh, they also get patients from neighboring states Odisha, Chhattisgarh, and Jharkhand. Hospital works with a single motto

“TO PROVIDE CARE THAT PEOPLE TRUST”

Patients coming for laboratory investigations in outpatient department are in a hurry to get the reports fast to consult the concerned doctor for treatment. As the appointments to the specialist are pre-timed and booked for treatment and they are in a pressure not to miss their appointment time.

Some patients coming from a distance area are eager to return back home. However, lab investigation takes time, more so in insurance and corporate billing cases and this waiting period causes discontent for the patients.

Some investigations required special conditions to be maintained by the patients, Ex: fasting samples, the patient who is advised for a fasting sample has to be fast (not eating food for at least 8-12hrs), if the patient is from a long distance and has already taken food has to wait for time to give the sample which is distress to patient and family members accompanying. The study gives the analysis of the deviations observed and provides recommendations to improve outpatient lab services for benefit of patients from long distances and patients coming for check-ups by absent from their

International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Website: www.ijirset.com

Vol. 6, Issue 8, August 2017

III. OBJECTIVES OF THE STUDY

1. To assess the work load in relation to organization staffing pattern, physical facilities and location.
2. To study the system of specimen collection, transportation to the laboratories and disposal of reports to the OPD.
3. To offer suggestions for the effective implementation of laboratory services and enhancing the patient satisfaction to minimize the inconvenience to patients and also the administration.

IV. METHODOLOGY

This Chapter discusses in detail the methodology followed for the study. It firstly discusses the methods that has been employed for data collection. Data collection is from primary sources.

PRIMARY SOURCES:

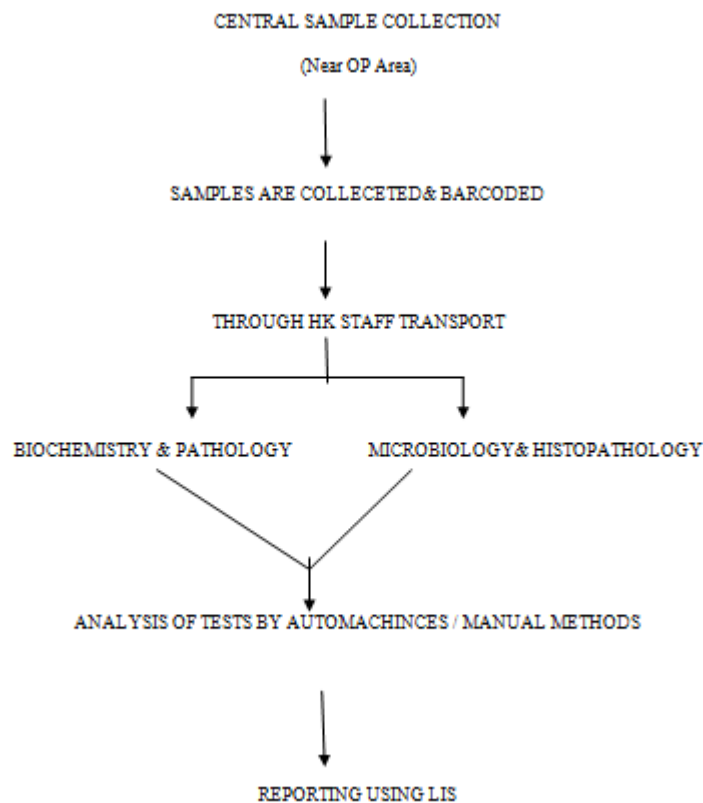
The primary source of data is applied for getting the required and relevant information directly from the departments and in the course of discussion with the technicians, the following data collected through primary source

1. Location of primary sample collection area, staff pattern posted.
2. Method of sample collections, time spent for patient to tell about their doubts about the samples and requirements.
3. Arrival pattern of specimens in the laboratory.
4. Processing difficulties and dispatch time and methods.
5. Delay reasons.

SAMPLE

A sample was required for the study because the number of laboratory investigations at Hospital was over 20,000 per month. In which outpatient Departments are half working hours, which results in patient Satisfaction.

OBSERVATIONS: Flow chart representing present work flow



International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Website: www.ijirset.com

Vol. 6, Issue 8, August 2017

LOCATION OF LABORATORY AND SAMPLE COLLECTION AREA

Tertiary care hospital serving people of Vishakhapatnam, surrounding villages and neighboring state of Orissa population, the flow of patients per day around 200 to 300 and lab works for 24x7

OP sample collection is located near to OP reception in a small room

1. Two Phlebotomist
2. Single sample collection chair, for single patient at time;
3. No privacy for female patients
4. No couch for patient to lie down in case of weakness felt during sample collection
5. Waiting area near the sample collection is very small with 4 chairs, in a way for IP patient's area.
6. Sample are collected as the phlebotomist receive the bill from the patient, if the number of patients are many they collect the bills and call the patient one by one.
7. Over crowded when load is more.
8. Phlebotomist is not fluent in communication other than local language (telugu), hospital receive patients from different community and other states.
9. All the sample collected are bar-coded simultaneously.
10. Barcoded samples are transported to the lab by HK staff who rotates for every half hour.

Laboratory:

Laboratory in Hospital is distributed in two areas in the basement area way through ICCU is General lab for clinical Biochemistry, General Pathology which is look after by Two full time consultants, And second area is on 2nd floor Op area where departments of Microbiology and Histopathology look after by full time consultants.

In lab the work flow

1. Front office for receiving IP sample for bar-coding and triaging.
2. Sample from OP as bar-coded distributed to concerned departments
3. Sample received in the departments are processed by auto analyzers or manual methods. Most of the sample in departments is processed by auto analyzers.
4. Op samples which are not suitable for processing are recognized by the patient while processing and informed to sample collection for repeat sample.
5. Once the samples are analyzed the values are automatically transferred to the laboratory information system by most of the auto analyzers, some manual done test are updated into the system by the technicians
6. Once the values are transferred into the LIS the values are verified by the concerned technicians.
7. Any abnormal values and critical values are intimated to concerned doctor / nurse
8. After verification of results in the system consultants will do the final authorisation with clinical comments.
9. The authorized reports are ready for dispatch for the patient who can take they reports in OP dispatch room in OP area near to entrance to OP reception.
10. OP dispatch is by single personal working from 9a.m to 5p.m.

Quality control

Present era is the 'Era of Quality'. In this age of cutthroat competition and large scale production, only that manufacturer can survive who supplies better quality goods and renders service to-the consumers. In fact quality control has become major consideration before establishing an industrial undertaking. Proper quality control ensures most effective utilisation of available resources and reduction in cost of production.

The process-based quality control methods are in place in the clinical laboratory for decades.

Quality control chart methodology has many applications, one of which is the early detection of variations in hospital processes; unexpected patterns of occurrences of laboratory values can be more readily detected.

Quality control materials are of two types

1. Internal Quality controls: Daily quality controls run in lab
2. External Quality Controls (EQAS) : These are Quality controls materials received by external organization which the lab quality reporting is assessed compared with other laboratories participating in this program, it is every month in Biochemistry, haematology, in other areas it is once in 3 months.
EQAS program's lab participating

International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Website: www.ijirset.com

Vol. 6, Issue 8, August 2017

Department	Organizations
1. Biochemistry	CMC vellore
2. Hematology	AIIMS
3. Microbiology	IAMM CMC Vellore

V. DISCUSSION AND SUGGESTIONS

Location of Laboratory and Sample collection Area

1. Location of the Lab in the basement area way throw ICCU is little concerned as all patient when required for any quires is less approachable.
2. It will be more approachable if there is alternative accessibility to lab without interfering with IP area when ever required
3. Brining all the departments of laboratory in single areas reduce the patient difficulties of finding out the departments and easy approachability
4. Sample collection area is small for present work load , relocate bigger space for two sample collection chairs
5. Improving facilities for patient with privacy for the patient couch to lie down when patient feel sick after sample collection.
6. Waiting area in sample collection should be more facilitated by enough chairs for patients during rush hours of day.
7. Implementing token system for sample collection with approximate time mention for sample collection during the time of billing will reduce patient anxiety.
8. Using of shooting system for delivery for samples from sample collection to laboratory, reduce the delay time for transport.
9. Some test required preparation before sample collection Ex: fasting sample, 24hr, such type are to be given prior information before patient bill for test.
10. Training for communication skills to phlebotomist to deal with anxiety and apprehensive patients are to be improved.
11. Updating staff necessary to the workload of samples is to be consider for quality reporting.
12. Manual transport throw Hk staff is difficult in controlling the staff during peak hours and in emergency sample processing required.
13. Reports dispatch system can be improved by giving unique Id & password so patient can view and print they reports linking to hospital portal of software.
14. When an error report is released by mistake immediate contact to the patient and software pop to patient mobile to contact hospital about the reports.

VI. CONCLUSIONS

The Hospital Laboratory Services in the Hospital, as they exist at present, have been studied in terms of the managerial functions (planning, organising, staffing, and controlling) to analyse the deficiencies so that the services can be made more efficient and effective toward attainment of hospital goals.

The increasing dependence of modern medical practice on laboratory investigations and the rising expectations of the public from the health services, make it imperative that the services are reviewed and updated.

Quality controls are implemented in all departments of laboratory but the recommendations have not been fully implemented due to shortage of staff.

SCOPE FOR FURTURE

1. Improvements in LIS usage.
2. Electronic dispatch of all lab reports to patient mobile or emails.
3. NABL accreditation of lab to access the quality.



ISSN(Online): 2319-8753
ISSN (Print): 2347-6710

International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Website: www.ijirset.com

Vol. 6, Issue 8, August 2017

REFERENCES

1. The Joint Commission on Accreditation of Healthcare Organizations website. www.jcaho.org, 2004.
2. Hardwick DF, Morrison JI. Directing the clinical laboratory. New York: Field and Wood, 1990: 1-45.
3. Harry M, Schroeder R. Six Sigma: The Breakthrough Management Strategy Revolutionizing the World's Top Corporations. Doubleday, New York, 2000.
4. Brennan TA, Leape LL, Laird NM, et al. Incidence of adverse events and negligence in hospitalized patients- results of the Harvard Medical Practice Study I. N Engl J Med 1991; 324: 370-6.
5. Kost GJ. Critical limits for urgent clinician notification at U.S. medical centers. JAMA 263: 704-707, 1990.
6. Westgard JO, Barry PL, Hunt MR, Groth T. A multi-rule Shewhart chart for quality control in clinical chemistry. Clin Chem 27: 493-501, 1981.