

Study on the Reasons for Drop-Out Patients for Diagnostics
Tests at Thumbay Hospital, Ajman, U.A.E.

By

Arvind Bhushan

*Dissertation submitted for the partial fulfillment of the
MBA Hospital and Health Management*

Academic year, 2016-2018



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TO WHOMSOEVER MAY CONCERN

This is to certify that **Mr. Arvind Bhushan** student of MBA Hospital and Health Management from The IIHMR University, Jaipur has undergone internship training at **Thumbay Group, United Arab Emirates** from 11th February to 8th May, 2018.

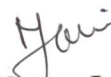
The Candidate has successfully carried out the study designated to him during internship training and his approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.

I wish him all success in all his future endeavors.



(Col.) Dr. Ashok Kaushik
Dean, Academics and Student Affairs
The IIHMR University, Jaipur



Dr. Nutan Jain
Professor
The IIHMR University, Jaipur



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The certificate is awarded to

Mr. Arvind Bhushan

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

Thumbay Labs

and has successfully completed his Project on

**A Study on the Reasons for Drop-Out Patients for Diagnostic Tests at
Thumbay Hospital, Ajman, United Arab Emirates**

11th February 2018 to 08th May 2018

Thumbay Group, United Arab Emirates

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

We wish him all the best for future endeavors.


Dr. PK Menon, MD, PhD, MBA, CPHQ
Director & Chief Operating Officer





مختبر جامعة الخليج الطبيه
GULF MEDICAL UNIVERSITY LABORATORY



May 08, 2018

To Whom It May Concern

This is to certify that **Mr. Arvind Bhushan** holder of Indian Passport Number M2708314 was working in our institution as Management Trainee from February 11, 2018 till May 08, 2018 as a part of dissertation of his M.B.A - Hospital and Health Management program. He has completed the assigned project.

We wish him all the best.

For Gulf Medical University Laboratory



THUMBAY MOIDEEN

President

THE IIHMR UNIVERSITY, JAIPUR

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled A Study on the Reasons
for Drop-out Patients for Diagnostics Tests at Thumbay Hospital
Ajman, UAE and submitted by (Name) Arvind Bhushan
 Enrollment No. IIHMR-U/01/2016-18/0394 under
 the supervision of Dr. Nutan P. Tain for award of
 MBA in Hospital and Health/ Pharmaceutical / Rural Management in Health and Hospitals of the
 University carried out during the period from 11th Feb. 2018 to
8th May 2018 embodies my original work and has not formed the basis for the award
 of any degree, diploma associate ship, fellowship, titles in this or any other institute or other similar
 institution of higher learning.


 Signature

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ABBREVIATIONS:

- HIMS: Hospital Information Management System
- LIS: Laboratory information system
- OPD: Outpatient department
- HOD: Head of department
- COO: Chief operating officer
- RCA: Root cause analysis
- CAPA: Corrective and preventive action

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INTRODUCTION:

The U.A.E.'s healthcare system has expanded over the past four decades(1). According to the latest figures from U.A.E statistics authority, the UAE has 126 public and private hospitals with a capacity of over 12,000 beds(2). As the healthcare sector is continuously growing it offers a massive growth opportunity for the public and private healthcare providers(2). As per the World Bank report the UAE population will grow from 9.4 million people in mid- 2017 to 11.055 million by 2030(3). This will create huge demand of healthcare professional in the country.To compensate and full fill this demand hospital revenue is one of the important factor. The revenue of a private hospital depends on various factors. One of the most important factor is the patient care(4). Improving the patient footfall and patient experience can help a hospital improve its financial performance by strengthening customer loyalty, brand reputation and boosts utilization of hospital and laboratory services through increased referrals to family and friends(5). Clinical diagnosis plays a major role in patient care. The diagnostics tests ranges from signs and symptoms during clinical examination, imaging tests, biochemical, pathological, and other tests.(5) These tests differentiate between the presence or absence of a disease. If diagnosed earlier helps improve patient outcome(6).

LITERATURE REVIEW:

1. Richard F. Gillum, Raymond R. Neutra, Willian B. Stason, Harold S. Solomon

Noncompliance with follow-up is a major issue in the management of hypertension. A retrospective cohort study examined dropout rates among 249 randomly selected outpatients with essential hypertension from the medical clinic of an urban teaching hospital. Data were abstracted from hospital records and a subset of dropouts was interviewed. A lifetable analysis revealed that patients who were initiating therapy or who had been under therapy for less than six months had a 50% chance of remaining in care two years later, while 70% of patients who had been under therapy for more than six months at entry were still in care after this period. Patients who were less severely ill by several indicators were the most likely to drop out. It is hypothesized that the low perceived severity of illness, coupled with the costs and inconvenience of care and the

lack of physician enthusiasm for the treatment of mild hypertension leads to noncompliance with follow-up.

2. Margaret Maglioni, Brian Chao & M. Douglas Anglin

This article explores correlates of retention among the 2,337 methamphetamine (MA) users entering public outpatient treatment programs in California from January 1, 1994 through September 30, 1997. A secondary analysis of data from the California Alcohol and Drug Data System (CADDs) was performed and predictors of drop-out before treatment completion (as measured by a retention of 180 days or more) were determined using logistic regression. Overall, 23.3% of MA users completed treatment, a rate similar to that for users of other drugs throughout California. As expected, MA users who were older (40 years or over), had less severe drug use patterns (used less than daily or did not inject), or who were under coerced treatment were significantly more likely to complete treatment than other MA users. Surprisingly, men were significantly more likely than women to drop out of treatment before 180 days. Until studies currently collecting primary data on MA treatment are completed, the present secondary analysis provides a useful foundation upon which future research and intervention strategies may be based.

3. Zahra Mirsepassi¹, Javad Alaghband Rad², Vanda Sharifi³

Dysfunctional behaviors are normal among outpatient centers, yet just a portion of these patients receive satisfactory medications. The motivation behind this examination is to assess the dropout rate and distinguish the indicators of dropouts in outpatient facilities in Roozbeh Psychiatric Hospital. In which a survey composed by master therapists was filled. The poll comprises of in-development gathered from medicinal records of 400 patients who counseled outpatient facilities of Roozbeh Psychiatric Hospital. The information were dissected utilizing SPSS16. The aggregate dropout rate was 57.8% (guys: 33.5% and females: 24.3%). The dropout rates in grown-up and tyke and immature centers were 58% and 43.8%, individually. A sum of 11% of aggregate dropout rate was in patients under 18 years, 41.8% was in patients matured 18 to 65 years, and 5% was in patients matured 65 years and over. There were noteworthy connections between dropout rate and factors of patients' age, instructive degrees, occupation, referral point, and kind of finding. Be that as it may, no critical connections were found between dropout rate and

sex or conjugal status of the patients. Decisions Dropout is a typical boundary in conveying outpatient mental medicines.

4. J. Roick MSc, Research Assistant¹ et al.

We examined the effect of statistic and infection related factors on non-investment and dropout in a group randomized conduct trial in disease patients with estimations taken amongst hospitalization and a half year from that point. The rates of non-cooperation and dropout were reported at each time point. Components thought to be possibly related with non-interest and dropout were as per the following: age, sex, conjugal status, instruction, salary, work status, tumor site and phase of ailment. Of 1,338 qualified patients, 24% declined cooperation at benchmark. Non-support was higher in more established patients (Odds Ratio [OR] 2.1, CI: 0.6– 0.9) and those with cutting edge sickness (OR 2.0, CI: 0.1– 1.3). Dropout by a half year was 25%. Dropout was more regular with expanded age (OR 2.8, CI: 0.8– 1.2), propelled infection (OR 3.0, CI: 1.0– 1.2), being hitched (OR 2.4, CI 0.7– 1.1) and less incessant with college training (OR 0.4, CI –1.3 to –0.8) and center pay (OR 0.4, CI –0.9 to –0.7). When arranging clinical trials, it is essential to know about patient gatherings at high danger of non-interest or dropout, for instance more established patients or those with cutting edge malady. Trial plans ought to think about their unique needs to build their rate of interest.

5. Maria de Fátima Pessoa Militão de Albuquerque et. Al.

An accomplice of cases starting tuberculosis treatment from May 2001 to July 2003 was followed in Recife, Pernambuco State, Brazil, to research organic, clinical, social, way of life, and human services get to factors related with three negative tuberculosis treatment results (treatment disappointment, dropout, and passing) independently and as a gathering. Treatment disappointment was related with treatment postponement, lack of education, and liquor consumption. Components related with dropout were age, earlier TB treatment, and ignorance. Passing was associated with age, treatment delay, HIV co-disease, and leader of family's wage. Fundamental components related with negative treatment results in general were age, HIV co-disease, lack of education, liquor abuse, and earlier TB treatment. We recommend the accompanying methodologies to expand cure rates: additionally preparing of the Family Health Program work force in TB control,

mindfulness raising on the need to tailor their exercises to extraordinary tend to cases (e.g., education preparing); focusing on utilization of specifically watched treatment for higher hazard gatherings; foundation of an adaptable referral plan to deal with specialized and psychosocial issues, including liquor abuse; and expanded cooperation with the HIV/AIDS program.

6. Mark Olfson, MD, MPH et. Al.

psychological wellness treatment dropout is normal, examples and indicators of dropout are inadequately comprehended. This investigation investigates examples and indicators of emotional well-being treatment dropout in a broadly illustrative example. The Data originated from the National Comorbidity Survey Replication (NCS-R), a broadly illustrative family unit overview. Respondents in psychological well-being treatment in the a year (n=1,664) before meet were gotten some information about dropout characterized as stopping treatment before the supplier needed. Cross-arrangement and discrete-time survival investigations were utilized to recognize indicators. Roughly one-fifth (22.4%) of patients quit treatment rashly. The most astounding dropout rate was from the general medicinal part (31.6%) and the least was from therapists (15.1%). Dropout rates were middle in the human administration area (19.7%) and among patients seen by non-therapist emotional wellness experts (18.9%). More than 70% of all dropout happened after the first or second visits. Psychological wellness protection was related with low chances of dropout (0.6, 0.4– 0.9). Mental comorbidity was related with a pattern towards dropout. A few patient attributes differentially anticipated dropout crosswise over treatment areas and in right on time and later periods of treatment.

Around one-fifth of grown-ups in emotional wellness treatment every year drop out before finishing the prescribed course of treatment. Dropout is most normal in the general restorative segment and fluctuates by quiet attributes crosswise over treatment parts. Mediations concentrated on high-hazard patients and segments will probably be required to lessen the high extent of patients who rashly end treatment.

7. Jessica A.Thull et. Al.

Substance mishandle and reliance have impeding impacts at both miniaturized scale and full scale societal levels. All things being equal, these scatters have all the earmarks of being manageable to treatment and people who get treatment for such issues by and large

accomplish constructive results. In any case, revealed substance mishandle treatment dropout rates have shifted enormously and no predictable "treatment dropout" profile has been recognized. This examination meant to portray the qualities of customers entering a concentrated outpatient synthetic reliance treatment program and to analyze how these factors contrasted between customers who were held in treatment to consummation and customers who dropped out of treatment rashly. Also, it investigated whether important subgroups of this example could be recognized. Results demonstrated that age, conjugal status, wage, mental comorbidity, substance(s) of utilization, and degree of substance utilize were identified with treatment maintenance. Group examination discoveries outlined four subgroups of customers in light of age, negative results identified with substance utilize, and ASI composite scores crosswise over medicinal, business, liquor and medication, legitimate, social, and mental spaces. Distinguished subgroups seemed to change along two wide measurements: level of practical weakness and type(s) of substance utilize. Results are thoroughly analyzed with the current substance mishandle treatment writing. Study restrictions are talked about, alongside suggestions with respect to hypothesis building, evaluation, and treatment intercessions. Future examinations at the individual program level are prescribed to control the outline, usage, and assessment of clinically-significant and experimentally determined evaluation systems and treatment mediations to improve substance manhandle treatment maintenance and results inside a specific program.

8. AtsumiMinamisawa et. Al.

Persistent dropout from treatment can prompt a decay in clinical condition, accordingly expanding the requirement for more serious treatment that acquires considerable social and financial misfortunes. The point of this examination was to recognize factors identified with mental patient dropout at a college outpatient center in Japan. In a review analyzed restorative outlines of new mental patients who were determined to have either a mind-set issue or an uneasiness issue (F4) in the outpatient facility at Kyoto Prefectural University of Medicine Hospital in Kyoto, Japan, between April 2010 and March 2013. The gauge qualities of the patients (age, sex, Global Assessment of Functioning score, Clinical Global Impression– Severity of Illness score, training, occupation, conjugal status, term of treatment, and earlier treatment history), treating therapist involvement in

years, and sex concordance between the patients and their treating specialists were broke down utilizing Cox relapse models. From among 1,626 qualified new patients amid the examination time frame, 532 patients were selected in the investigation (F3: n=176; F4: n=356). The dropout rate was 35.7%, which was like that of past examinations. Higher instructive level, being hitched, and bring down Global Assessment of Functioning scores were related with a lower dropout rate. Despite the fact that specialist encounter was not altogether connected with persistent dropout in the multivariate investigation, patients treated by less experienced therapists had a higher peril proportion for dropout (1.31; 95% certainty interim: 0.94– 1.85). So as to decrease the dropout rate, exceptional spotlight ought to be set on patients with the components recognized in this investigation, and youthful therapists ought to experience facilitate instruction to encourage adherence.

9. PekkaSaarnio

The reason for the examination was to research what factors cause outpatient substance mishandle treatment to be ceased. Information were gathered from three territories: (1) customer's experience and substance utilize, (2) advisor's relational working, (3) data on the association in treatment. The subjects (N = 66) were customers of an outpatient substance manhandle treatment center. Four advisors took an interest in the investigation. Customer's age and contact with issue clients were factors which represented the suspension of treatment. Dropout diminished as age expanded and turned out to be more predominant as contacts expanded. The specialist's relational working and the nature of the communication in treatment likewise influenced on the congruity of treatment. Specialists' relational working was related with customers' appraisals of association and with dropout: the all the more exceedingly the advisor's relational working was evaluated, the higher the customers evaluated the cooperation and the more outlandish they were to end treatment. On the off chance that both the advisor and the customer appraised the association as effective, treatment was more averse to be deserted. On the other hand, if the two gatherings surveyed the connection to be less effective, the more probable was treatment to be surrendered.

10. Sandeep Grover, DevakshiDua, Subho Chakrabarti, AjitAvasthi

This investigation planned to assess the dropout rates from treatment and related elements among elderly patients going to a tertiary care psychiatry outpatient office. Information

of 1422 patients matured ≥ 60 years, going to the stroll in center were assessed. Out of 1422 patients, 406 (28.55%) had a place with the "dropout" gathering. In the dropout gathering, the period of patients was essentially higher than the followed-up gathering, and a higher extent of patients were >70 years old. Fundamentally lower extent of patients with conclusion of depressive issue had a place with the "dropout" gathering and essentially higher extent of patients with "other" judgments had a place with the "dropped out" gathering. In patients with depressive issue, a higher extent of the patients in the "dropout" aggregate were Hindu by religion (68.7% versus 58.7%; $\chi^2 = 4.26$; $P = 0.03$). In patients with bipolar confusion, patients in the "dropout" gather had altogether higher wage (Rs. 13,323 [standard deviation [SD] = 16,769] versus 5681 [SD = 9422]; t-test esteem: 2–25; $P = 0.028$) and lesser extent of patients were of the male sexual orientation (63.15 versus 86.95%; Mann–Whitney U esteem = 257.5; $P = 0.039$). In the gathering of different conclusions, a higher extent of patients in the "dropout" amass were as of now single (32.3% versus 18.7%; $\chi^2 = 4.12$; $P = 0.042$), from rustic region (63.1% versus 46.72%; $\chi^2 = 4.33$; $P = 0.037$) and were not recommended medicines (40% versus 22.4%; $\chi^2 = 6.05$; $P = 0.04$). Conclusion: Dropout from treatment among elderly patients is related with higher age, not being recommended pharmaceuticals, and determination other than the emotional issue, crazy issue, and the psychological issue.

11. Debasish Basu, Abhishek Ghosh, Siddharth Sarkar, Bichitra Nanda Patra, B.N. Subodh & Surendra Kumar Mattoo

Dropout from substance utilize disarranges treatment is related with poor results. Albeit numerous components have been related with an early dropout of patients, the purposes behind dropping out of treatment rashly remain inadequately saw especially in the Indian setting. This investigation was meant to ponder socio-statistic and clinical factors foreseeing starting dropout of patients going to a tertiary care de-dependence treatment focus in north India. Techniques: Information was removed from the records of continuous recently enrolled patients from January 2011 to December 2014. The patients who did not want follow up inside 30 days of the primary contact were characterized as beginning dropouts. Results: Data of 7991 patients could be recovered. Greater part of the example comprised of male, wedded and utilized people. Of them, 4907 patients (61.3%) were viewed as introductory dropouts. Multivariate examination uncovered that

subsequent to controlling for different variables, more noteworthy age, being utilized, bring down instructive status, lesser term of substance utilize, utilization of liquor, sedative, tobacco, cannabis or narcotic entrancing use however the nonappearance of multi-substance utilize anticipated beginning drop out. Understanding and conclusions: This investigation distinguished some socio-statistic and clinical factors which may foresee treatment wearing down in substance utilize clutters. Clinician's mindfulness towards these elements and customized intercession may enhance beginning treatment maintenance. Future research could be coordinated to discover the legitimacy of this presumption.

12. Leila Hoseinie 1, Zhaleh Gholami1, BehrangShadloo 1, AzarakhshMokri 1, Masoumeh Amin-Esmaeili andAfarin Rahimi-Movaghar

The point of this investigation was to survey drop-out rates and related reasons among patients at the Iranian National Center for Addiction Studies (INCAS) facility. In a one-year time frame (April 2014 to March 2015), all patients with tranquilize reliance who had been alluded for treatment and went to for a first appraisal were incorporated into this investigation (N=242). The individuals who got treatment were taken after until March 2016. Survival examination demonstrated that 70.2% had dropped out from treatment. Log rank test demonstrated that treatment drop-out rates contrasted between the distinctive methodologies utilized ($P < 0.001$), with the least slant in buprenorphine support treatment and the most astounding in the detoxification program. Drop-out rates inside the initial three months was 62% (SE= 0.05) and 82.4% (SE=0.03) for opioids and stimulants reliance, individually. Examinations were performed utilizing SPSS (Version 21.0) and STATA programming, (variant 13.0). From the patients' viewpoint, motivational irregularities were considered as the primary purpose behind not beginning or leaving treatment. The discoveries of this investigation could give specialist co-ops a superior handle of drop-out rates and the related reasons.

13. Ayse Bahadir1 ,Sinem Iliaz2 , Sibel Yurt1 , MedihaGonenc Ortakoylu1 , Nur Dilek Bakan1 and Esra Yazar1

The target of this examination was to research the pervasiveness of suspension in the smoking discontinuance outpatient center (SCC) and to inspect the highlights of resistance. We reflectively included 1324 smokers into the examination. Patients were

partitioned into two gatherings, as the individuals who ceased (dropped out) development (aggregate 1) and the individuals who remained in development (assemble 2). Of the aggregate 1324 smokers, 540 (40.8%) patients were in gather 1. What's more, the decision of treatment was likewise unique between gatherings ($p < 0.001$). Motivational/conduct treatment and nicotine substitution treatment (NRT) were more typical in assemble 1 contrasted and amass 2. There was no distinction among bunches in sexual orientation, having family smokers, history of upper treatment, past quit endeavors, and instructive status ($p > 0.05$). Right around 40% of our patients did not go to their subsequent SCC visit. More youthful age, bring down Fagerstrom score, low measure of every day cigarette utilization, and being dealt with just with conduct treatment or NRT were distinguished as the attributes of the dropout gathering. Attention to the qualities of smokers who drop out of SCC projects may accommodate the usage of customized treatment at the primary arrangement.

14. G Leigh, A C Ogborne, P Cleland

Dropout was carried in 172 patients (40 women) of an outpatient alcoholism treatment program. The predictors of dropout was the length of delay between appointments, and variables related to symptom levels such as the number of prior alcohol-related arrests, the use of illicit drugs and scores on the Michigan Alcoholism Screening Test was of lesser importance, but in line with previous findings, were sociodemographic variables such as age, the level of social stability and the presence of dependents at home. No personality variables were found to be relevant. It is suggested that treatment programs can improve attendance by reducing the delay with which services are offered and by changing certain characteristics of treatment personnel.

15. John McKellarT, John Kelly, Alex Harris, Rudolf Moos

This examination was to utilize pretreatment and treatment elements to anticipate dropout from private substance utilize clutter program and to inspect how the treatment condition changes the hazard for dropout. This examination evaluated 3649 male patients at section to private substance utilize clutter treatment and got data about their view of the treatment condition. Benchmark factors that anticipated dropout included more youthful age, more prominent psychological brokenness, more medication utilize, and bring down seriousness of liquor reliance. Patients in treatment conditions evaluated as low in help or

high in charge likewise will probably drop out. Further, patients at high danger of dropout were particularly prone to dropout when treated in a profoundly controlling treatment condition. Better screening of hazard factors for dropout and endeavors to make a less controlling treatment condition may bring about expanded maintenance in substance utilize scatter treatment.

16. RennéGusmãoBusnello, Raquel Melchior, Carlo Faccin, Daniela Vettori, JulianoPetter, Leila Beltrami Moreira, Flávio Danni Fuchs

This examination was to utilize pretreatment and treatment elements to anticipate dropout from private substance utilize clutter program and to inspect how the treatment condition changes the hazard for dropout. This examination evaluated 3649 male patients at section to private substance utilize clutter treatment and got data about their view of the treatment condition. Benchmark factors that anticipated dropout included more youthful age, more prominent psychological brokenness, more medication utilize, and bring down seriousness of liquor reliance. Patients in treatment conditions evaluated as low in help or high in charge likewise will probably drop out. Further, patients at high danger of dropout were particularly prone to dropout when treated in a profoundly controlling treatment condition. Better screening of hazard factors for dropout and endeavors to make a less controlling treatment condition may bring about expanded maintenance in substance utilize scatter treatment.

PROBLEM STATEMENT

During a routine audit it was noticed that number of test ordered in HIMS was significantly more than those availed by the patients. It was realized that patients, who attended OPD and were prescribed diagnostics tests, did not avail the diagnostic services. With a view to understand underlying reasons for the drop out a study will be carried out so as to identify the reasons of drop out and enhance patient treatment outcomes.

OBJECTIVES

The objectives of the study are:

- To Understand reasons for not availing recommended diagnostics tests by OPD patients at Thumbay Hospital Ajman;

- To Carry out Root cause analysis (RCA); and to conduct Corrective and Preventive actions (CAPA) for enhancing use of diagnostics services at Thumbay hospital Ajman.

OPERATIONAL DEFINITION

- **Test:** A medical procedure that involves testing a blood, urine or other body fluid in order to diagnose, identify a disease condition.
- **Patient Drop Out:** Patient who failed to return to hospital for the next appointment.
- **Patient Outcome:** Change in the health of an individual, group of people or population that is attributable to an intervention.
- **Patients' challenges:** Unmet demands or difficulties faced while receiving healthcare services.
- **Patient expectation:** Observations encountered by patients while receiving hospital services.
- **Patients' satisfaction:** Feeling of contentment when their needs and expectations have been met.
- **Payer:** Insurance provider who pay for the hospital and laboratory services prescribed to the patient.

METHODOLOGY:

Study area: Gulf Medical University Laboratory”&Thumbay Hospital Ajman.

Study Duration: 11th Feb to 8th May 2018

Study Respondents: Individuals who have not been availed prescribed tests in the OPD during the study period from 11th Feb to 20th April 2018.

Sample Unit: Out-patient department patients at Thumbay Hospital Ajman.

Sample Size:

Keeping in view Approximate 250 patients are prescribed one or other diagnostic tests at Thumbay hospital Ajman of the total patient Approximate 33% patient are not availing the diagnostic services of the hospital, which approximates to 60 to 70 patients need to be contacted daily to know the reasons of drop out. Keeping in view the feasibility aspects, Approximate 30 to 40 such patients were contacted per day for telephonic interview for 5 to 10 minutes for each Patients considering 50% may be the non-response (poor connectivity of call, not picking up, not free. Etc.) and therefore, another 10 patients were also contacted which calculates 30 patients per day. Data collection was done for 20 working days and therefore, it calculates a sample of 30 patients per day x 20 days = 900 patients. This patient were men, women and children. On the other hand, Further classification will be made based on type of diagnostic tests.

Data collection methods

Primary data through telephonic interview and Secondary data collection was done by organizational record. Which includes Patient details like Name, Contact detail, Total number of test prescribed.

Data collection tools

Interview schedule for the patients who are dropped out for any diagnostic tests. In case the patients was not able to respond, the attendant was contacted for the interview.

The interview schedule captured information on the following:

- a) If the test is already been done at same/other place.
- b) When he/she will get the test done.
- c) Does he/she would like to avail home sample collection facility.
- d) If not willing for the test. What is the reason?

Before conducting the interview, the oral consent was taken. The patient or the family members was told about who is contacting them and why.

The interview schedule included general information (name, date and time, prescription of test, doctor consulted, duration since s/he is suffering, etc.) which was already taken from the hospital records, Then the reasons for not availing the prescribe test was asked. The reasons include: personal, social, hospital related, provider related, financial, behavioral, distance, ill-health so that s/he cannot stay for long, duration, etc. If the respondent does not reflect, s/he was probed for other reasons. Whether s/he has done from outside.

Operational plan

A list of patients who did not availed the diagnostic services at the hospital was collected for the last 3 month period along with their details like name, contact details. As per the list 30 patients were selected as per the above mention variables. All the identified patients were contacted over telephone In case, they do not pick the call at all, three attempts were made for each Patients. Privacy and confidentiality was maintained and the Informed consent was obtained prior to telephonic conversation.

Data Management

Data was entered using MS Excel sheet. The data collected from the records was entered in Excel.

Analysis and Intervention:

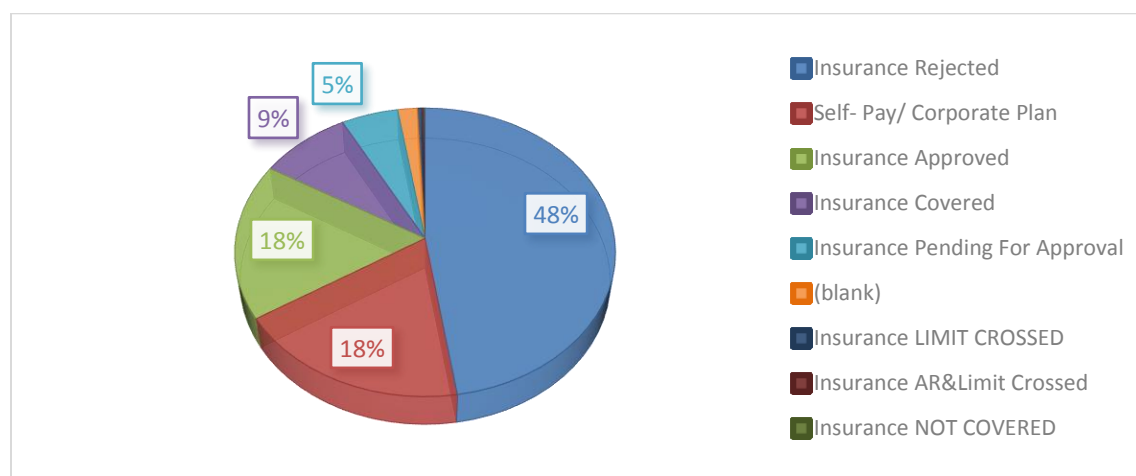
OPD data was collected through HIMS. The collected data was then converted into .exe file format. Data analysis was done through Microsoft excel. The primary data that was collected through telephonic interview was entered in Microsoft excel sheet and further analysis was done using same excel sheet.

RESULTS:

Number of patients who were contacted was 703 of which the response rate was 73% i.e., 516. The remaining 27% were non-respondent. From the pre-data analysis it was identified that there was drop in prescribed test at thumbay hospital Ajman. Further it was identified that this drop was among Insured patients. The distributed of the insured patients were as follows:

- a) Insurance rejected
- b) Self-Pay/ Corporate plan.
- c) Insurance approved cases.
- d) Insurance covered cases.

Figure 1: Percent distribution of drops out patients at Thumbay hospital (n=8038)

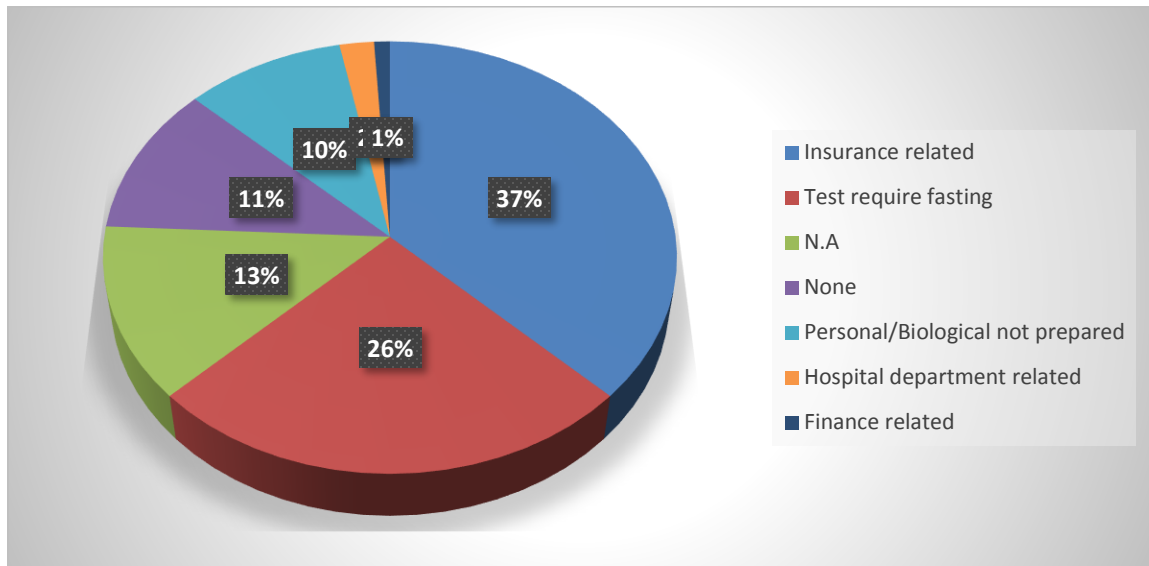


The Fig 1 represents the patient dropout classification across the various insurance groups for the period of three months.

The maximum drop of 48% was in insurance rejected cases. These are those cases whose insurance request was rejected by the insurance company. Second highest drop was among self-pay and insurance approved. Self-pay is the one who pay from their own pocket and insurance approved ones are the one whose test request was already approved by the insurance company where the patient need not to pay for the service. In order to hold those patient. The organization proposed a pilot study. Where the insurance approval and rejected cases were targeted and interview to know the undeline cause and problem for not availing the prescribed tests at Thumbay Hospital. Total number of patients who were contact during the study was 703. Among them the response rate was 73%. The nonrespondent were those whose contact number was incorrect or number was not reachable during the study period. Total 516 patients were telephonically interviewed through a structured question. Amongst those 9% of the patients already got their test done either at thumbay hospital or thumbay group of clinics. The remaining 87% patients did not get the prescribed test and had following problems at the first visit.

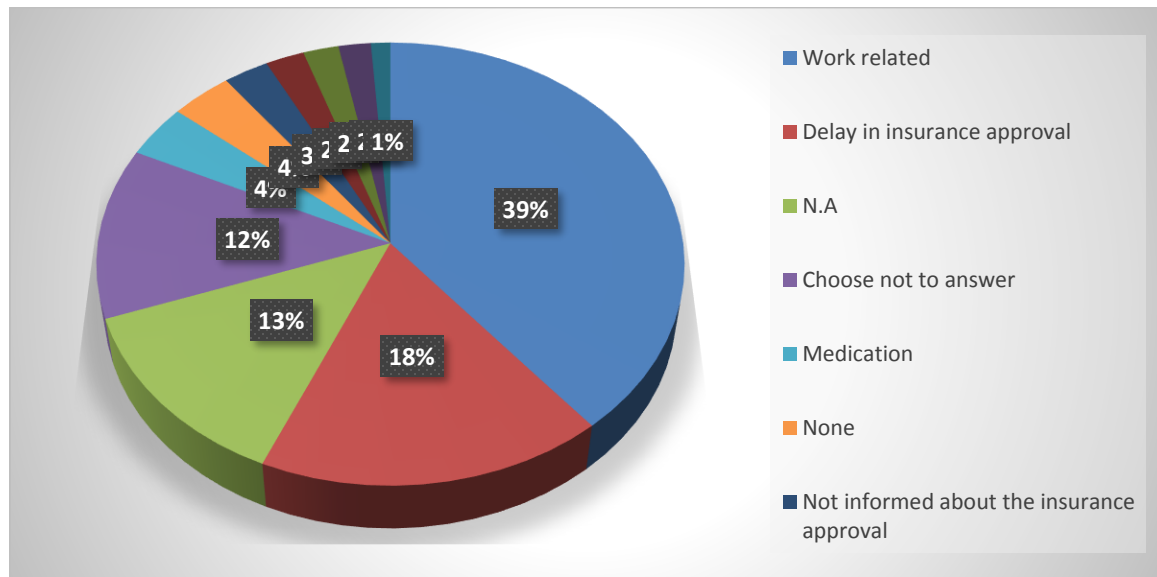
- a) Insurance related problem: 37%
- b) Medical test related: 26%
- c) Personal/Biological: 10%
- d) Others:27%

Figure 2: Percent distribution of drops out patients during the first visit at Thumbay hospital (n=516)



The Fig 2 represents the patient dropout reasons during the first visit to the hospital. These patients were further followed up before their next visit and the reasons for the delay in service utilization were identified. 39% of the patients delayed their test because of their work schedule, 18% patients were delayed because of the delay in insurance approval. The remaining patients gave other reasons for the delay.

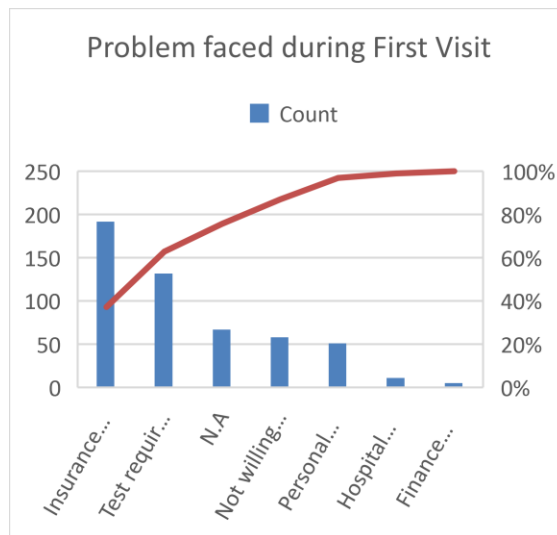
Figure 3: Percent distribution of the reasons of delay among the drop out patients during the followup visit at Thumbay hospital (n=516)



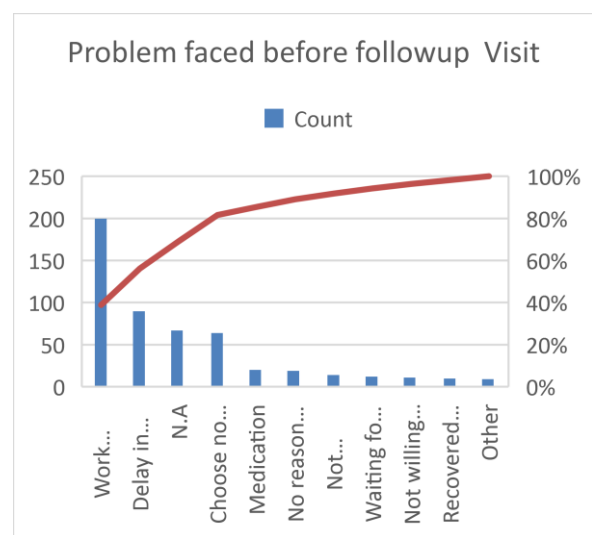
The Fig 2 represents the reasons of patient dropout during the followup visit at Thumbay hospital.

Pareto Chart:

Figure 4: a) Pareto chart for the problems faced during the first visit. B) Pareto chart for the problems faced during follow-up visit.



a)



B)

A brainstorming session was organized from the above pareto chart. During the first visit insurance related problem was identified as the major cause of patient dropout. In the

second chart patients delayed the test because of busy work schedule and lack of time
Problem in both the steps were considered together and top four problems were taken as
the priority problems to be considered for corrective and preventive action.

Figure 5: Fish bone Diagram:

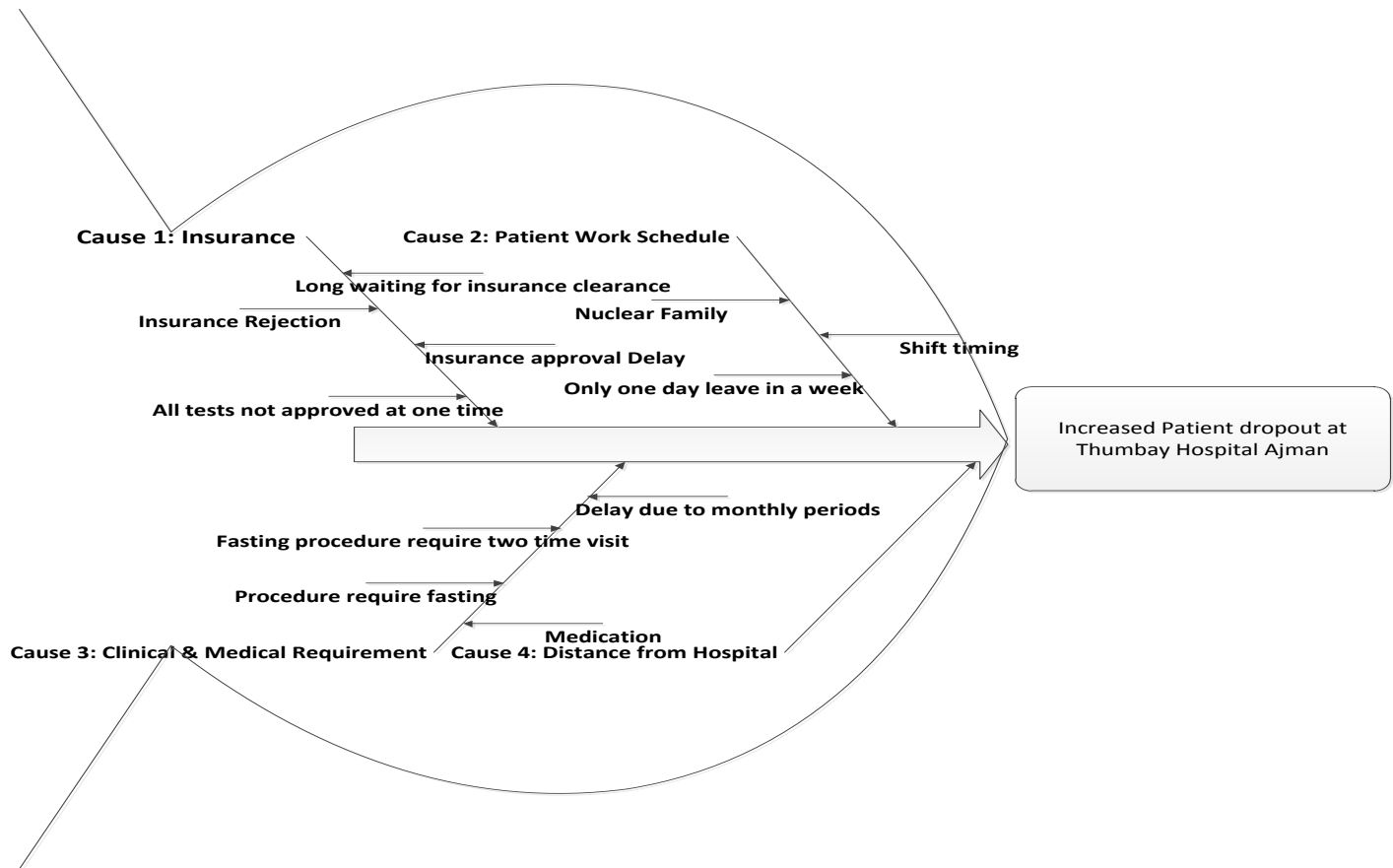


Table 1: The above table represents the CAPA recommendation to the management

S. No.	Category	CAPA	Call Centre	Home Collection
1	Insurance Rejected	1. Analysis of reasons of Pre Billing Rejection on a weekly basis by Insurance dept and submission of report to COO Thumbay Labs & Individual Facility COO.		
		2. Necessary mechanism to be put in place to reduce the prebilling rejections.		
		3.Reach out to rejected patients and offer discounted rate as approved by management	Y	Y
2	Self- Pay	4.Reach out to self-pay patients and offer discounted rate as approved by management.	Y	Y
3	Insurance Approved	5.Reach out to patients and convince them to come to the respective facility, offer home collection if required	Y	Y
4	Insurance Covered	6. Process review by individual hospital facility and do necessary modifications to ensure that the cases which are covered and can be converted to immediate billing shall not go out of hospital without giving sample.		
		7. In case sample is not collected on same day then reach out to the patients and convince them to come to the respective facility, offer home collection if required	Y	Y
5	Insurance Pending For Approval	8. Analysis of cases on a day to day basis and alert to be generated to Hospital insurance approval team where any case is in pending stage for more than 48 hrs by Hospital insurance dept.		
		9. Any case where status exceeds 72 hrs and the case is pending for approval an alert to be sent to COO Thumbay Labs & Individual Facility COO.		
		10. TAT for approval to be monitored by insurance dept and a report need to be submitted for the same		
6	Miscellaneous	11.To be considered in second phase		

DISCUSSION AND CONCLUSION:

Patient dropout study was done in various healthcare setting where the drop out study was carried out in case of clinical setting or long-term patient treatment like cancer treatment or psychiatric treatments. Studies shows the effect of patient dropout on the patient outcome. In UAE the patient dropout study has not been reported in relation to the hospital revenue. Where the major revenue of Thumbay hospital was impacted because of patient drop out. And patient dropout in relation to Insurance has not been reported in any of the literature till date. This study is first of its kind in nature. It directly reflects the financial impact on the hospital revenue. One of the major limitation in this study was the classification of dropout patient was not done based on the demographic factors i.e., age, sex, educational level, income level because of the cultural and ethical issues of the country. In the other dropout study the patient were followed for a longer duration of time. Whereas in this study the patient follow-up was for a short time through telephonic interview.

Conclusion: The major problem identified for the patient dropout was delay in insurance approval, insurance rejection of tests, work related delay was one of the main reason of delay during the follow-up visit. To minimize such delay and patient dropout home collection facility was offered to the patients and further discounted rate was offered to the patients whose tests was rejected by the insurance company.

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