

Dissertation

At

Yatharth Hospital Pvt. Ltd.
Omega-1, Greater Noida
On

FORMULARY ADHERENCE IN OUT PATIENT AND IN PATIENT PHARMACY

By

Km Ekta
PG/17/027

Under the guidance of Dr. Pankaj Talreja
Post Graduate Diploma in Hospital and Health Management
2017-19



Post-Graduate Diploma in Hospital & Health Management

2017-19

International Institute of Health Management Research, New Delhi

(Completion of Dissertation from respective organization)

The certificate is awarded to

Name -KM EKTA

in recognition of having successfully completed her
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Title --PHARMACY

and has successfully completed her Project on

FORMULARY ADHERENCE IN OUT PATIENT AND IN PATIENT PHARMACY

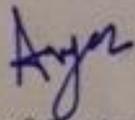
Date-30-MAY-19

Organisation-YATHARTH SUPER SPECIALITY HOSPITAL

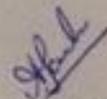
GREATER NOIDA

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

We wish her all the best for future endeavors.



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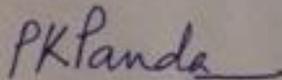
TO WHOMSOEVER IT MAY CONCERN

This is to certify that **KM EKTA** student of Post Graduate Diploma in Hospital and Health Management (PGDHM) from International Institute of Health Management Research, New Delhi has undergone internship training at **YATHARTH SUPER SPECIALITY HOSPITAL, GREATER NOIDA** from **04-MAR-19** to **30-MAR-19**

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

The internship is in fulfillment of the course requirements.

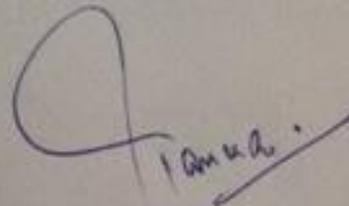
I wish her all success in all her future endeavors.



Dr Pradeep K Panda

Dean, Academics and Student Affairs

IHMR, New Delhi



Mentor

IHMR, New Delhi

Certificate of Approval

The following dissertation titled "FORMULARY ADHERENCE IN OUT PATIENT AND IN PATIENT PHARMACY" at "Yatharth Super Specialty Hospital Greater Noida" is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of Post Graduate Diploma in Health and Hospital Management for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

Dissertation Examination Committee for evaluation of dissertation.

Name

Signature

Dr. P. L. Jais
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FEEDBACK FORM

Name of the Student: *EKA*

Dissertation Organisation: *Yatharth Hospital, Greater Noida*

Area of Dissertation: *Pharmacy*

Attendance: *Regular*

Objectives achieved: *Adherence to Hospital formulary has been increased.*

Deliverables: *Adherence has been increased from 40% to 60%*

Strengths: *Science & Handwritten*

Suggestions for Improvement: *None*

Suggestions for Institute (course curriculum, industry interaction, placement, alumni): *None*

Signature of the Officer-in-Charge/ Organisation Mentor (Dissertation)

Date: *30/May/19*

Place: *G. Noida*

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Km Ekta

(PG/17/027)

CONTENTS

	Table of Contents	Page Number
1	ACKNOWLEDGMENT	3
2	LIST OF ABBREVIATION	4
3	INTRODUCTION OF ORGANIZATION	5
4	INTRODUCTION	8
5	OBJECTIVE	9
6	METHODOLOGY	10
7	DISCUSSION	11
8	CONCLUSION	27
9	RECOMMENDATIONS	28

LIST OF ABBREVIATIONS

- SCM – Supply Chain Management
- FSN- Fast, Slow and Non Moving
- ABC- Always Better Control
- ROL – Re-order Level
- EHC– Executive Health Checkup
- BMW –Biomedical Waste
- IP – In Patient
- ICU – Intensive Care Unit
- NICU- Neo natal ICU
- PICU – Pediatric ICU
- OPD – Out Patient Department
- HK – Housekeeping
- CSSD – Central Sterile Supply Department
- PTS - Pneumatic Tube System
- GDP – Gross Domestic Product

OVERVIEW OF THE ORGANIZATION

Yatharth Super Speciality Hospital at Greater Noida is the flagship hospital. This hospital has been planned and designed as a 400 bedded tertiary care multi-specialty facility. The Yatharth Super Speciality Hospital is constructed across a sprawling 1.6-acre campus.

VISION

Committed to deliver quality & personalized care to improve the well-being of patients and communities we serve..

MISSION

To evolve as the most preferred destinations for quality healthcare that provides a comprehensive range of services and is trusted for personalized care with compassion.

CORE VALUES

T- Trust

P – Personalized care

Q- Quality

SPECIALTIES

Key Specialties

Orthopedics & Joint Replacement

Ophthalmology & Refractive Surgery

Cardiology & Cardiac Surgery

Internal Medicine

General & Minimal Access Surgery

Nephrology

Other Specialties

Anesthesiology& Pain Management	Plastic & Cosmetic Surgery
Blood Bank & Transfusion Medicine	Preventive Health Check up
Critical Care	Pulmonology
Dentistry	Rheumatology
Dermatology	Radiology
Endocrinology	Surgical Oncology
ENT	Trauma & Emergency (24X7)
Gastroenterology	Urology
G I Surgery	Vascular & Endo Vascular Surger
Hearing & Speech	
Internal Medicine	
Interventional Radiology	
Lab Medicine	
Medical Oncology	
Neurology	
Neuro Surgery	
Physiotherapy & Rehabilitation	

INTRODUCTION

Out Patient and In Patient Pharmacy forms one of the most important components of hospital supply chain management. Out-patient pharmacy and In Patient Pharmacy is the show window of the hospital supply chain management. It is revenue churning for the hospital out-patient services & contributes to the hospital business and growth.

For a super specialty hospital, managing an out-patient pharmacy and In Patient Pharmacy demands a strategic approach on account of the below mentioned reasons:

- Multiple consultants for a single specialty
- Multiple specialties to cater to
- Multiple brands in same molecule/components
- Multiple strengths of a single drug
- Multiple dosage forms of a single drug
- Availability of stock from the vendor

All these factors contribute to the final stock levels of the out-patient pharmacy and In Patient Pharmacy availability or non availability of the drugs in the out-patient pharmacy and In Patient Pharmacy

The stock at out-patient pharmacy at any given time shall be in sync with the hospital formulary. While saying this in turn we also need to understand that a hospital formulary is a very dynamic document and needs updating periodically.

Prescriptions presented at the out-patient counter may contain one or more drugs and it has a possibility that few or all of them might not be available with the store. The key observation here has to be if those drugs were a part of the formulary or were molecules/brands which are not added or obtained in the formulary.

It is a matter of grave concern for items which are a part of the formulary and are not available. It should be looked into & they should be made available. For items which are not a part of the formulary, the patient is suggested alternate available choice in consultation with the doctor.

Also, to ensure adherence to the formulary the consultants are made aware of the existing drug options. Any prescription where 50% of the prescribed medications are not available in the store, regardless of the reason is considered as a bounced prescription.

Going further into the study, we will study:

- The numbers of such prescriptions.
- Their source of generation.
- Trends in the deviation from formulary.

Also, we will suggest ways & means to enhance formulary adherence at the end of this study.

AIM

Evaluating formulary adherence for 400 bedded hospital across specialties on out-patient and in-patient basis and suggesting necessary intervention to minimize deviations.

SPECIFIC OBJECTIVES

1. Analyze & capture deviations from formulary medicines
2. Analyze data with respect to specialties & consultants
3. Share the details with pharmacy team & consultants to make required amendments in the formulary
4. Analyze the deviation trends post the intervention
5. Suggest a plan for in-patient pharmacy

METHODOLOGY

Study Design: Observational Study and Descriptive Study

Study Area: Yatharth Super Specialty Hospital

Study period: Formulary adherence in out-patient and in-patient pharmacy during the (March 2019-May 2019) training were included in the study.

Study Population: Prescription from out-patient pharmacy in Yatharth Super Specialty Hospital Greater Noida, from 04 March till 30 May 2019 were observed and tracked during the study.

Sample Size: 902

Sampling Method: Purposive

- Direct observation in out-patient and in-pharmacy.

Tools: Hospital Data (from HIS)

Data Analysis: Descriptive statistics (average and percentage) are used for analyzing the data from HIS

Observational study (direct in to the pharmacy)

DISCUSSION

The study was conducted in out-patient and in-patient pharmacy of the hospital, where any sort of non-availability/substitution was directly monitored for each bill. Any prescription which had constituents was considered a bounced prescription.

The team took a note of the following parameters for all such incidents:

1. Data
2. Specialty
3. Consultant
4. Formulary Adherence

Conducted data was analyzed on daily basis to determine if there was a high or low in number & % of such drug orders. Data was analyzed on multiple parameters such as:

- Formulary adherence
- Specialty
- Consultant etc

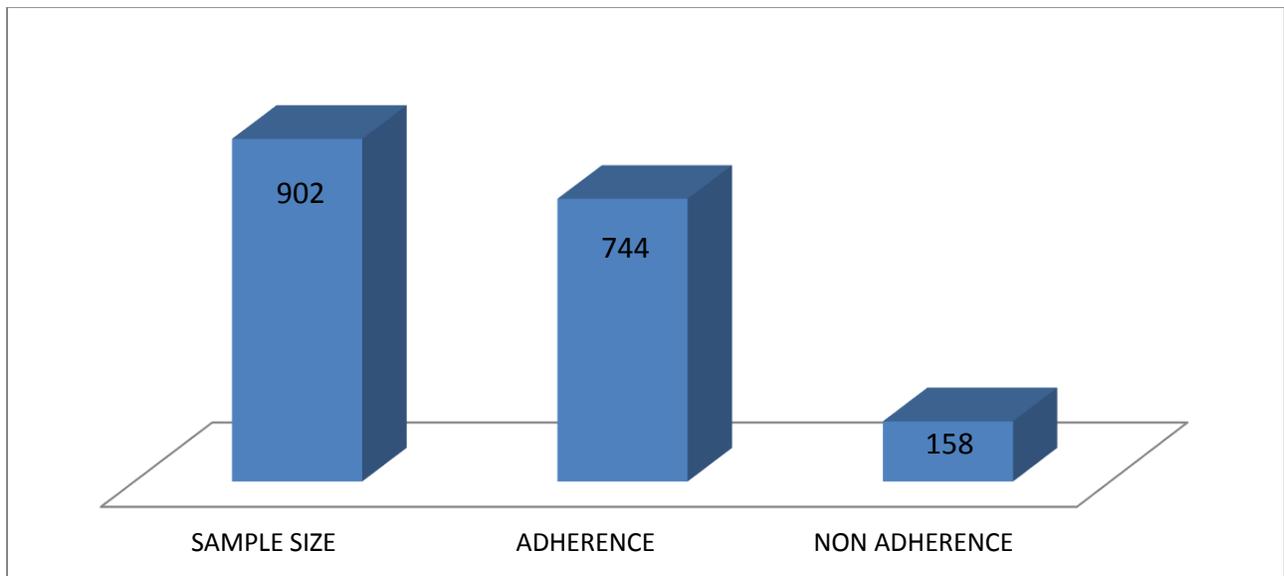
Description of all such analytics will follow soon. Post analysis, the data was presented to the management & consultants in the pharmacy & therapeutic committee along with the in-charge of pharmacy.

A few additions & subtractions were made to the existing formulary to achieve better formulary adherence.

For all non available drug -

1. A total of 902 prescriptions were captured & the details are attached in annexure.
2. The observations for this non-availability as per data are shown in the following graphical representations.

Total non-availability: This graph is showing total non-availability of drugs in that formulary adherence and non-formulary adherence combined.

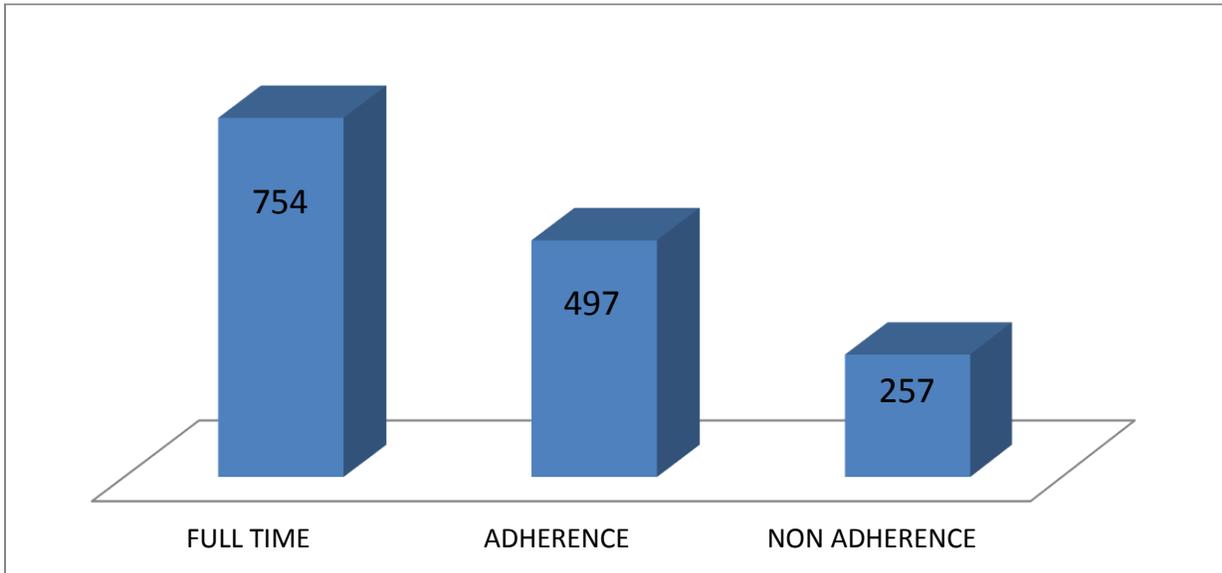


Sample Size-902 Formulary adherence-744 Non-formulary adherence-158

That's a total number of drugs which were not present in the out-patient and in patient pharmacy. Data captured into different-2 specialty wise.

- Common Medications
- Paediatric
- Cardiology
- Dental
- Dermatology
- ENT
- Gynaecology
- Internal Medicine
- Nephrology
- Neurology
- Ophthalmology
- Orthopaedic

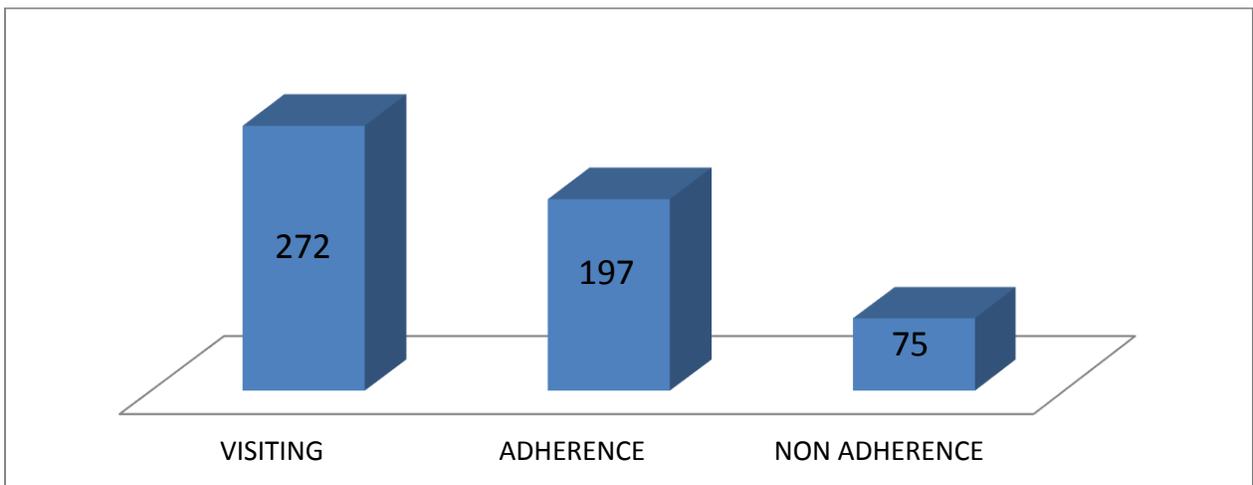
Full Time:



Full time specialties prescribed drugs in three months total 754 in that:

Formulary adherence- 497 drugs Non-formulary adherence-257 drugs

Visiting:

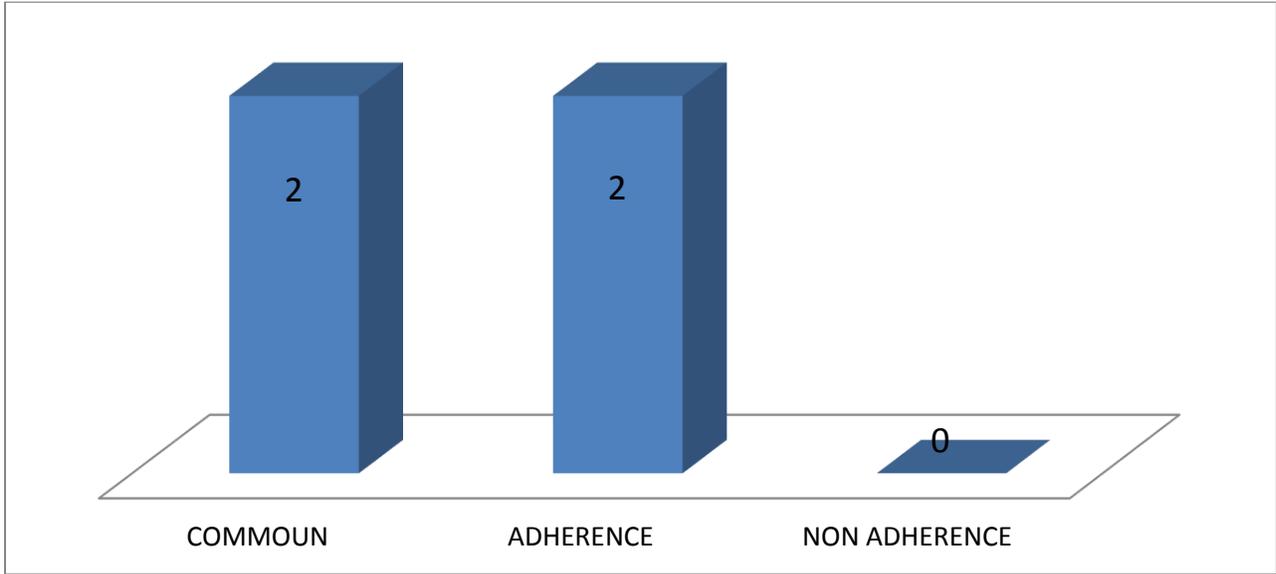


Visiting specialties prescribed drugs in three months total 272 drugs in that:

Formulary adherence-197 drugs Non-formulary adherence-75 drugs

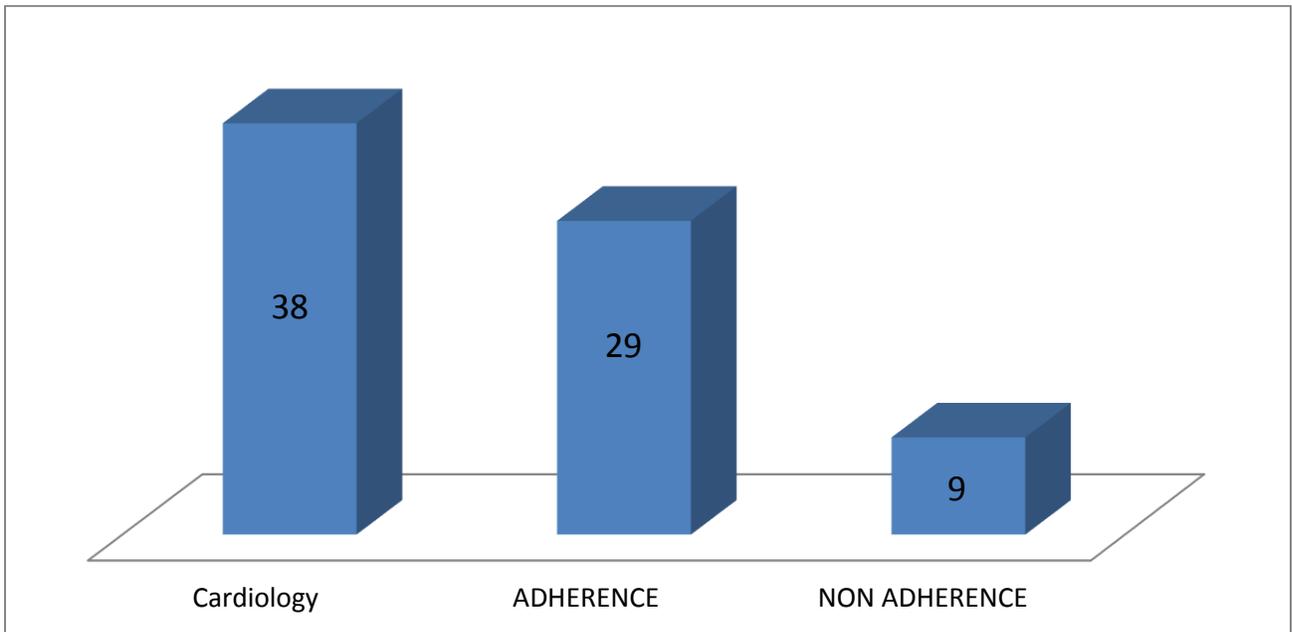
Specialty Wise: Now these graphs will show specialty wise which specialty is prescribe more or less formulary drugs.

Common Medications:



Formulary adherence-2 Non-formulary adherence-0

Cardiology:

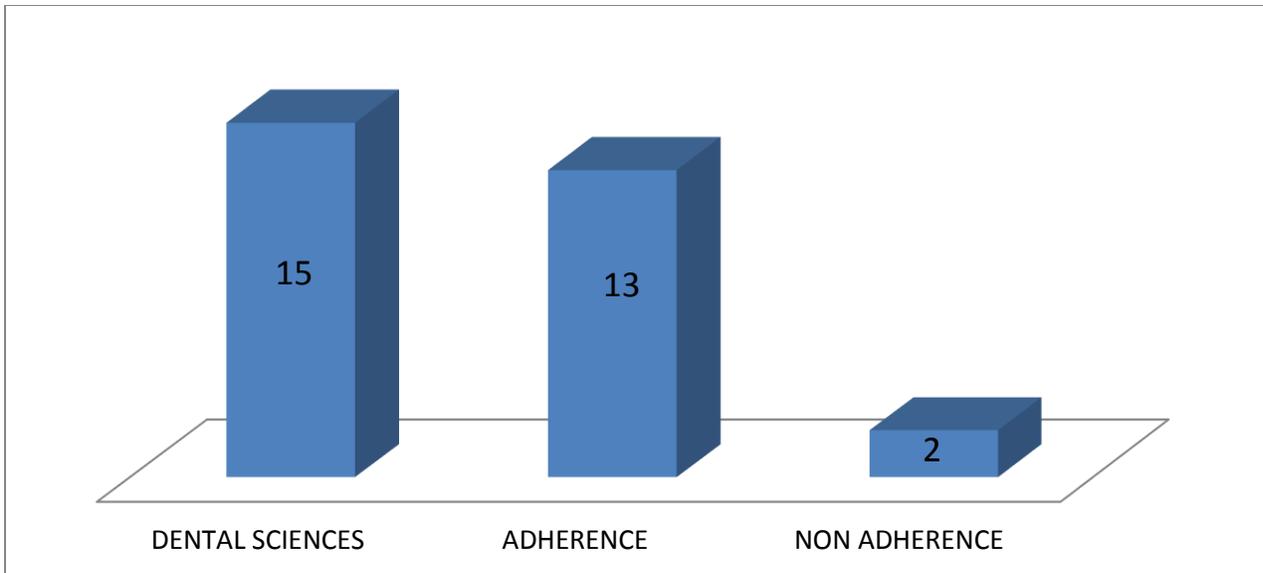


Cardiology specialty prescribed 38 drugs in three months.

Formulary adherence-29 Non-formulary adherence-9

That means this specialty prescribed formulary drug.

Dental Sciences:

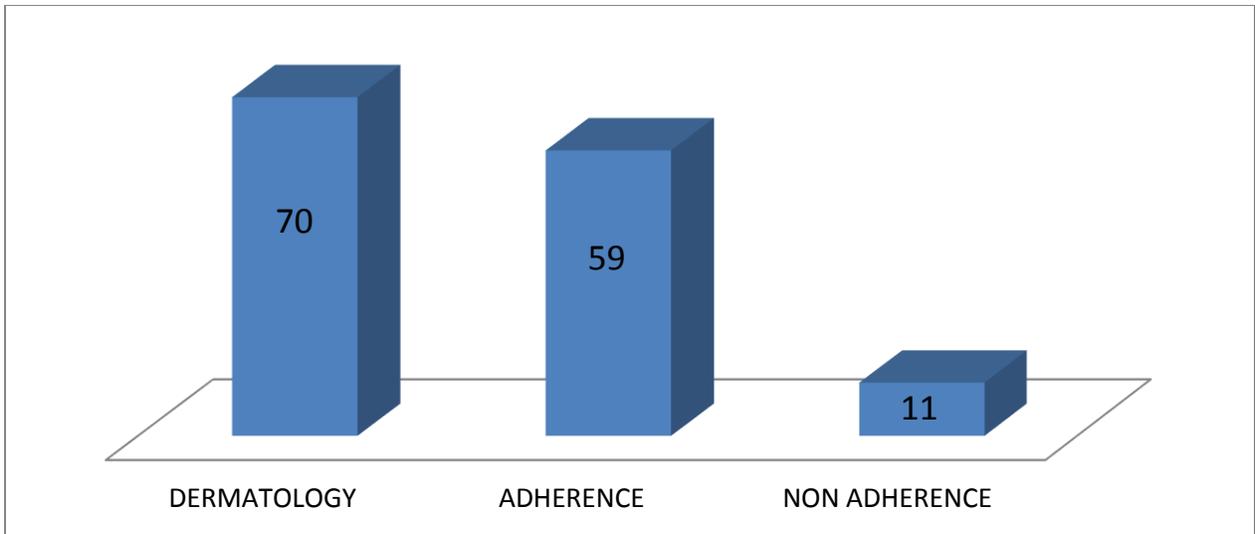


Dental sciences specialty prescribed 15 drugs in three months

Formulary adherence-13 Non-formulary adherence-2

That means this specialty prescribed formulary drug.

Dermatology:

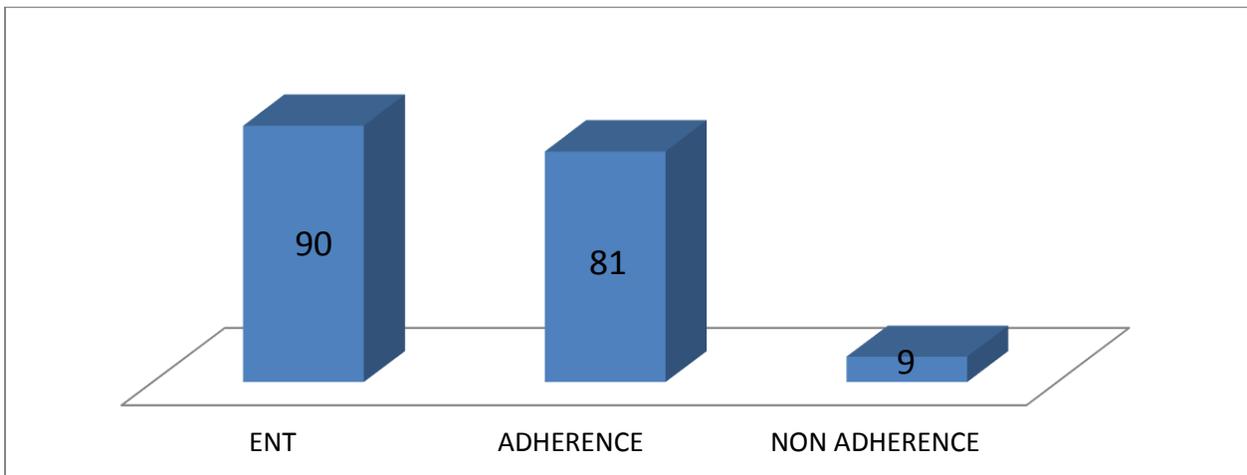


Dermatology specialty prescribed 70 drugs in three months

Formulary adherence-59 Non-formulary adherence-11

That means this specialty prescribed non-formulary drug.

ENT:

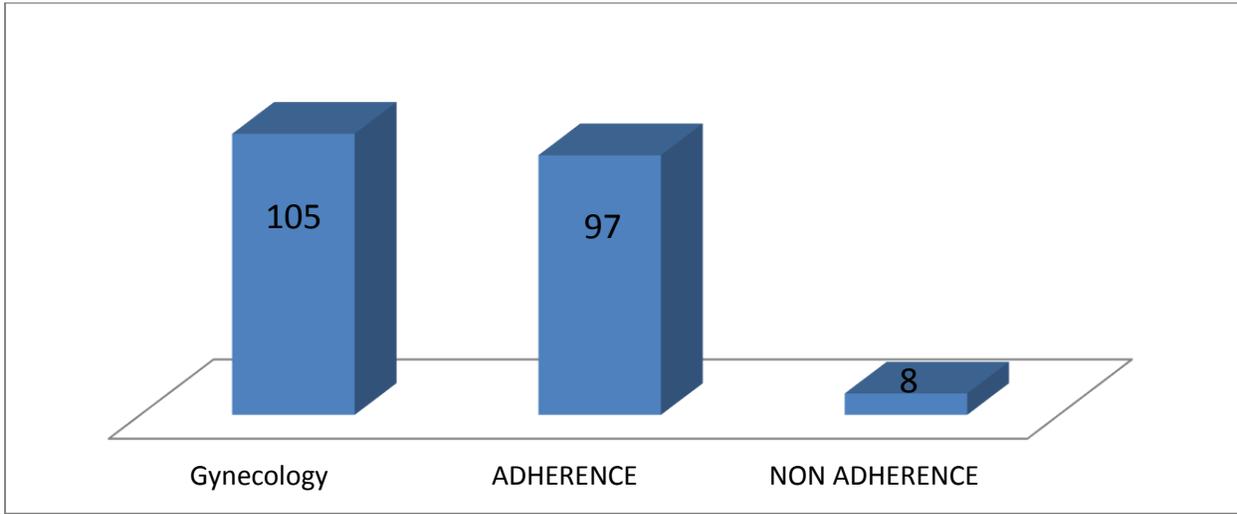


ENT specialty prescribed 90 drugs in three months

Formulary adherence-81 Non-formulary adherence-9

That means this specialty prescribed formulary drug.

Gynecology:

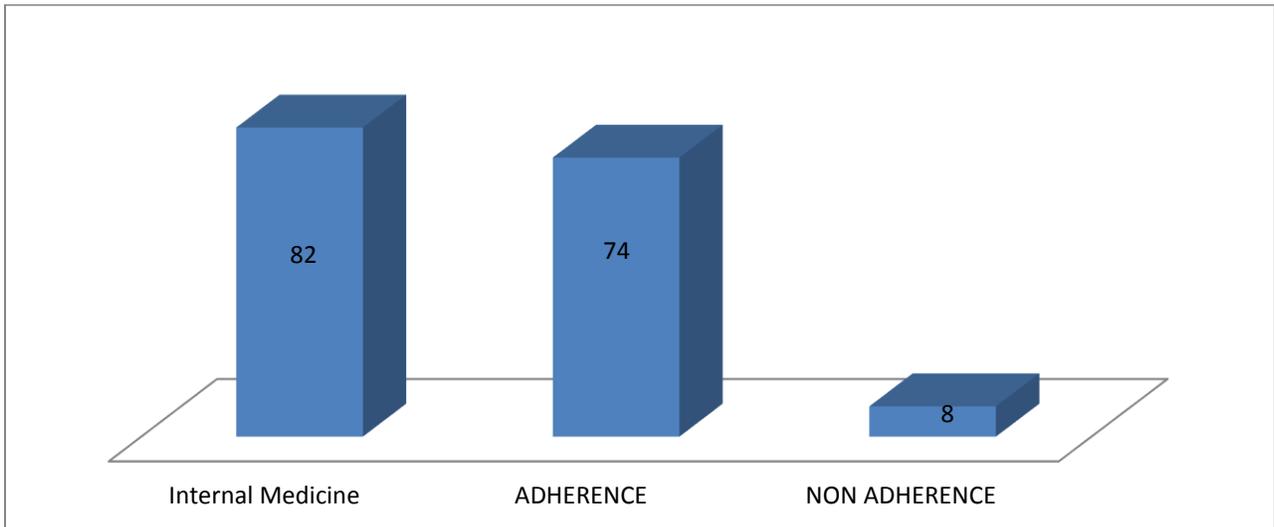


Gynecology specialty prescribed 105 drugs in three months

Formulary adherence-97 Non-formulary adherence-8

That means this specialty prescribed formulary drug.

Internal Medicine:

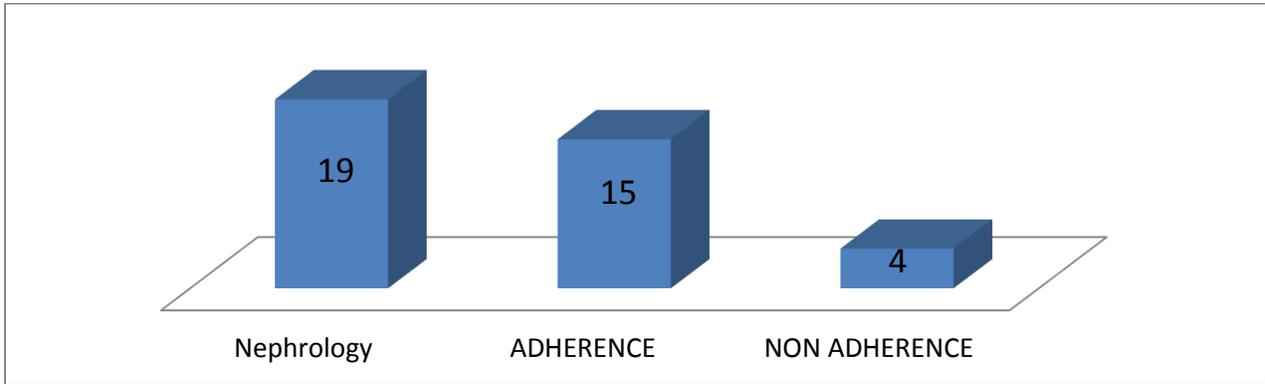


Internal Medicine specialty prescribed 82 drugs in three months

Formulary adherence-74 Non-formulary adherence-8

That means this specialty prescribed all most formulary drug but some non-formulary drugs.

Nephrology:

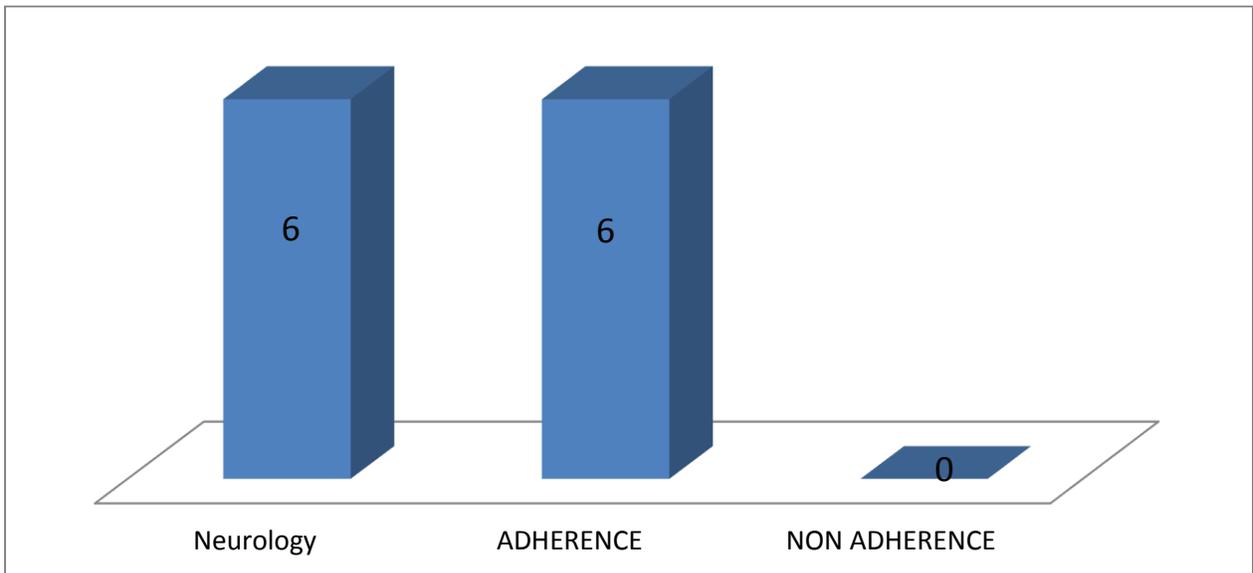


Nephrology specialty prescribed 19 drugs in three months

Formulary adherence-15 Non-formulary adherence- 4

That means this specialty prescribed formulary drug but some non-formulary drugs.

Neurology:

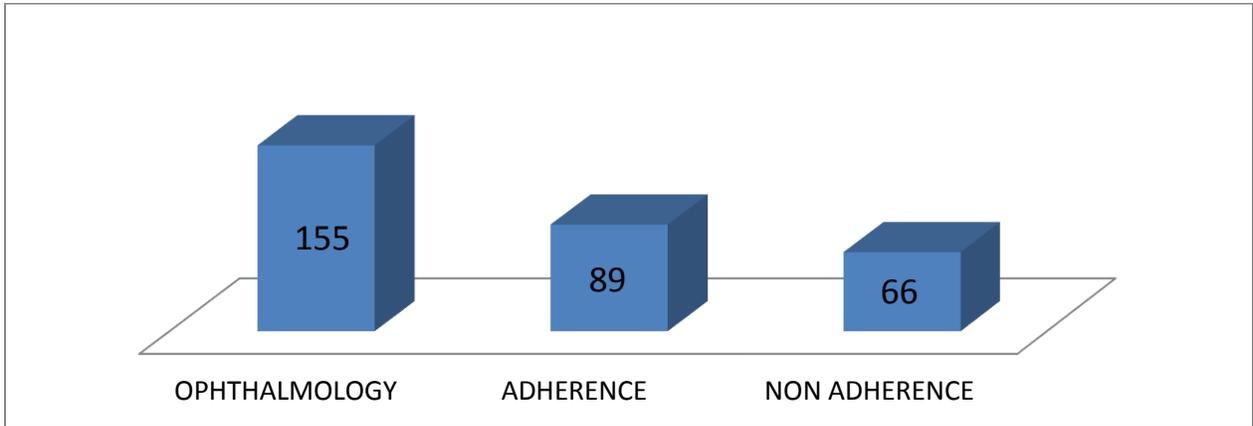


Neurology specialty prescribed 6 drugs in three months

Formulary adherence-6 Non-formulary adherence-0

That means this specialty prescribed formulary drug.

Ophthalmology:

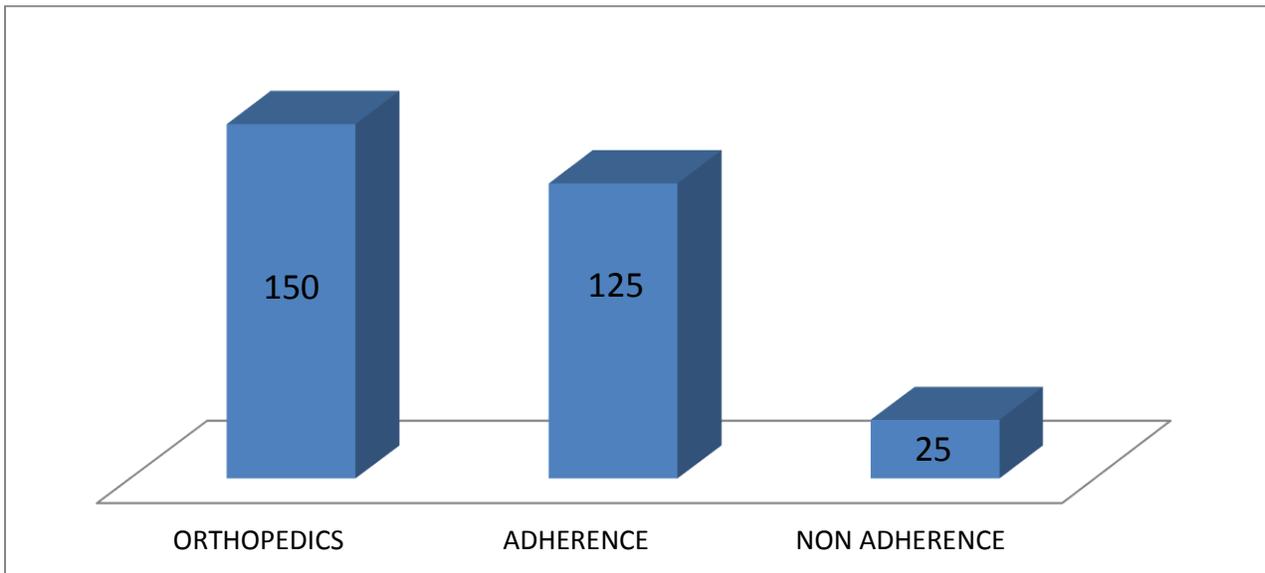


Ophthalmology specialty prescribed 155 drugs in three months

Formulary adherence-89 Non-formulary adherence-66

That means this specialty prescribed formulary drug.

Orthopedics:

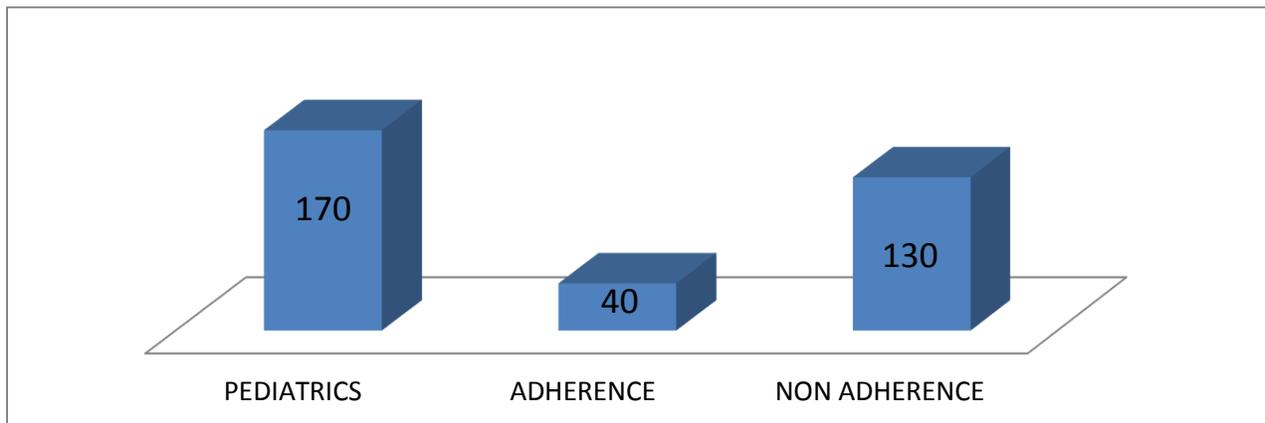


Orthopedics specialty prescribed 150 drugs in three months

Formulary adherence-125 Non-formulary adherence-25

That means this specialty prescribed formulary drug but some non-formulary drug.

Pediatrics:



Pediatric specialty prescribed 170 drugs in three months

Formulary adherence-40 Non-formulary adherence-130

That means this specialty prescribed formulary drug.

CONCLUSION

It was an interesting arrangement which enabled me analyze & observe pharmacy from a different perspective. The business opportunity host is equally as important as business in cashed. During the first week of study the formulary adherence rate of all bounce prescription was 80%

Hence the catch was that nobody observed this fact and consequently no intervention was either planned or executed around it. The formulary adherence at the last week of the study was 30%

Now an action plan has been set & the organization has a way formed to minimize the same in the coming 12 weeks both by strengthening of formulary & reinforcing the same to one consultants.

RECOMMENDATIONS

- Educate the consultant to prescribe the medicines which are in the formulary.
- Proper monitoring and maintain the stock.
- According to requirement upgrade the formulary.