EVALUATING AND ENHANCING IN-PATIENT (IP) TO HOME CARE SERVICE CONVERSION AND IMPROVING REVENUE

At

Aster MIMS Hospital, Calicut

March 2023 - May 2023

Dissertation Submitted to

The IIHMR University, Jaipur

for the partial fulfilment for the award of the degree of

Master of Business Administration (MBA)

in

Hospital and Health Management

By

Dr Amritha G

Under the Supervision and Guidance of

Dr Arindam Das

Professor and Dean Research, IIHMR University, Jaipur

2023

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DECLARATION BY STUDENT

I hereby declare that this dissertation titled **"Evaluating and Enhancing In-Patient to Home Care Service Conversion and Improving Revenue"** is the bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.

(Signature)

Name of Student: Dr Amritha G

Date:

INTERNSHIP COMPLETION CERTIFICATE

Aster
MIMS HOSPITAL
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MIMS/HR/L&D/2023-2024/0619 Date: 31/05/2022

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Dr. Amritha G,** has successfully undergone internship training in the Department of **Operations** at **Aster MIMS Hospital, Calicut** of Aster DM Healthcare for a period commencing from **01. Mar.2023** to **09. Apr.2023.** She was further undergone Internship Training in the department of Medical Administration from **10. Apr.2023 to 31. May.2023.**

Aster MIMS is the 1st NABH Accredited multi-specialty hospital in India with 627 beds and also has the Certification under NABH Nursing Excellence for its Nursing Services. We have also received AHPI Award in the category 'Best Hospital to Work for' during the year 2020.

During her tenure with us her performance was good. She is a good learner and bears a good moral character.

We wish her success in all her future endeavors.

For Malabar Institute of Medical Sciences Ltd.

Briju Mohan K R
General Manager - Human Resources
Aster Hospitals - Kerala Cluster

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CERTIFICATE

This is to certify that dissertation titled **"Evaluating and Enhancing In Patient to Home Care Service Conversion and Improving Revenue"** is a record of the research work undertaken by Dr Amritha G in partial fulfilment of the requirements for the award of the degree of MBA (Hospital and Health Management) from the IIHMR University, Jaipur under my guidance and supervision and his/her approach to the research study has been sincere, scientific and analytical.

Faculty Guide	School Dean
IIHMR University, Jaipur	IIHMR University, Jaipur
Date:	Date:

ABSTRACT

Title: **Evaluating and Enhancing In-Patient to Homecare Service Conversion and Improving Revenue**

Submitted by: Dr Amritha G *Guided by*: Dr Arindam Das

Roll No: 1253

Background: Home healthcare is a wide range of healthcare services offered to patients at the convenience of their home. It includes - physician consultations, nursing care, physiotherapy, laboratory services, pharmacy services, post operative care, geriatric care, supportive care for patients with debilitating or chronic illness. Aster@Home is the home care unit of Aster DM Healthcare. The project is done at the home care unit of Aster MIMS Hospital, Calicut. The purpose of the study is to evaluate the functioning of homecare department and find out methods to improve IP to homecare service conversions and increase revenue from home care department and its implementation.

Objectives: The objectives of the study are - to increase IP to homecare service conversions, to monitor daily in-patient to homecare service conversion, to document daily service reports and revenue break up for evaluation, to increase one to one nursing care and extended services.

Methods: The data for the study is collected from the daily service report of Aster@Home, data register and service call register. Three parameters – IP Conversions, 24-hour nursing care services and Revenue were evaluated.

Results: The total number of IP Conversions increased in February compared to that of January, then decreased in March and later increased in April 2023. The number of 24-hour nursing care services consistently decreased from January to March 2023 followed by an increase in April 2023. Revenue from homecare decreased from January to February and started increasing from March 2023.

Conclusion: Educating hospitalised patients on homecare services and constant follow up can improve IP to home care service conversions. Sustainable and optimal marketing strategies, improving IP to homecare service conversions and extending the service sector can improve revenue from home care.

Key Words: Home healthcare, In-patient conversions, Nursing care

ACKNOWLEDGEMENT

I would like to take the opportunity to express my deepest gratitude to the IIHMR University (Indian Institute of Health Management Research) Jaipur, for providing me a platform to gain enough knowledge and skills in different aspects of hospital management. I express my deepest indebtedness to Mr Lukman Ponmadath, COO at ASTER MIMS Hospital, Calicut for the support, guidance and advice.

My sincere thanks to my mentor, Dr. Arindam Das for his support throughout the project. I will strive to use the gained skills and knowledge on the best possible way throughout the journey.

Sincerely,

Dr Amritha G (MBA-HM, 1253)

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ABBREVIATIONS

HaH – Hospital at Home

IP – In Patient

CAGR – Compound Annual Growth Rate

JCI – Joint Commission International

ICU – Intensive Care Unit

ECG – Electrocardiogram

PSP – Patient Support Program

NABH – National Accreditation Board for Hospitals

Chapter 1: INTRODUCTION

Home healthcare is a cost-effective way to deliver comprehensive, quality healthcare in the convenience of the patient's home. The services include preventive, therapeutic and rehabilitative care. Home healthcare is intended for patients that are well enough to be discharged from hospital but still require the assistance of a skilled healthcare worker for health assessments, medication and intervention assistance. There are wide range of services offered under home healthcare services by trained medical professionals including wound care, disease management, medical therapy, nursing care, patient education etc. The service providers also focus on promoting general health and disease prevention, providing emotional support and basic care like personal hygiene.

Hospital at Home (HaH) model was first introduced in 1995 at John Hopkins in the United States . In this model the length of stay as well as readmission rates were found to be less and patient satisfaction was better. The incidence of hospital acquired infections was found to be less thereby reducing unnecessary complications and hospital related complications, The HaH model provided acute critical care to patients at home. Old age patients and patients with chronic conditions benefit mostly from this model of care.

The demand of Home healthcare has increased during and post corona pandemic. Technological advancement in healthcare has increased the efficacy of home healthcare treatment model.

Aster@Home, the homecare unit of Aster DM Healthcare is a JCI accredited home healthcare service provider which is functioning in 5 hospitals of Aster DM Healthcare. It offers a comprehensive healthcare service at home with the help of trained doctors, nurses and other medical professionals to take care of the elderly and those in need of personal care. A wide range of service is being provided to those who underwent surgery, people living with chronic condition and in need of care, or with assistance with activities of daily living. The services offered by Aster@Home are -

- Doctor visits
- Nursing care
- Physiotherapy
- Lab tests
- Pharmacy Services
- Personalised care
- Home ICU

Doctor Visits: The homecare department at Aster MIMS Calicut has two dedicated doctors exclusively for home care consultations. Service requests come mostly from geriatric patients and bed ridden patients

Nursing care: It includes services like medicine administration, wound care, suture removal, ECG, monitoring of vitals etc provided at home. Trained nursing staff and nursing assistants are the service providers here.

Physiotherapy: Aster@Home also offers at home physiotherapy and rehabilitation services. The hospital physiotherapy department is taking care of all home care physio services. Home care physiotherapy is generally given to post operative patients – post hip/knee replacement surgeries, shoulder surgeries etc, post stroke patients or any patients advised physiotherapy as part of their treatment.

Lab Services: The homecare nursing staff also visits patients at home for phlebotomy and other sample collection for various laboratory investigations. It is of great advantage particularly for patients who has undergone transplant surgeries as they need constant monitoring of certain blood values and follow up care.

Pharmacy Services: Prescription medicines will be delivered at home through Aster homecare services so that even patients residing at far away places has access to every medicine prescribed for them despite its unavailability in their locality.

Personalised Care: Bed ridden patients and patients in need of a bedside assistance will be provided with trained nursing staff or nursing assistants as per requirement at home and during their stay in hospital. This service is provided by home care staff for 3 time frames – 24 hours, 12 hours and 9 hours as per requirement. End of life support is also provided.

The homecare staff maintains handwritten medical record for all homecare patients. Consents are also obtained from patients or family members prior all procedures done and medications given at home and kept it attached to concerned medical record.

The biggest advantage of home healthcare services provided by a hospital is that, the concept of care continuum can be implemented. It can ensure a better treatment and post procedural outcome which is equally beneficial for the patient as well as the treating hospital. Through homecare services, hospitals can extend their services in various sectors like geriatric care, end of life care, care of chronic medical conditions and post operative care and rehabilitation. Patient compliance will be better as care is given at the comfort of their home.

Majority of the patients availing services from the home care department of a hospital will be those who have visited the hospital prior for their medical concerns. Medical staff providing home care services can interact with patients during their stay in hospital. It can help to maintain a good rapport with the patient and family. It ensures patient comfort and better patient compliance to further care. It also gives an opportunity to counsel and educate the patients admitted in the hospital on the benefits of homecare services.

1.1 PURPOSE OF STUDY

The purpose of this project is to evaluate functioning of homecare department, find out various methods to improve in-patient to homecare service conversions and increase revenue from homecare department, its implementation and evaluation.

1.2 AIMS AND OBJECTIVES

AIMS

- To analyse the functioning of Aster@Home to identify various factors influencing the overall revenue from homecare department.
- To find out measures to increase in-patient to home care service conversion and revenue, its implementation and evaluation.

OBJECTIVES

- To increase the number of IP to homecare service conversions
- To monitor daily IP to homecare conversions
- To document daily service reports and revenue break up for evaluation
- To increase one to one nursing care and extended services

Chapter 2: REVIEW OF LITERATURE

Sigrid Nakrem and Katrine Kvanneid conducted a qualitative study involving eight health professionals who were working in home healthcare services. The aim of the study was focussed on healthcare professionals' perception on two aspects (i) Quality of care in home healthcare (ii) Factors putting patient safety at risk.

The staff considered that the following factors should be present to provide good quality services in home healthcare

1. A competent work place
2. Proper communication, co-operation and exchange of information
3. Well organized continuous care
4. Adequate resources

The results showed that high quality homecare services were provided by those with an experience of 2-22 years mostly female staff. Well trained, well experienced and highly competent nurses excelled in the quality of care they provided. Good communication skills include - being polite, compassionate behaviour and utmost patience in doing their work. The service providers should also have proper communication between each other. Proper communication between treating physicians, nursing staff and technicians in the health set up ensures delivery of good quality care. Information handling is also an important aspect when it comes to quality of care and patient safety. Proper documentation and a well-managed system ensure quality care. Adequate follow up can only be provided only with the help of good collaboration between staff. Inadequate staffing and lack of time can have a negative impact on quality of care.

Irene Lizano-Diez, Sonia Amaral-Rohter and Susana Aceituno conducted a targeted review on impact of home care services on patient and its economic outcomes. There was Patient Support Programs (PSPs). Home based health care, patient medication, counselling and support for the needy, thome delivery of medicine and health care devices came under PSPs. This study was about the impact of these service on patient outcome and its financial feasibility. The study was conducted at an international level in 64 homecare service units. The study showed that patient's receiving home-based care has better adherence to medications. PSPs showed a positive impact on patient satisfaction and health related quality of life. Cost savings were noted in 14 homecare units.

Cinita Curioni. Ana Carolina Silva, Jorginete Damiao, Andrea Castro, Miguel Huang, Taianah Barroso, Daniel Araujo and Renata Guerra conducted a comparative study between homecare service and in-hospital care for patients based on their cost effectiveness. The inclusion criteria were (i) Adults receiving home healthcare services (ii) Homecare as an intervention (iii) In-hospital care as a comparison (iv) Full economic evaluation examining both costs and consequences and (v) Economic evaluations from randomized controlled trials (RCTs). The study showed that out of 14 there was cost saving in 7, 2 found to be cost effective and in 1 home care service is found to be more effective than in-hospital care. It suggests that homecare services are more cost saving as compared to in-hospital care.

Suk Jung Han, Hyun Kyung Kim, Judith Storfjell and Mi Ja Kim has conducted a prospective descriptive study of 100 home healthcare patients. The aim of the study was to evaluate the quality of daily life of home health care patients depending on change in their health status outcomes from the beginning of care and end of care or 60 days whichever is coming first. The quality ofdaily activities of participants significantly improved between the beginning of care and end of care. Overall quality of life, general health, physical, psychological and environmental quality of life were significantly improved.

Pauline S Sockolow, Kathryn H Bowles, Christine Wojciechowicz and Ellen J Bass conducted a mixed methods study at 3 home healthcare agencies regarding missing information in homecare admissions. This information is important for decision making and to provide support care for patients at the time of admission. The study showed that no information included all data items as per international data for transition in care information, the continuity of care document enhanced with office of the national coordinator for healthcare information technology summary terms (CCD/S). The study concluded with a recommendation that the referral source and home healthcare agencies that they should follow the guidelines on data standards for proper data collection and sharing of data and information.

Henil Y Patel and Daniel J West Jr published an article “Hospital at Home: An Evolving Model for Comprehensive Healthcare” in Global Journal on Quality and Safety in Healthcare. Hospital at Home (HaH) is an innovative, sustainable and a futuristic model of healthcare. From healthcare management point of view the HaH model provides cost benefits and improved quality of care and from the physician’s point of view, it is about patient centred medical care, reduce hospital stay and readmissions, reduces hospital acquired infections and other complications associated with hospital

admissions. During Covid pandemic the demand of home healthcare model has significantly increased. With the help of modern technology good quality of healthcare services can be provided for patients at the comfort of their homes. The HaH model of healthcare has a lot of limitations as well as barriers. The payment or reimbursement from insurance companies for home healthcare services , physician resistance, patient safety and lack of sufficient research data to support the use of HaH model of healthcare.

Rui Zhou, Joyce Cheng, Shungshuang Wang and Nengliang Yao has conducted a qualitative study based on semi-structured interviews, among homebound older adults living in Jinan, Zhangqui and Shanghai, China, who have received home-based healthcare. This aim of the study is to investigate on the experiences of patients who receive home healthcare services and areas which needs improvement in China.

Positive experiences of the study were –

(i) Convenient healthcare delivery method
(ii) Timely detection of health problems
(iii) Home care service providers had better technical skills and bedside manners compared to hospital care providers
(iv) Medical insurance covered homecare cost.

Areas to be improved were –

(i) The home healthcare services has many limitations to meet all the Healthcare needs of homebound older adults
(ii) Visiting time for the service was very short
(iii) The technical skills of various healthcare providers varied to a greater extent.

The study showed that for Chinese homebound adults the home healthcare model was found to be affordable and convenient. It also showed that opportunities are there to expand the scope of home health care services and the quality of care can also be improved.

Carolyn Foster, Aaron J Kaat, Sara Shaunfield, Elaine Lin, Cara Coleman, Margaret Storey, Luis Morales and Mathew M Davis has conducted a study to measure paediatric home healthcare quality. A multidisciplinary expert panel at the national level was entrusted to develop various domain of survey content. There was another panel of 3 experts to rank the candidate survey. Cognitive interviews of care givers and Cross-sectional survey of parents were done. The aim of the study was to develop a family-reported survey (PediHome) to measure the quality of home based healthcare services provided for children with complex medical conditions. The study showed

that the median overall quality was 7.5-9 (on a 0-10 scale). The study concluded that Pedihome is useful to evaluate the quality of healthcare across various domains.

Griselda Manzano-Monfort, Guillermo Paluzie, Mercedes Diaz-Gegundez and Carolina Chabrera has conducted a study about a mobile application for health professionals working in homecare services and to assess its accessibility and usability among healthcare professionals. The study was conducted in 3 phases using a mixed methods approach. The study showed that there was significant usability of the mobile application in terms of efficiency, effectiveness and satisfaction. The study also showed that mobile application is very useful for a fast response, prevent errors in transcription, accessibility to available information and data management in a healthcare setting. This technology also has a beneficial impact in delivering healthcare services.

India Home Healthcare Market Size, Share and Trends Analysis Report by Equipment, By Services and Segment Forecasts, 2023-2030 states that in 2022 the mark size of home healthcare in India was valued at 8.8 billion USD. This value will be expanding over the years at a CAGR (Compound Annual Growth Rate of 19.29% from 2023-2030. The driving forces for this market growth will be some changing trends in healthcare like-

(i) Shift of disease burden from from communicable diseases to lifestyle diseases
(ii) Healthcare services delivered at home by trained medical professionals.
(iii) Application of advanced technology in the field of home healthcare.
(iv) The number of people in geriatric age group geriatric and dependency ratio in India is on the rise. Both factors are expected to increase the demand for home healthcare in India. Cost saving is another factor which can increase the inclination towards home healthcare. Cost savings on homecare treatments can be 10% - 25% lesser than in-hospital treatment expenses.
(v) In 2022 the market share of therapeutic equipment segment was 42.57% which was the largest. From 2023 to 2030 the CAGR of diagnostic equipment segment is expected to be 20.27%

CHAPTER 3: METHODOLOGY

3.1 RESEARCH QUESTION

Why there was a decrease in revenue from homecare department and how to improve revenue from homecare department?

3.2 STUDY SETTING

The study was conducted at Aster MIMS Hospital, Calicut. Aster MIMS Hospital situated in Calicut district is a 600 bedded NABH accredited multispecialty hospital in North Kerala with more than 25 medical and surgical specialities. Aster@Home is the home health care unit of Aster which is JCI accredited

3.3 STUDY DESIGN

Descriptive study was undertaken at the homecare department of Aster MIMS, Calicut

Three parameters – IP conversions, 24-hour nursing care(number/revenue) and Total revenue was evaluated during the study and post implementation.

Type of Data: Quantitative data

Data Source: Daily service report of Aster@Home, Homecare service data register, Service call register

Study Duration: 1st March 2023 to 31st May 2023

Data Analysis Tools: Microsoft Excel, Observational and Comparative Analysis

Inclusion Criteria: Patients availing homecare services

Exclusion Criteria: In patients availing physiotherapy homecare services alone (for IP Conversions)

Chapter 4: RESULTS

In this study all services provided by Aster@Home for the month of January 2023, February 2023 and March 2023 are included. The data on number of home care service calls and revenue from the home care department were collected and compiled in MS Excel. The collected data is shown below as tables and graphs for further analysis and interpretation.

4.1: DATA ANALYSIS

Table 4.1. Homecare Service Report – January 2023

Services	No: of Service Calls	Revenue
Doctor Visit	118	168269
Home Visit	210	195590
Phlebotomy	365	795218
Physiotherapy	284	213900
Pharmacy	114	273339
Home ICU/Long term nursing care	50	226500
TOTAL	**1141**	**1872816**

Table 4.2. Homecare Service Report – February 2023

Services	No: of Service Calls	Revenue
Doctor Visit	100	145829
Home Visit	196	229097
Phlebotomy	360	661076
Physiotherapy	260	195000
Pharmacy	90	314040
Home ICU/Long term nursing care	37	162500
TOTAL	**1043**	**1707542**

Table 4.3. Homecare Service Report – March 2023

Services	No: of Service Calls	Revenue
Doctor Visit	133	190343
Home Visit	191	187719
Phlebotomy	477	841290
Physiotherapy	253	189750
Pharmacy	76	352077
Home ICU/Long term nursing care	32	142000
TOTAL	**1162**	**1903179**

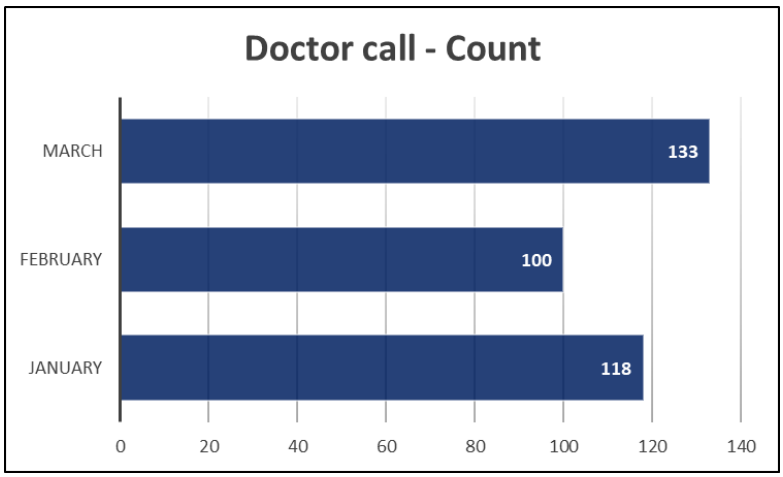

Fig 4.1: The above figure shows the number of at home consultations provided by home care physician for the month of January 2023, February 2023 and March 2023

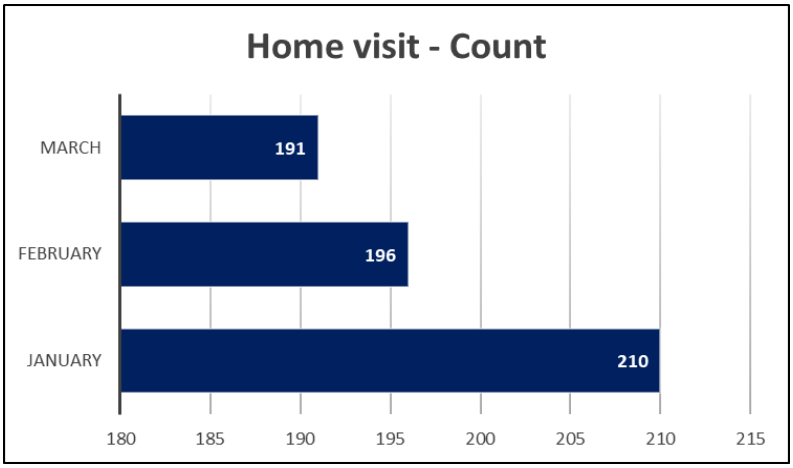

Fig 4.2: The above figure shows the number of home visits by nursing staff/para medical staff for various patient care services for the month of January 2023, February 2023 and March 2023

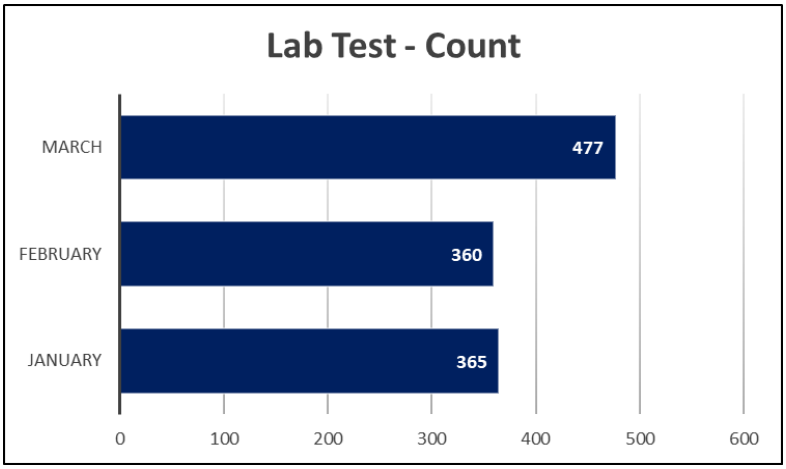

Fig 4.3: The above figure shows the number of lab test service calls done via home care services for the month of January 2023, February 2023 and March 2023

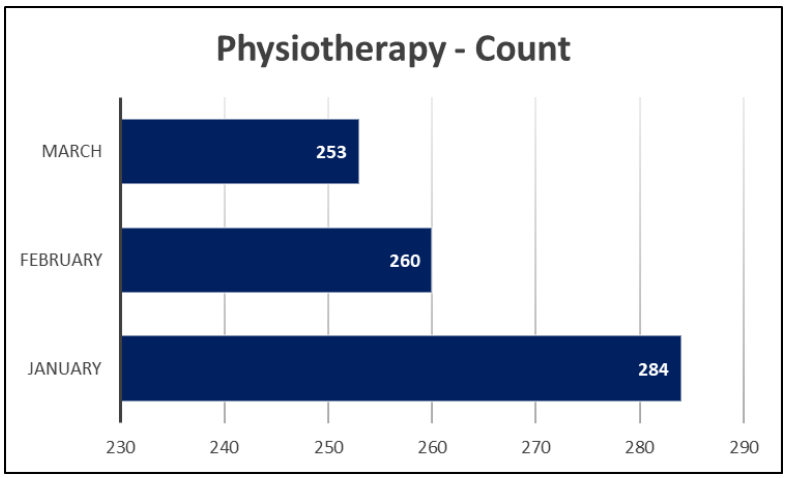

Fig 4.4: The above figure shows the number of home care physiotherapy services done during the month of January 2023, February 2023 and March 2023

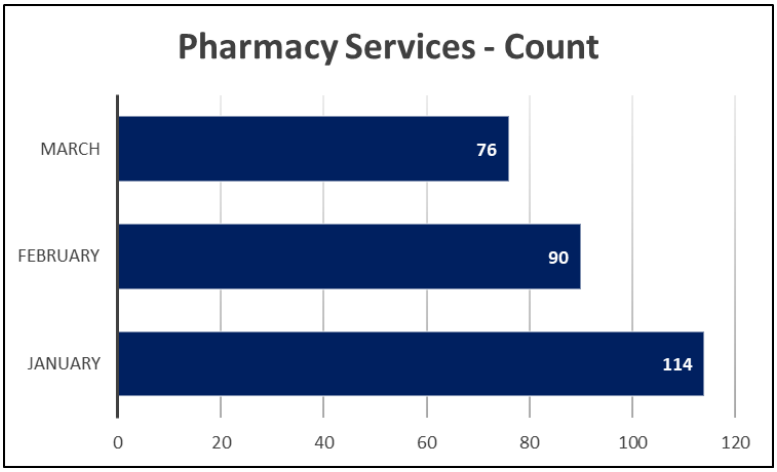

Fig 4.5: The above figure shows the number of medicine delivery done by home care services for the month of January 2023, February 2023 and March 2023

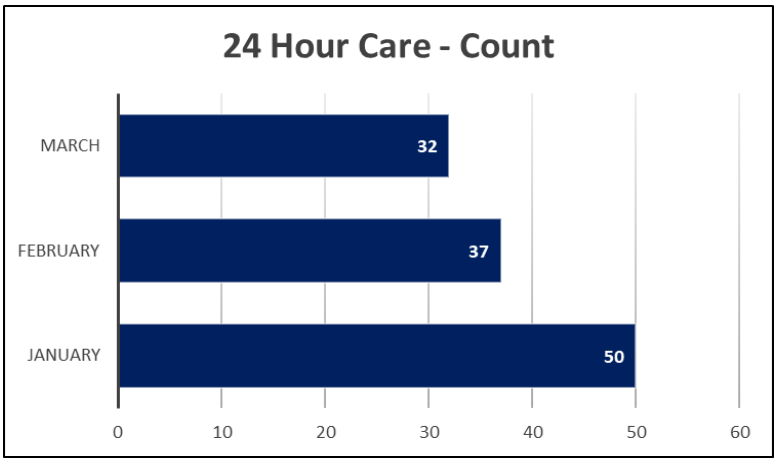

Fig 4.6: The above figure shows the number of 24 hour home nursing care service calls for the month of January 2023, February 2023 and March 2023

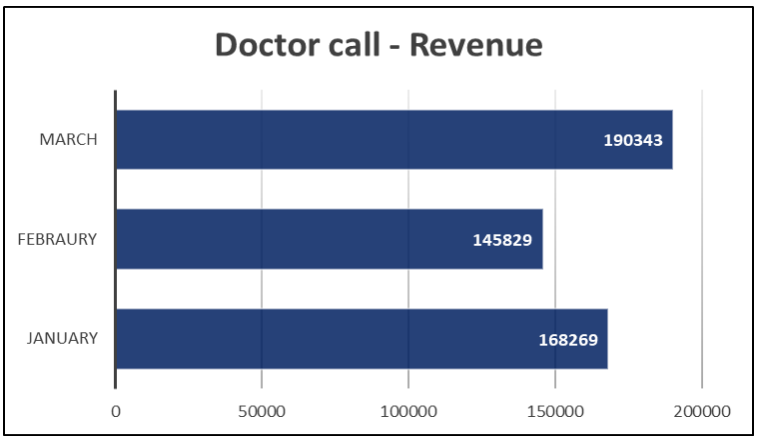

Fig 4.7: The above figure shows the revenue from home physician consultations for the month of January 2023, February 2023 and March 2023

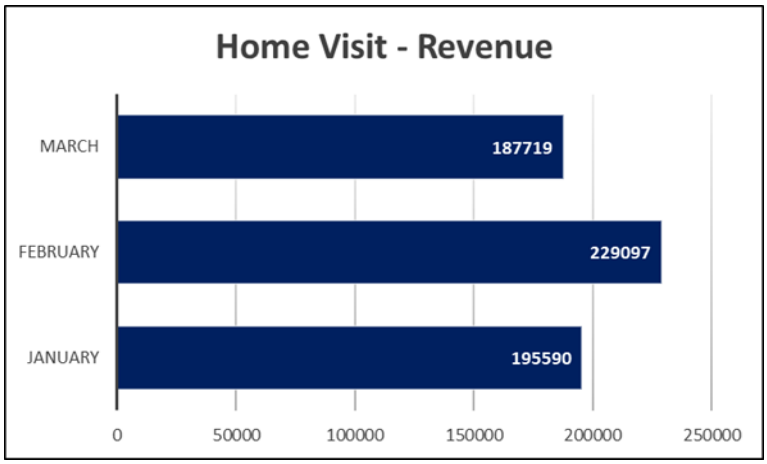

Fig 4.8: The above figure shows the revenue from home visits by nursing/ paramedical staff for patient care services for the month of January 2023, February 2023 and March 2023

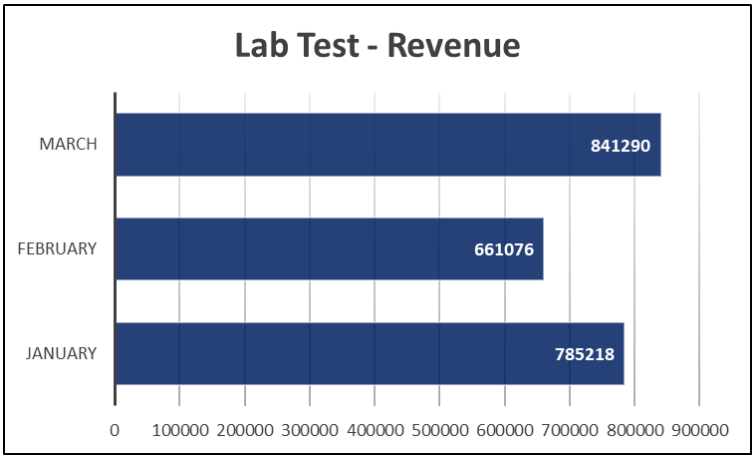

Fig 4.9: The above figure shows the revenue from lab tests done via homecare services for the month of January 2023, February 2023 and March 2023

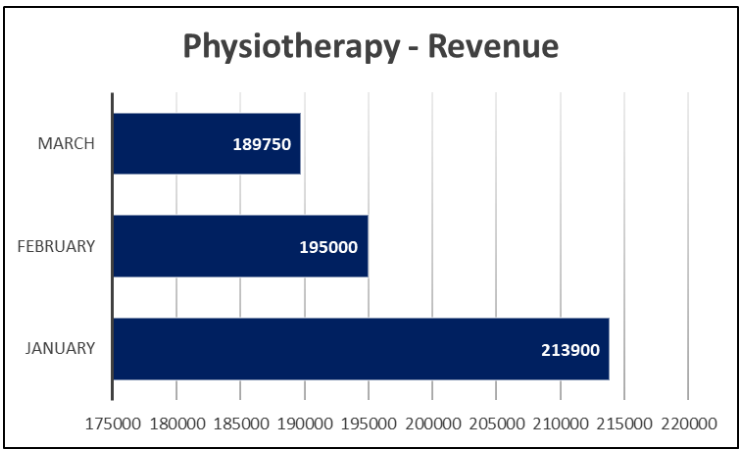

Fig 4.10: The above figure shows the revenue from homecare physiotherapy for the month of January 2023, February 2023 and March 2023

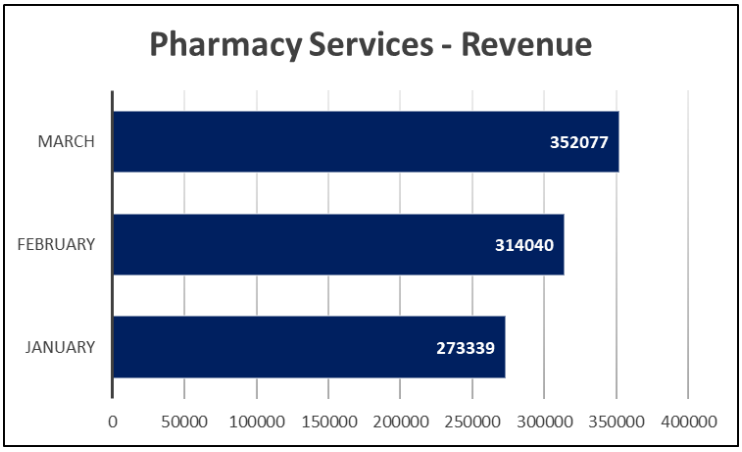

Fig 4.11: The above figure shows the revenue from home delivery of medicines for the month of January 2023, February 2023 and March 2023

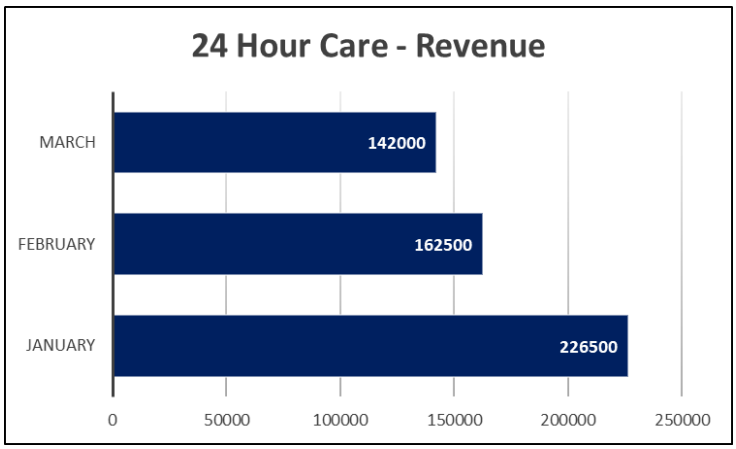

Fig 4.12: The above figure shows the revenue from 24-hour home nursing care services for the month of January 2023, February 2023 and March 2023

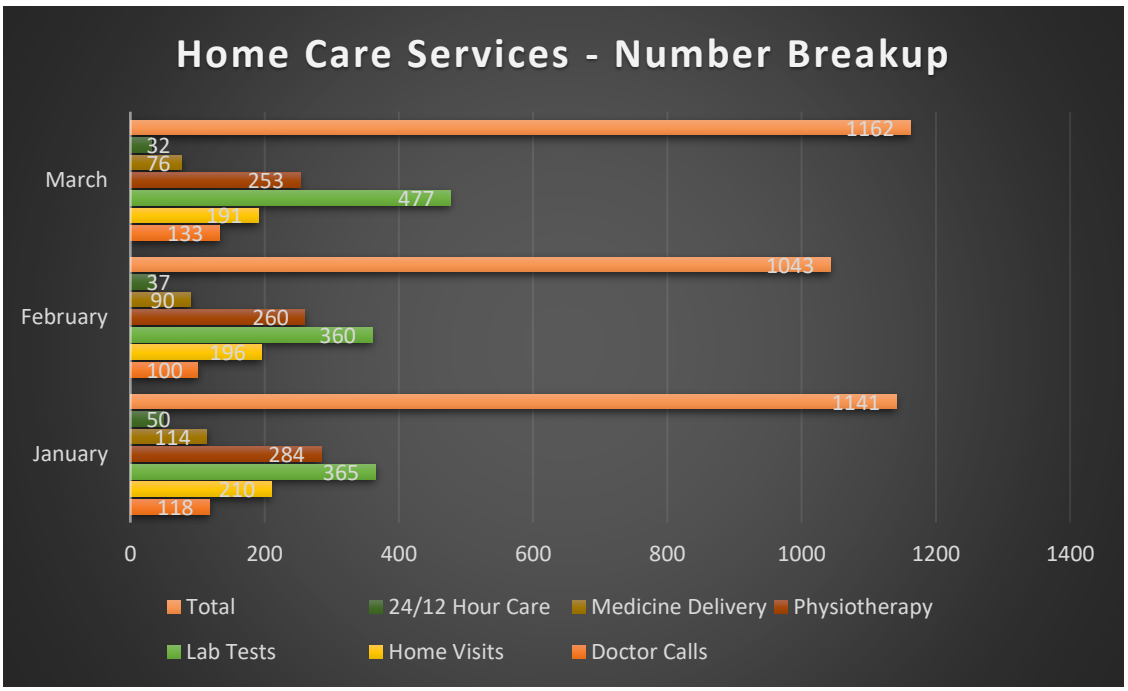

Fig 4.13: The above figure shows the total number of homecare service calls and their breakup for the months January 2023, February 2023 and March 2023

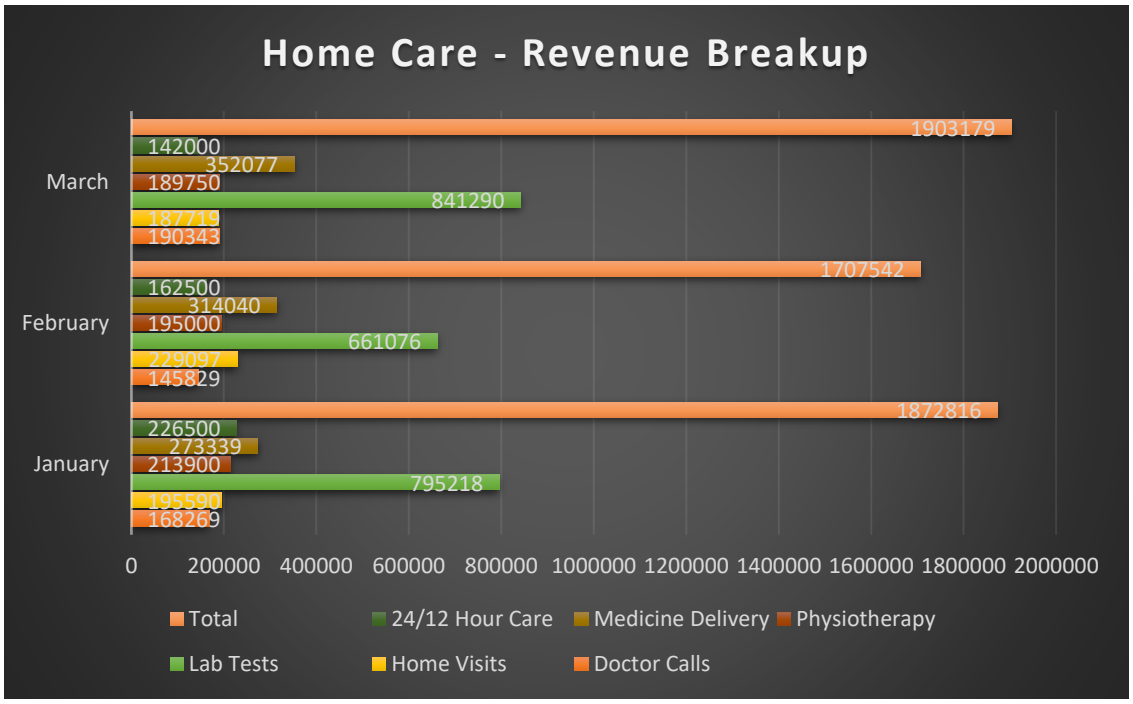

Fig 4.14: The above figure shows the total revenue of homecare services and revenue breakup for the months January 2023, February 2023 and March 2023

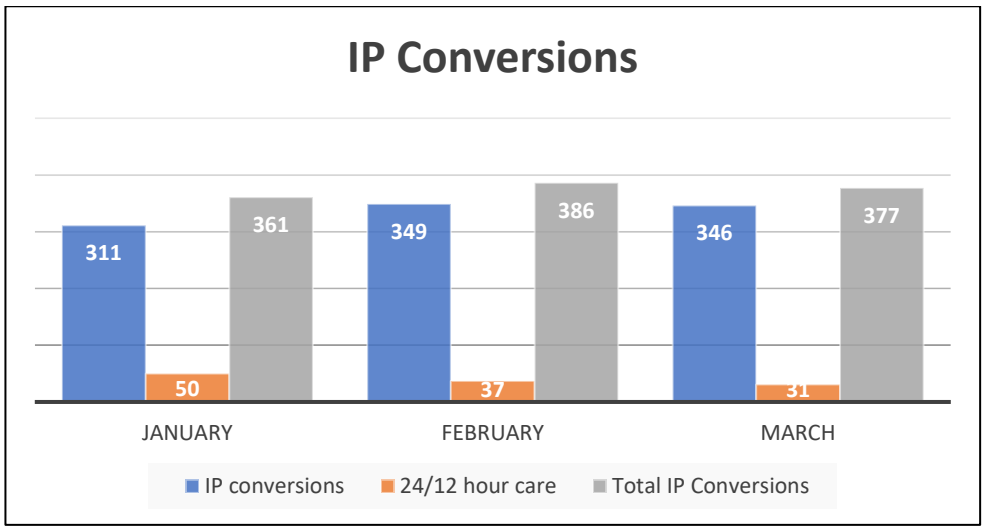

Fig 4.15: The above figure shows the number of IP conversions for the month of January 2023, February 2023 and March 2023. IP conversions indicates the number of in patient to homecare services other than 24-hour care. Total IP conversions indicates the sum of both.

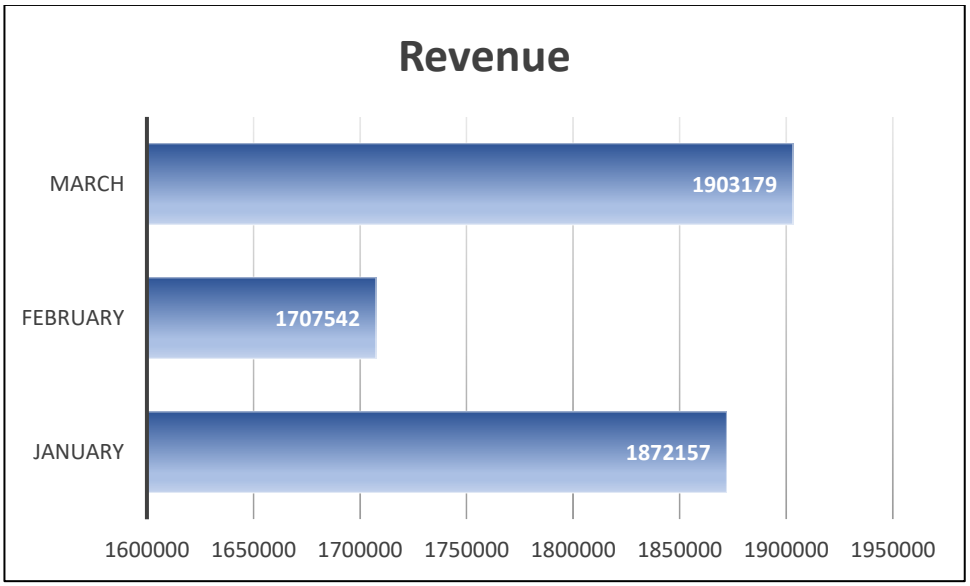

Fig 4.16: The above figure shows the total revenue of homecare department for the month of January 2023, February 2023 and March 2023.

Fig 4.16 shows that there is a decrease in total revenue in the month of February as compared to that of January which is reflected by the decrease in revenue from various homecare services – Doctor visits, Lab tests, Physiotherapy and 24-hour Nursing Care Services.

The revenue for the month of March shows an increase compared to that of January and February. The revenue from 24-hour nursing care was consistently decreasing from the month of January 2023 to March 2023.

Chapter 5: DISCUSSION

Data analysis and observation of functioning of homecare services shows that the decrease in total revenue is reflected by the decrease in revenue from various homecare services as well as decrease in the number of services provided by Aster@Home during the study period.

Aster@Home already has a functioning clinic in an apartment. No promotional activities were done specifically for the clinic targeting the apartment inmates during the study period.

There was no active marketing strategy (later started by mid-March) for homecare services and no organized in-patient education on existing homecare services during the study period. No consistent promotional activities through own digital media platforms.

5.1 RESEARCH FINDINGS

- There is a decrease in total number of services offered by homecare department in the month of February 2023 as compared to that of January 2023. During this period there was a decrease in number of specific homecare services – Doctor Visits, Lab investigations, Physiotherapy, Medicine Delivery and Personalised/ 24-hour Nursing Care
- The total number of services offered by the home care department in the month of March 2023 shows an increase compared to that of January 2023 and February 2023. There was an increase in number of specific homecare services – Doctor calls and Laboratory Services during this period.
- There is a decrease in total revenue in the month of February 2023 as compared to that of January 2023. During this period there was also a decrease in revenue from specific homecare services – Doctor visits, Lab tests, Physiotherapy and 24-hour Nursing Care Services.
- The total revenue for the month of March 2023 shows an increase compared to that of January 2023 and February 2023. The revenue from Laboratory Services, Pharmacy Services and Doctor Visits also shows an increase during this tenure.
- In-patients availing home care services (mentioned as IP conversions) are monitored mainly to assess the impact of existing in-patient counselling by homecare staff. There is an increase in number of IP conversions in February 2023 compared to January 2023. It further

decreases in March 2023. The in-patient services except personalised care shows the same pattern

- The number of service calls as well as revenue from personalised/24-hour nursing services shows a decline from January 2023 to March 2023
- The number of service calls as well as revenue from homecare physiotherapy services shows a decline from January 2023 to March 2023
- The number of service calls and revenue shows similar change patterns for homecare services like – Doctor Visits, Laboratory Services, Physiotherapy Services, Personalized/24-hour nursing care
- 24-hour nursing care decreases from January 2023 to March 2023

5.2: STRENGTH AND LIMITATION OF STUDY

Strength:

- Data is daily updated and hence reliable.
- Patient communication is happening through home care console contact number and through homecare coordinator hence it is comparatively easy to track in patient conversions.
- Data entry is done manually by an executive and excel sheet is maintained by homecare coordinator helps to decrease errors in the raw data as it is cross checked daily.

Limitations:

- 100% in patient conversions couldn't be tracked as the home care physiotherapy services are done by the hospital physiotherapy department at their convenience. Patient communicates with the physiotherapist directly and not through the homecare console. Hence it was unable to track in patients who were availing physiotherapy services.
- The number of services given was tracked and not the number of patients as the data is being recorded and revenue is calculated on daily basis and that of services provided every day. Hence comparison cannot be made against the number of hospital in-patient admissions for a particular time period

Chapter 6: CONCLUSION

Services offered by Aster@Home during the study period were doctor visits, nursing care, lab investigations, physiotherapy, pharmacy services/medicine delivery and 24-hour/personalised nursing care services. An increase in any of these services can improve the number of service calls and revenue from the same. Sustainable changes should be implemented for a consistent overall improvement of number of service calls and revenue. Optimal marketing, educating all in patients on homecare services and involving nursing staff for the same helps to increase patient awareness on homecare services. Patients should be made aware about the concept of care continuum which helps with a better treatment as well as post procedure outcome. Homecare services ensure a better treatment outcome as the focus is mainly on follow up care including post operative/post procedural care and geriatric care.

Interaction with homecare staff gave some insights that many patients prefer to avail homecare services on the long run. Hence marketing strategies can be focussed primarily on patients who have already availed homecare services and hospital in patients for better conversion (patients admitted in hospital availing home care services post discharge).

Increase in IP conversions will reflect in an increase in all homecare services as patients after discharge need post operative care, specific medications, lab tests prior review consultations, post procedural physiotherapy, wound care and other services. Post transplant and post cancer treatment patients can be benefitted more as they need follow up care for longer period. The number of in-patients in Aster MIMS ranges from 3000-3500. The homecare staff can be assigned to visit in-patients everyday.

There is a huge potential for homecare services and the demand is increasing day by day so as the number of competitors in the outside market. For sustainability, marketing strategies should be designed focussing primarily on retaining existing patients availing homecare services. The social media pages of the hospital can also be used for homecare service promotions and marketing.

Home health care service sector can be expanded by providing occupational and speech therapy, companionship for home alone patients, volunteer care, nutritional support, home delivered meals, diagnostic imaging, transportation to medical facility etc**.** With the help of emerging technology

and availing health insurance support home healthcare services can become equally efficient but more economical compared to hospital care

6.1 RECOMMENDATIONS

An overall improvement in the number of service calls and revenue can be achieved by implementing a sustainable marketing strategy, measures to improve in patient to home care service conversion and expanding service sector. Focussing on in patient conversions is a comparatively easier approach as the patient is already trusting the hospital for their treatment.

1. Sustainable and Optimal Marketing Strategy
    - Promotions through own social media pages
    - Broadcasting (targeting existing patients)
    - Targeted promotions (primarily for apartments where Aster@Home clinics are functioning) – Basic health check-up packages, Women's wellness health check-up packages
2. Measures to Improve Inpatient to Homecare Service Conversion
    - Educate in patients about homecare services.
    - Educate hospital nursing staff about homecare services so that they can help to counsel patients on after care and educate them about homecare services.
    - It should be made mandatory for all homecare nursing staff to visit in-patients and give daily report to home care coordinator and ensure follow up.
    - Entrust home care call centre executives to contact discharged patients over phone calls for follow up.
    - Constant follow up of transplant patients and oncology patients.
3. Expanding Service Sector
    - Start new clinics
    - Organize health check-up camps

Chapter 7: IMPLEMENTATION AND EVALUATION

Promotions through social media pages of Aster MIMS and follow up calls by executives are being implemented from 3rd week of March 2023.

Posters on home care services were constantly displayed in social media pages of Aster MIMS. As instructed, home care call centre executives make a record of in-patients interested in home care services along with their

contact details which were provided by home care staff visiting in-patients. Later the console staff will contact them for follow up care.

In April 2023, two classes were conducted for staff nurses to make them aware of various services offered by homecare department and instructed them to educate patients on home care services. A staff was employed exclusively to educate in-patients on home care services. It has made mandatory for all home care nursing staff to visit in patients to educate them on home care services and to maintain a good rapport with them.

The home care service data for April 2023 is given below

Table 7.1: Home Care Service Report – April 2023

Services	No: of Service Calls	Revenue
Doctor Visit	127	201024
Home Visit	206	169031
Phlebotomy	313	822452
Physiotherapy	129	100952
Pharmacy	44	585106
Home ICU/Long term nursing care	118	523000
TOTAL	**951**	**2401565**

Total revenue from home care services over the months January 2023 to April 2023 is given below

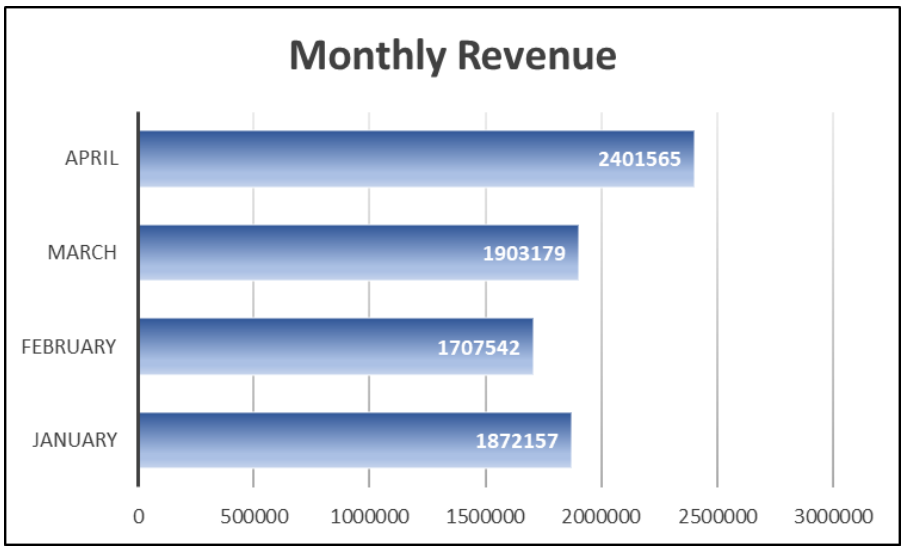

Fig 7.1: The above figure shows the total revenue from home care department from January 2023 to April 2023

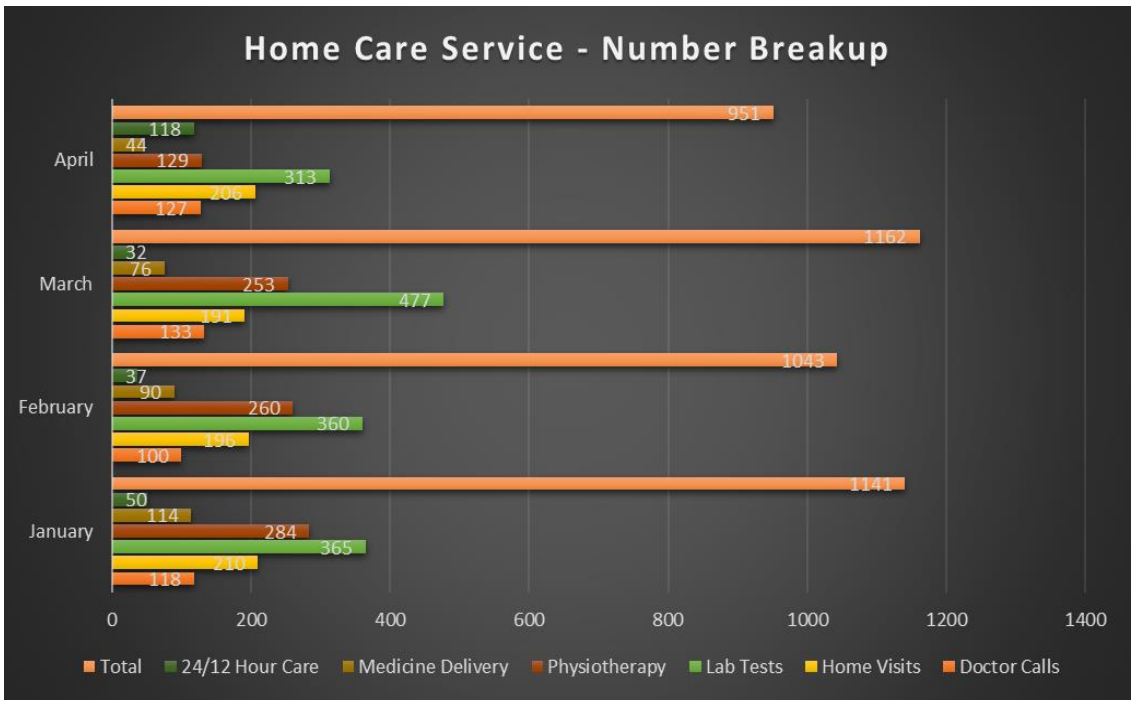

Fig 7.2: The above figure shows the number of home care service calls and breakup for January 2023 to April 2023

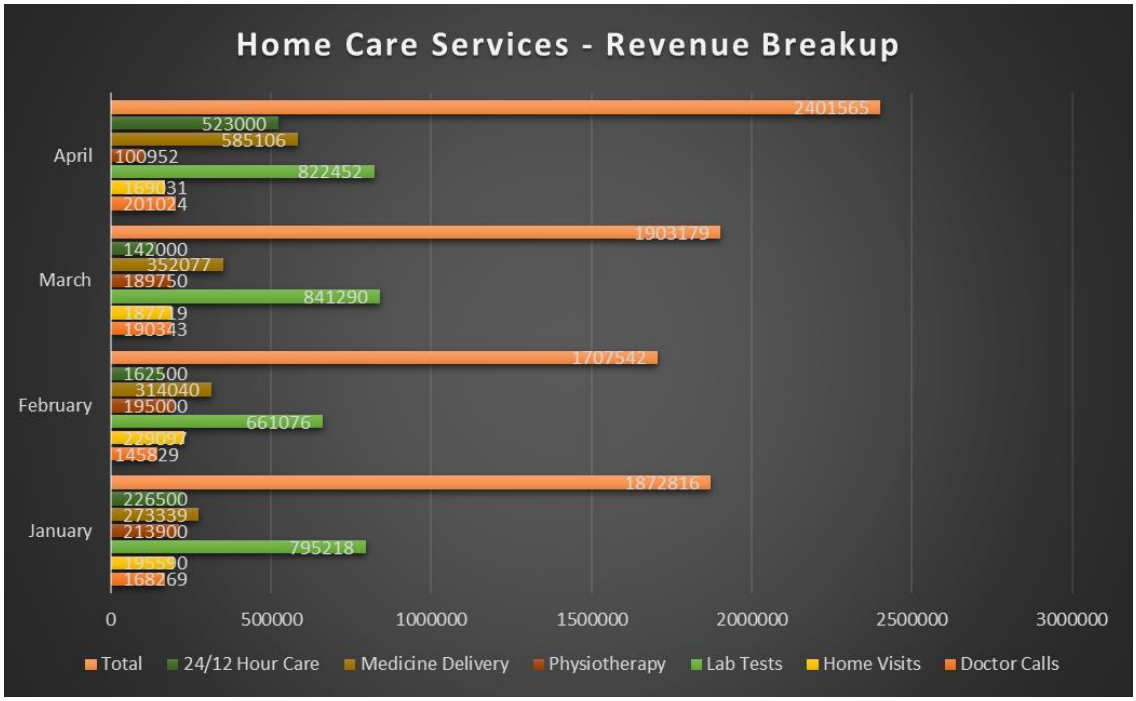

Fig 7.3: The above figure shows the total revenue from home care services and revenue breakup from January 2023 to April 2023

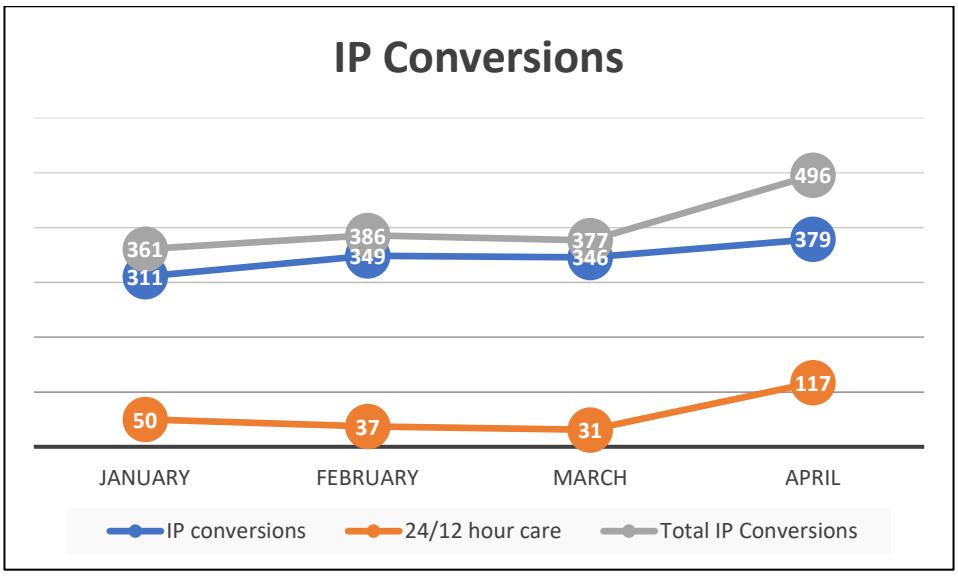

Fig 7.4: The above figure shows the number of in-patient (IP) to home care service conversions in January 2023 to April 2023

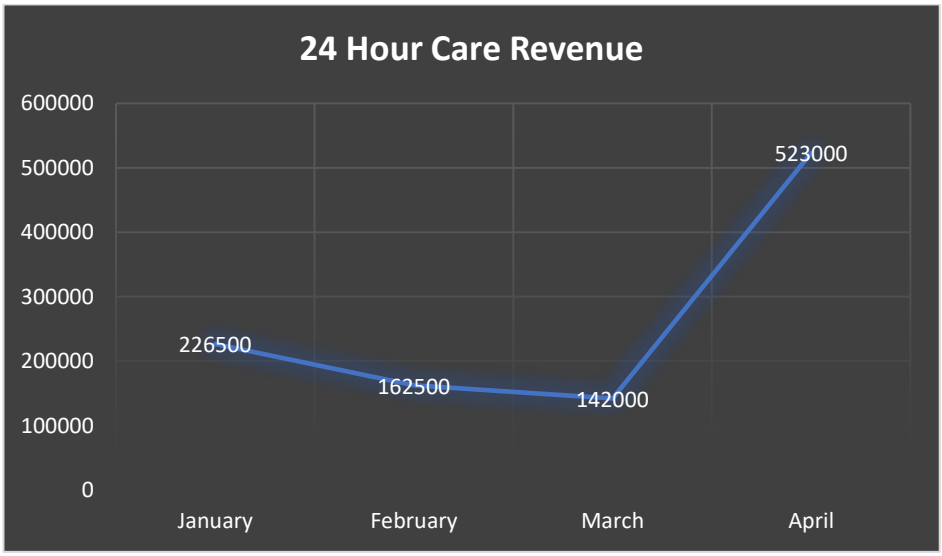

Fig 7.5: The above figure shows the revenue from 24-hour nursing care services from January 2023 to April 2023

FINDINGS

- The number of service calls shows a decline in April 2023 which is a general trend in hospital services in Kerala during the month of Ramadan.
- The number of personalised/24-hour nursing care services as well as IP to homecare service conversions shows an increase.

- The total revenue from homecare services, revenue from 24-hour nursing care services and pharmacy services increases in April 2023 compared to that of previous month.

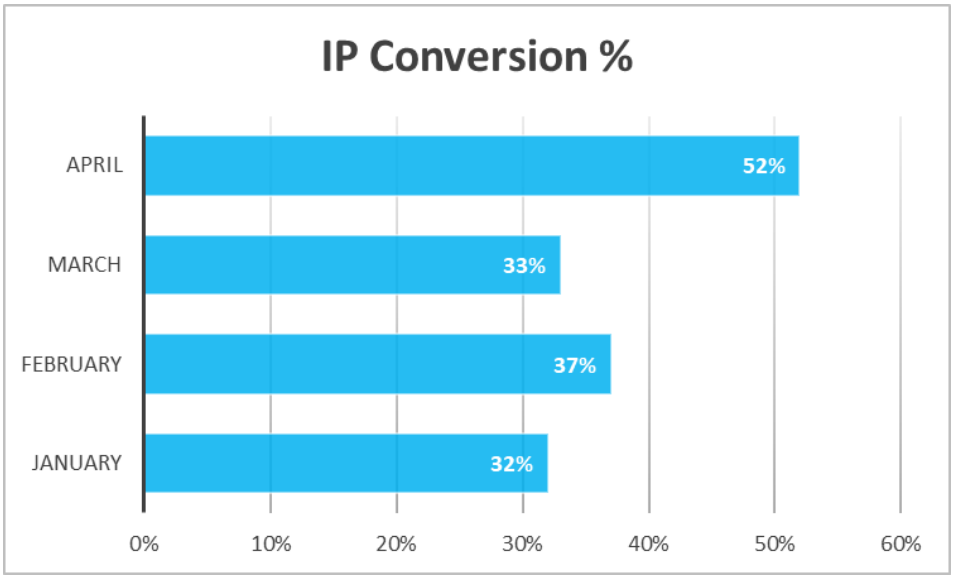

Fig 7.6: The above figure shows the percentage of IP conversions in January 2023 to April 2023 (Percentage is calculated against the total number of service calls)

EVALUATION

To evaluate the impact of various measures implemented 3 parameters were identified:

1. Total Revenue from Homecare Services
2. IP to Homecare Service Conversions
3. Personalised/24-hour Nursing Care

Total revenue from home care services showed an increase from March 2023 onwards.

IP to homecare service conversions showed an increase. The percentage of in-patient conversions (fig 7.5) shows significant increase.

$$\text{IP conversion percentage} = \frac{\text{IP to Homecare Service Conversions}}{\text{Total Homecare Service Calls}} \times 100$$

More than 50% service calls are from IP conversions

Personalized/24-hour nursing care showed an increase in number as well as revenue in April 2023

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