Impact of Internet Based Application System to Improve Upon Healthcare Delivery System at Healthcare at Home

By

Ashima Kaushik

Dissertation submitted for the partial fulfillment of the

MBA Pharmaceutical Management

Academic year, 2015-2017

The IIHMR University, Jaipur

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INSTITUTE OF HEALTH
MANAGEMENT RESEARCH
(WHO Collaborating Centre for District Health System Based on Primary Health Care)

IIHMR UNIVERSITY

TO WHOMSOEVER MAY CONCERN

This is to certify that Ashima Kaushik student of MBA Pharmaceutical Management from The IIHMR University, Jaipur has undergone internship training at Healthcare at Home from 13th February, 2017 to 9th May, 2017.

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

The Internship is in fulfillment of the course requirements.

Iwish her all success in all her future endeavors.

Dean, Academics and Student Affairs
The IIHMR University, Jaipur

Professor
The IIHMR University, Jaipur

1, Prabhu Dayal Marg, Near Sanganer Airport, Jaipur- 302029, Rajasthan, India.
Ph.: 0141- 3924700, 2791431- 32, Fax: 0141 3924738, E-mail: iihmr@iihmr.edu.in, Web.: www.iihmr.edu.in

HealthCare at HOME
By your side

The certificate is awarded to

Ashima Kaushik

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

Operations

and has successfully completed her Project on

Impact of Internet Based Application System to Improve Upon Healthcare Delivery System at Healthcare at Home

Date: 13 February 2017 – 9 May 2017

Organization Name: HealthCare at Home India Pvt. Ltd., Noida

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

We wish her all the best for future endeavors.

For **HealthCare at Home India Pvt. Ltd.**

Rolli Saxena
General Manager – Human Resources

IIHMR UNIVERSITY

THE IIHMR UNIVERSITY, JAIPUR

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled **Impact of internet based application system to improve upon healthcare delivery system at Healthcare at Home** and submitted by **Ashima Kaushik, Enrolment No 0033** under the supervision of **Dr C. Ramesh** for award of **MBA in Pharmaceutical Management** of the University carried out during the period from **13 February 17 to 9 May 2017** 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

THE IIHMR UNIVERSITY, JAIPUR

CERTIFICATE BY SCHOLAR

This is to certify that all ethical issues have been considered while collecting data for my dissertation titled "Impact of Internet Based Application System to Improve upon Healthcare Delivery System at Healthcare At Home"

Signature of student

Abstract

BACKGROUND:

This dissertation seeks to quantify various aspects of the revolutions of the health care industry as a result of information technology. Healthcare at Home has spread it business to over 32 cities only because of it strong technological grip and knowledge, the technological expansion over India keeps HCAH ahead of its competitors.

Health technology is defined by the World Health Organization as the "application of organized knowledge and skills in the form of devices, medicines, vaccines, procedures and systems developed to solve a health problem and improve quality of lives".

Due to the multi-faceted impact of Information Technology – particularly in health care – I have chosen to examine the technological aspect impacting the organizational framework. Although researchers frequently investigate the impact of technology in a monocratic manner; much richness is sacrificed with such an analysis. Consider the following example that showcase an episode in health care that is likely to occur in the near future. When a patient begins to receive Home Visit Report (HVR), the impact of the use of this technology is being realized at multiple levels. It will affect the record-keeping in the doctor's office, patient's next of kin (NOK) and HCAH for any further analysis or reporting. Access to the electronic record will also have a bearing on the information record that the doctor has, which is likely to affect the treatment that the patient receives. Indeed revolutionizing the entire health care sector.

The study also suggest that the application of health information technology into the health care structure truly is a multi-faceted, multi-level phenomenon that formulates a significant relationship at all levels of healthcare system. Most likely issue for patients is the topic of security and privacy of personal medical information. Some patients argue that they do not want their medical information to go digitized; which, if true, could delay the distribution of information-based systems such as the Home visit report prepared by HCAH clinical team to keep the track of the patient's health and wellness.

OBJECTIVES

- To know how health technology system is acting as a link between patient health and Home care services
- To know the outcome of health based application system on patient health.

METHODOLOGY:

Parameters to be assessed on:

- Functional outcomes and quality of life at HCAH and other Home care providers.
- Nurse work environment.

Key research questions:

- How technology is helping connect Healthcare at Home to their patients Pan India.
- How PCS, a web based software system acting as a link between HCAH and Patients.
- To understand various technological tools HCAH has adopted to collect and manage payments.
- Day to day operational challenges the organization is facing.

Research design:

- Descriptive and observational study

Results & conclusions:

Since my entire study was an observational and descriptive study I would like to conclude by saying that with the growing technology each one of us is changing and so is the healthcare care system around us changing, patient is more aware about the health delivery system and has knowledge of his/her treatment and does not wish to settle for less. Healthcare at Home a joint venture between HCAH UK and Dabur comes in acting as a bridge between the patient and their health. HCAH provides home services from single drug administration to complete setting up of an ICU at patients home. Technologically driven this organisation is largely effected by newer advancements in the world and believes in bringing change in its operational processes to smoothen down patient handling and making the patients journey with HCAH at ease, though being technically advance makes this organisation superior over the other market competitors but the organisation believes in providing quality care so from initial assessment till the end date, each and every moment of the patient is tracked and traced so that in case of any emergency HCAH is there to cater the patient in the best possible manner, HCAH not only shares patients health report with his/her NOK but also keeps updating the patients treating doctor and keeps taking his/her advice on behalf of the patient. So overall with HCAH technologically advanced services has a great impact on patient's life and make sure the services delivered are at its best.

Acknowledgement

The satisfaction and euphoria that accompany the successful completion of the project would be incomplete without mentioning the people who made it possible. I would hereby like to express my profound sense of gratitude **to Dr Gaurav Thukral, Senior Vice President, Healthcare at Home India Pvt Ltd**, for giving me the opportunity to carry out my dissertation at **Healthcare at Home, Noida**, under his experienced and highly qualified team members.

I would also like to express my deep sense of gratitude to **Mr. Abhishek Malik, Unit Head, Delhi HCAH**. I am greatly thankful to him for providing his valuable guidance at all stages of the dissertation project, his advice, constructive suggestions, optimistic and supportive attitude and continuous inspiration, without which it would have not been possible to complete the project.

I owe a debt of gratitude to **entire Business Development Team and Team Novartis HCAH** for their continuous guidance and patience, motivation, and immense knowledge at all stages of the internship that paved way for better understanding of the fundamentals. I am also thankful for their never ending enthusiasm they gave in this project which lead me to walk a path full of optimism and success each day.

I am also thankful to **the entire HCAH employees** for helping me settle down and to get aligned with the work environment also was able to find time for my project and impart knowledge necessary for its completion instead of his busy schedule and workload. The knowledge gained herein and the practical experiences learnt will be invaluable in the end.

I would also like to thank my project **guide Dr C Ramesh, The IIHMR University, Jaipur**, for his help, cooperation and wholehearted encouragement. His assistance enabled me, to overcome many obstacles during my project study.

Last but not the least, I must express my sage sense of gratitude to my parents and my team-mates for providing me with constant support and uninterrupted encouragement throughout. This accomplishment would not have been possible without them.

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Abbreviations

Abbreviation	Full Form
HCAH	Healthcare at Home
HVR	Home visit report
NOK	Next to kin
OM	Operations management
TQM	Total quality management
PCS	Patient care support system
TS	Tele sales
CS	Customer support
BD	Business development
HCA	Health care attendant
CRCC	Critical care packages
PHLEBO	Phlebotomist
FCF	Financial consent form
BRD	Burman retail distribution

Chapter 1: Introduction and Scope of Dissertation

"…the system as we know it today is in need of fundamental change--transformational change--to survive into the next decade and century." -- Paul H. Keckley in Saving Lives & Saving Money, by Newt Gingrich, 2003

This dissertation seeks to quantify various aspects of the revolutions of the health care industry as a result of information technology. Healthcare at Home has spread it business to over 32 cities only because of it strong technological grip and knowledge, the technological expansion over India keeps HCAH ahead of its competitors.

Health technology is defined by the World Health Organization as the "application of organized knowledge and skills in the form of devices, medicines, vaccines, procedures and systems developed to solve a health problem and improve quality of lives".

Due to the multi-faceted impact of Information Technology – particularly in health care – I have chosen to examine the technological aspect impacting the organizational framework. Although researchers frequently investigate the impact of technology in a monocratic manner; much richness is sacrificed with such an analysis. Consider the following example that showcase an episode in health care that is likely to occur in the near future. When a patient begins to receive Home Visit Report (HVR), the impact of the use of this technology is being realized at multiple levels. It will affect the record-keeping in the doctor's office, patient's next of kin (NOK) and HCAH for any further analysis or reporting. Access to the electronic record will also have a bearing on the information record that the doctor has, which is likely to affect the treatment that the patient receives. Indeed revolutionizing the entire health care sector.

The study also suggest that the application of health information technology into the health care structure truly is a multi-faceted, multi-level phenomenon that formulates a significant relationship at all levels of healthcare system. Most likely issue for patients is the topic of security and privacy of personal medical information. Some patients argue that they do not want their medical information to go digitized; which, if true, could delay the distribution of information-based systems such as the Home visit report prepared by HCAH clinical team to keep the track of the patient's health and wellness.

Health care is not like other industries where there are significant blockades to adoption of IT. Other industries have had to address the challenges related to adoption and execution, but the health care industry has its own unique problems. One plausible

explanation for this outlook is that most individuals tend to think about the technologies that directly affect their treatment but not the health information technologies for which they do not have a direct contact. For much the same reason, practitioners and doctors have focused most of their devotion to understand technology that directly influences patient care and diagnosis, as only technology which isn't helping to treat patient and recover their condition adds no value to the system and nor to any health care practitioner.

Most of the health-related processes are being restructured by the Internet. In this new era of medicine, where each person is defined at an individual level, and not as masses, each one is treated as an individual human being but up until now there was no way to establish one's biological or physiological individuality. There was no way to how to determine a relevant metric like calculating blood glucose or blood pressure level around the clock while a person is sleeping, or at work, or in the middle of an emotional outburst. This represents the next level of digital revolution, getting to the most important but insulated domain – preserving individual's health.

A number of industry analysts have observed that increased approachability of treatment is one of the most concrete ways that technology has been changing healthcare. Health IT opens up many more avenues of research and development, which allows experts to make healthcare more effective and friendly than it has ever been. Digital innovations is now making it possible for consumers to use portable devices to admittance their medical information, monitor their vital signs, take tests at home and carry out a wide range of tasks. Devices like tablets and smartphones are starting to replace recording systems and conventional monitoring systems, and people are now been giving an option of undergoing a full treatment in the privacy of their own homes. Technological improvements in healthcare has contributed to services being taken out of the confines of hospital walls and assimilating them with user-friendly, accessible devices. In clinical setups, the internet enables care providers to gain an access to information that can aid in the diagnosis of health issues or development of suitable treatment plans. It can make patient records and practice guidelines available from the examination room. At the same time, internet supports a shift toward more patient-centric care than anything else than to receive care at home.

The fact that nurses and doctors who are working on the felid on the frontline are now regularly using hand-held computers to record all real-time patient data and then start sharing it instantaneously with their patients and updated medical history in an excellent illustration of benefits of health IT.

Being able to gather lab results, records of vital signs and other severe patient data into one consolidated area that has transformed the smoothness of care and efficiency, a patient can expect to receive their healthcare data in a most accessible manner. The reach and expansion of technological innovation continues to grow, changing the entire industry as it evolves.

A majority of IT integrated healthcare growth is attributed to the growing adoption of various healthcare IT solutions by healthcare providers in order to meet the heightened regulatory requirements for patient care and safety, increasing need to curtail the soaring healthcare costs, and growing need to improve the quality of healthcare while maintaining the operational efficiency of healthcare organizations. Internet applications promise to improve the quality, accessibility and efficiency of health care while simultaneously making sure that the services being offered are cost effective.

The shift from institutional care to home care is becoming a common today, resulting in a growing number of medical services escorting to the patient's home. The increasingly advanced medical technologies found in home care allow patients with illnesses to receive intensive care at home services over hospital care. In hospitals the medical technology is handled by a qualified experienced person, while in home care the users are primarily a nonprofessional individuals composed of patients and their friends and relatives, with a diverse background of experience in dealing with the technology. This varied group of individuals handling technology is a great challenge for designers and manufactures of medical technology in their attempts to create a user-friendly device for home care. Feeling secure is one of the basic needs for the patients and their next of-kin at home. To feel secure requires sufficient support, adequate symptom control and a well-functioning communication and information flow. Medical technology's impact on the daily lives of patients and their next-of-kin is described in several studies but only a few studies describe its impact on patients' in palliative home care and their next-of-kin's daily lives. Therefore the focus of this thesis is to lighten this knowledge gap.

In today's world, technology plays an important role in not only in every industry but also in our personal lives. The merger of healthcare and information technology industry is responsible for bringing in improvement and saving countless lives all around the world.

The Healthcare at Home venture community has invested heavily in channel offerings like telemedicine, retail clinics, and healthcare attendants to deliver healthcare more affordably and less traditionally, meeting consumers where they want healthcare attendants to meet them. A major driver of the sector's growth is the customisation of Health Tech supported by the widespread availability of smartphones and tablets, HCAH through this is able to reach to a large audience at a comparatively a lower cost, a trend that stands to be associated as wearable technology spreading throughout the market.

Marketers Prospective

A strategic partnership with a venture capital investment partner is the new name of the game in healthcare. Whether a small healthcare tech start-up or a behemoth healthcare services organization, marketing leaders should consider these three things to begin to build a relationship:

1. Research and identify your target healthcare investor(s) and leverage existing marketing calendar opportunities, like events or conferences, to connect with them.
2. Use PR to tell interesting trend, financial, or innovation stories. Leverage as much data as possible and target publications that investors are likely to read.
3. Consider shifting some resources away from customer-only marketing efforts and allotting them toward efforts that will get you noticed by potential venture capital partners.

Despite a general lack of formal healthcare training and support, patients and caregivers manage 24-hour home care by compensating, on-the-job training, one-patient care, and including caregivers. However, the results suggest that improved training, support and quality control are needed to ensure safe patient care and good working conditions for

caregivers. These results can contribute to continued development of the caregiver role in HMV care.

In the past 5 years running up to the end of 2015, venture funding has grown 200%, allowing US$11.7 billion to flow into Health Tech businesses from over 30, 000 investors in the space. Its clear investors see huge potential of profit from healthcare – venture capital funding has doubled in the past five years from less than $8 billion in 2010 to more than $16 billion in 2015. HCAH this financial year was able to pull out an excellent funding of nearly US$ 40M (~250cr) for the first time in our history from a PE fund called Quadria Capital. Quadria has around US$ 1.5Bn (Rs 10,000cr) of managed capital. The organisation have raised this money in an environment where you are seeing more start-ups closing down than getting funds. Quadria is a healthcare focussed fund so they understand the market and the fact that they have believed in the concept is testimony to the fact that HCAH has done something right. Yet, beyond the financial benefits, these capital backers may very well be the solution to much of healthcare's woes.

At this historic juncture, the CEO congratulated and thank everyone who had put in their hard work into the company over the last 4.5 years. It is only because of their efforts and good wishes that HCAH have been able to achieve this feat. While it is an overall effort, the team which has been with us from early day's right from the senior management to the nurses and HCAs deserve a special mention. It is because of their belief that we are here. Special thanks to the team who managed the process of fund raising including the strategy team and the finance team.

As the organization was able to extract this funding, it plans to become more aggressive in their rollout, more aggressive in the growth expectations and targets to grow the company 4x in FY17 and 25x by FY20 over FY16 and setting the employee mind set to get ready for an exhilarating ride ahead of them. The top management believes in their team and is focussed and dedicated to work side by side with each employee and turn out to be the best in the industry and continue to achieve greater milestones going forward.

Scope of this Study:

The scope of this observational study is to explore which theoretical perspectives is dominating the operational management field and how Healthcare at Home is dealing with it and understanding the areas where my theoretical knowledge can help improve the practical working at HCAH.

Chapter 2: Review of Literature

Operations management is an area of management concerned with overseeing, designing, and controlling the process of production and redesigning business operations in the production of goods or services. Operations management (OM) is the science of understanding and improving business processes it therefore, refers to performing the traditional managerial functions (planning, organizing, directing, and controlling) on the organization's operations. It involves the responsibility of ensuring that business operations are efficient in terms of using as few resources as needed, and effective in terms of meeting patient requirements. It is concerned with managing the process that converts inputs (in the forms of materials, labour, and energy) into outputs (in the form of goods and/or services). Understanding the waiting time formula is important because it presents the fundamental parameters that can be managed to reduce waiting times and length of stay to improve the service quality towards HHC patients as well as caregivers by optimizing the compactness and workload balance criteria.

According to Tishta Bachoo, in her article on "What are some of the challenges facing Operations Managers today?" states various factors an Operation Manager goes through his/her entire journey with an organisation. She believes that that a manager should be well equipped with all the tools and the knowledge required for how a business function. Operation Managers are essential to understand the entire business flow, and the products, the customers, and the operations and the technology being used. Managing a service system has become a major challenge in the global competitive environment.

Some of the challenges she talked about were from the manufacturers point of view as to how an operations work environment is being effected due major pit holes in the process and the reduction in trade barriers and advancement in communication and transportation can be made more effective and efficient with help of technology. She mentioned how globalisation is becoming a challenge for the industry and in turn for operation managers. Competing with firms from abroad means a firm will have to remain competitive by providing quality goods and services at lower prices.

The operations manager would definitely be concerned with this as he would have to engage in the four functions of planning, organising, leading and controlling to ensure that the product or service remains competitive in the market. Tishta mentioned that the

challenges faced by the Ops due to globalization the manager needs to maintain the quality and uniqueness of the product or the services offered to be able to compete in the global market with the complete knowledge of the competitors.

Customer Satisfaction:

Total quality management is the term used to describe the quality of the process emphasising on customer satisfaction and often involves co-operation. It is a fact that affordable costing and good high quality are the key attributes that a service needs to possess.

To satisfy your customers and remain that competitive in the market, a firm must be able to supply the quantity of goods and services with high quality, at a low price and at the right time with the surety that either the product or service is to the standard required by the customer.

Work environment:

Values, culture, environment have a huge impact on the work of operations. Since some of the managers have to deal directly with the employee, they have to take into account some trends along with planning, organising and controlling the employee work environment. Hiring qualified workers to replace the old ones who have been working for years is a task for many organisations. Finding the right employee, and managing them people becomes a constant battle for the managers as the younger generation have turned their back on the manufacturing job. According to Trishta this gap can be covered by taking an active approach to attract and retain new hires, who are well qualified and have certain experience in the field.

Economic Environment:

The dramatic change in the economic conditions also affects the process of operations managers. Economic variable such as inflation, job loss, interest rates, fast hire and fire policies, exchange rates, economic growth, or recession have a direct impact on the price of raw materials and the final price of the finished products.

Technology:

Technological advances have led to a vast array of new products and processes. Undoubtedly the computer & tabs have had—and will continue to have—the greatest impact on business organizations. It has revolutionized the way companies operate. Technological advances in new materials, new methods, and new equipment have also made their mark on operations. Technological changes in products and processes can have major implications for production systems, affecting competitiveness and quality, but unless technology is carefully integrated into an existing system, it can do more harm than good by raising costs, reducing flexibility, and even reducing productivity. In order to overcome this challenge, operations managers will have to adapt his/her skills in view of the recent developments that have been taking place in production. It is also important to underline that with the advances in technology, products are becoming outdated over time. Therefore, the operations manager has to constantly keep pace with new technology to ensure that the firm does not lag behind with regards to the product being unique. Furthermore, it is expected that the operations manager will have to face and cope with an integration of business needs, people needs and technology.

Ethical conduct:

In making decisions, managers must consider how their decisions will affect shareholders, management, employees, customers, the community at large, and the environment. It is the goal of the manager to strive to achieve the best solutions in the interest of its stakeholders in case of all problems. Furthermore, even managers with the best intentions will sometimes make mistakes. If mistakes do occur, managers should act responsibly to correct those mistakes as quickly as possible, and to address any negative consequences. It is the responsibility of all the managers to make ethical

decisions. Ethical issues arise in many aspects of operations management, including: safety (product & employee), quality and environment.

The home care market is segmented based on products, services, software, telehealth, and region. Based on products, the market is segmented into testing, screening, and monitoring products and is expected to account for the largest market share in 2015. Testing, screening, and monitoring devices include blood glucose meters, blood pressure monitors, pulse oximeters, peak flow meters, heart rate monitors, HIV test kits, sleep apnea monitors, coagulation monitors, ovulation & pregnancy test kits, Holter and event monitors, cholesterol monitoring devices, colon cancer test kits, home hemoglobin A1C test kits, drug & alcohol test kits, ECG/EKG devices, EEG devices, temperature monitors, hearing aids, and pedometers. Therapeutic products include oxygen delivery systems, nebulizers, ventilators, sleep apnea therapeutic devices, wound care products, IV equipment, dialysis equipment, insulin delivery devices, inhalers, and other devices (ostomy devices, automated external defibrillators, and external stimulation devices). Mobility care products include canes, crutches, mobility scooters, walkers & rollators, and wheelchairs.

Chapter 3: Methodology

Objectives:

- To know how health technology system is acting as a link between patient health and Healthcare at Home.
- To know the outcome of health based application system on patient health.

Parameters to be assessed on:

- Functional outcomes and quality of life at HCAH.
- Nurse work environment.

Key research questions:

- How technology is helping connect Healthcare at Home to their patients Pan India.
- How PCS, a web based software system acting as a link between HCAH and Patients.
- To understand various technological tools HCAH has adopted to collect and manage payments.
- Challenges the company is facing to manage the payments of the organisation.
- Day to day operational challenges the organization is facing.

Research design:

- Descriptive

Research procedures adopted:

- Observational data collected and reviewed.

Chapter 4: Results & Discussion

Healthcare at Home India Pvt Ltd.

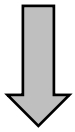
In the near future, the home is becoming hub of all health care with all the available and advancing technologies being used in the field today. For patients also, this is an ideal situation wherein they can heal faster and better and in a known and comfortable environment in addition of adding advantage of being cost effective and efficient.

Health Care at Home India is backed by the Burman family (the promoters of Dabur), carrying a proud legacy of trust and excellence for over 125 years. The organisations endeavour is also backed by the clinical credibility of the founders of the Health Care at Home UK, where the company has a healthy market share of 80% and is considered a leader and pioneer in home healthcare. In a nation like India, they bring significant value to the healthcare industry and the home health service sector by drawing synergies and growing global.

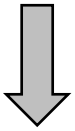
Company's Vision

HealthCare at HOME will strive to be the most people-centric, credible and comprehensive home healthcare solution provider in India.

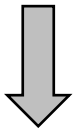
Before registration, HCAH representative meets the patient and family.



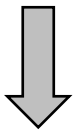
HCAH specialist team meets the patient's doctor to collect information.



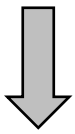
The Doctor is consulted to gain a complete patient history and specific inputs in relation to patient care and treatment plan is collected.



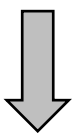
An Assessment team then creates a customized home care plan after consulting the doctor.



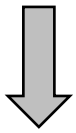
Post approval is taken from the Clinical Supervisor, then the care plan is uploaded on the PCS application and homecare specialist visit is then scheduled.



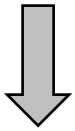
A welcome call is done by a centralized customer support patient Care Desk to explain the care plan.



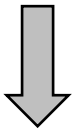
The HCAH team of nurses and specialists seeks to the patient on time assigned by the agent.



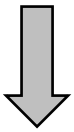
HCAH specialists is equipped with a sophisticated application system on their tablet devices for exact and timely data collected.



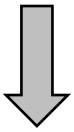
Home Visit Report (HVR) is prepared on regular basis from the system and shared with patient's family and referral doctor to keep them updated on treatment progress.



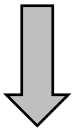
Real-time data is tracked, analysed and necessary intervention is facilitated through HCAH state-of-the-art technology platform.



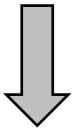
Patient's doctor is always kept in the loop for review and to suggest suitable modifications to the care plan.



Feedback calls are done by a centralized Patient Care support Desk to ensure quality of the services and customer satisfaction.



On sharing the report with the patient and their doctor the inputs are considered and the care plan is altered accordingly.



Patient's family is educated continuously on self-care at home, package is gracefully closed and the patient is discharged from service.

Functional outcomes and quality of life at HCAH.

ODOO

Functional outcome of Healthcare at Home is achieved via various technological advancements and these advancements are brought in to smoothen down the process flow and track the entire journey of our patient from the patient's first call to the last visit taken place at the patients place. ODOO is an integrated web based application system with Patient Care support system developed and designed especially for HCAH. ODOO plays a major role in streaming down all the leads from various sources and aligning all the leads received from various sources for the conversion of the package. Various sources from which leads are received and automatically updated in ODOO are via Google, Facebook, Just dial, Employee referral, Patient referral, Business Development Team and others. These leads are automatically scanned online and raised on the agents screen as soon as he/she logs in ODOO. Agent is the person who works directly on ODOO and works on the leads received.

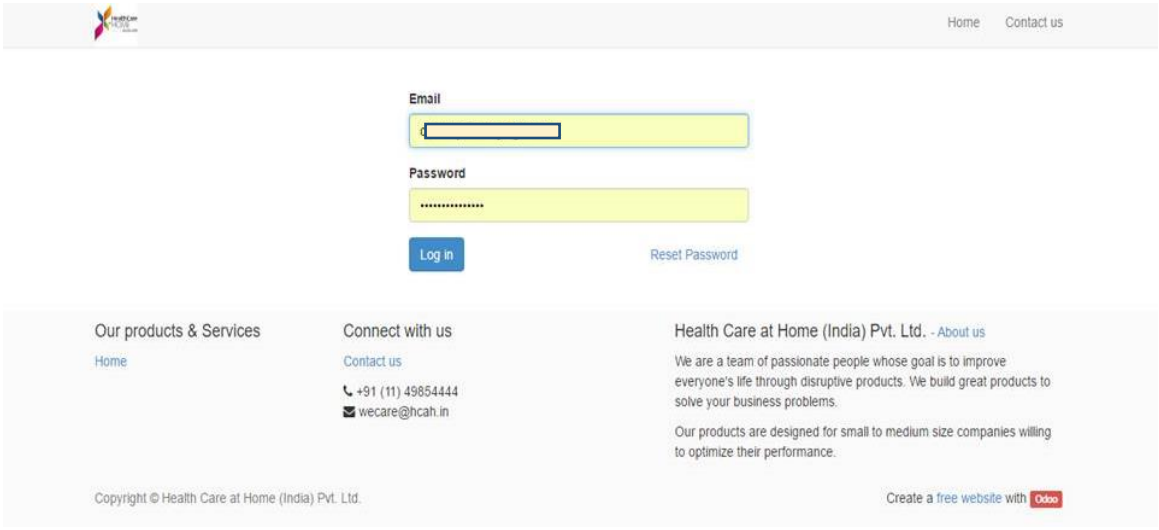


Figure 1: Front page of the tab – ODOO

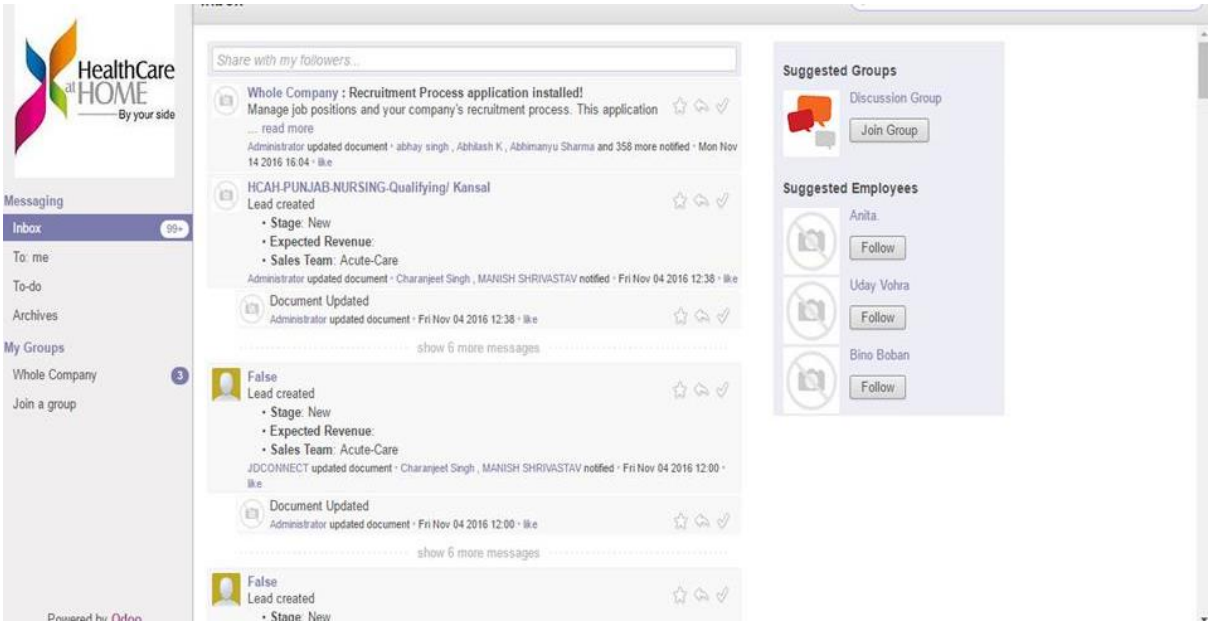


Figure 2: Fresh Leads display

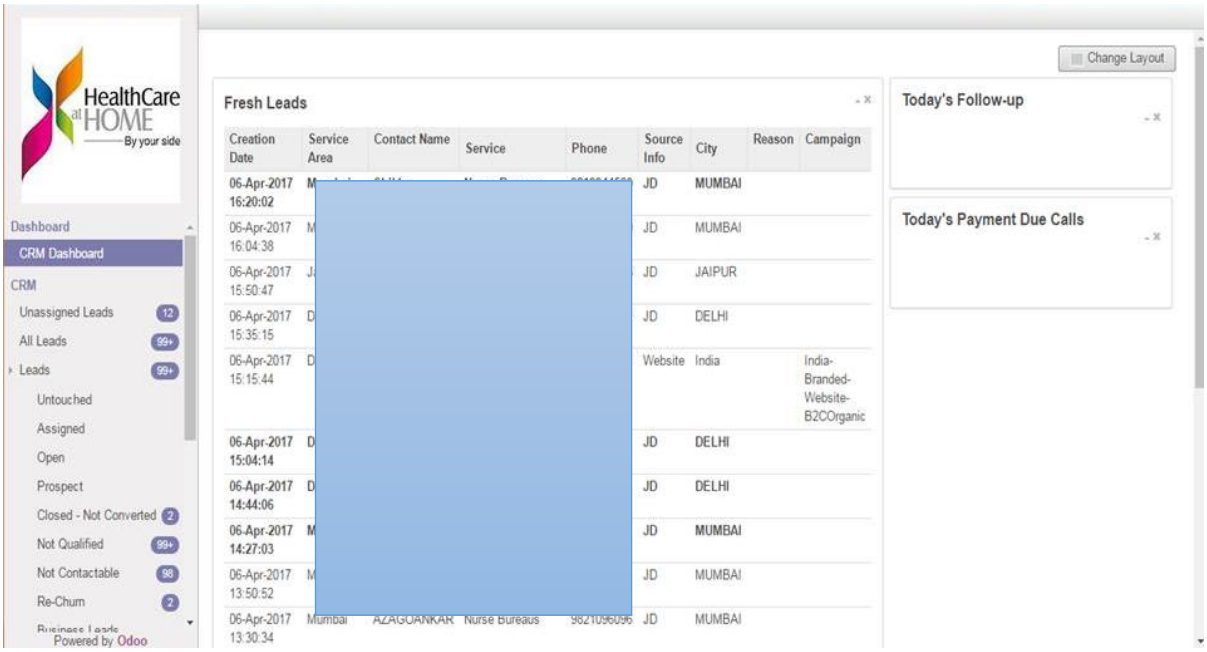
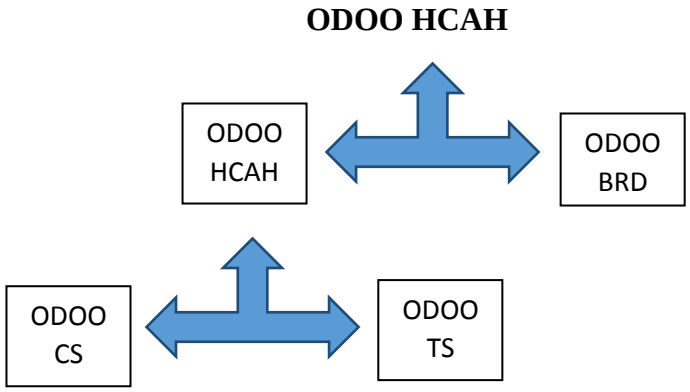


Figure 3: CRM dashboard displaying fresh leads



ODOO is an application which contains complete patient information and its NOK, it is somewhat similar to Patient care support system but holds a totally different importance and the major department which uses ODOO is the Tele-sales and Customer Support.

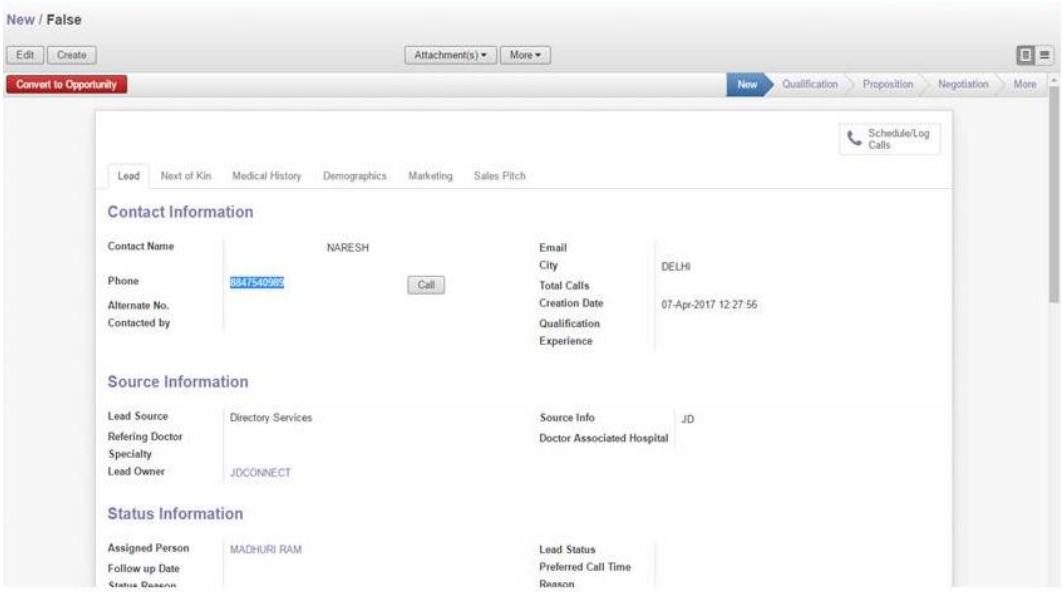


Figure 4: Contact Information of Fresh Leads.

Figure 5: Creation of new package by TS send to CS.

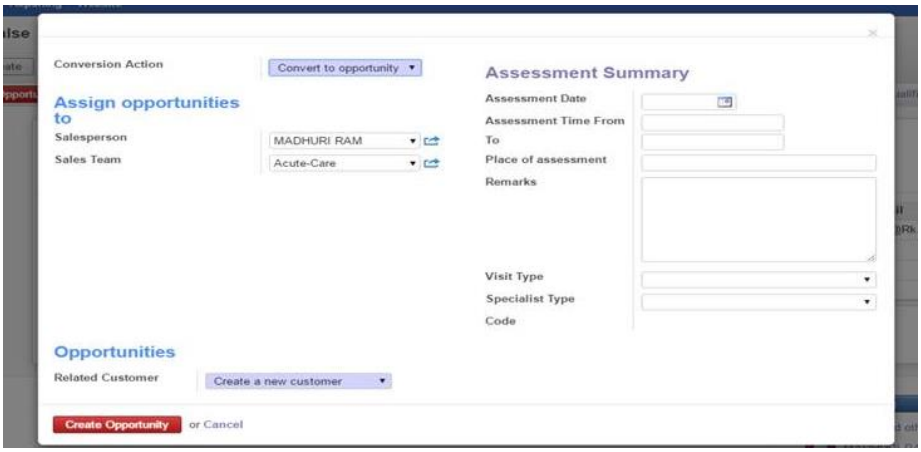


Figure 6: Creation of Initial Assessment form.

ODOO is a software developed to generate and raise tickets against patients name in order to maintain the track record of the patients, mainly to collect patient's feedback and in generating financial consent forms which is another important parameter in payment collection.

ODOO not only act as a patient server but is also responsible for uploading and updating the leads coming in from different source like Facebook, Google, and other online websites, and Doctor Referrals through Business Development team. ODOO helps the support team to keep a record of how many fresh leads comes and how many

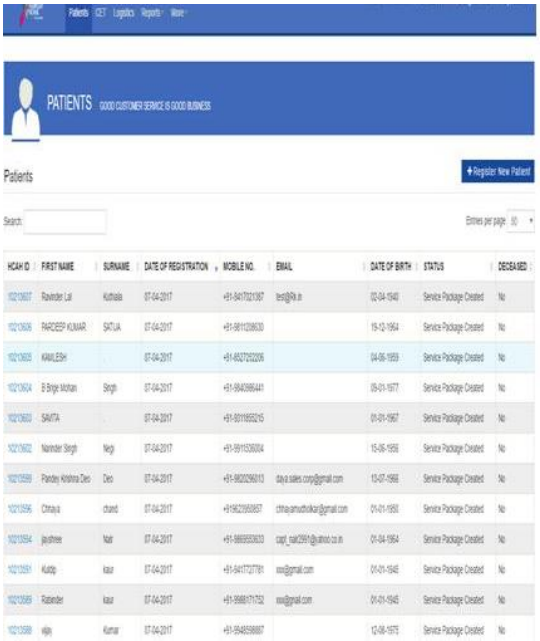
leads get converted for initial assessments to final conversion of the package. ODOO has another build in segment where in the customer support team and Tele sales team has an option of calling and building

ODOO Burman Retail Distribution

BRD is another extended arm of HCAH and Dabur that is the Pharmacy of HCAH, where in all the prescription based medication is available and delivered at the patients door step free of cost. BRD offer certain percentage of discounts also to its patients who are already taking HCAH services and are enrolled with us. ODOO here acts as a link between the patient and the pharma services by making sure the drug is delivered and reached out to the patient on time and to the correct address. Tracking of all the records or bills and purchase pharmacy drugs is done on ODOO. In case BRD ODOO acts as a base to the chain and it's smoothen distribution.

Patient care support system:

Patient care support system (PCS), is a web based application system which is specifically developed for HCAH and employees to act as a link between the patient and the organisation.



PATIENT INFORMATION	
Name of Patient	MrsXyz Uvw
PCS ID	10214032
Gender	male
Date of Birth/Age	1945-01-01 /
Phone No.	+91-0000000000
Email Id	Xxx@gmail.com
Name of Caller/Relationship	ABC / Son
Phon No. of caller	+91-0000000000
Email id of Caller	Xxx@email.com
MEDICAL INFORMATION	
Diagnosis	Tkr
Service Required	Physio
ASSESSMENT INFORMATION	
Assessment Place/Address of Patient	123Xyz Delhi 011001 India
Assessment Date	2017-04-12
Time Frame	12:00:00 to 13:00:00
OTHER INFORMATION	
Lead Source	Staff
Hospital Details	
Doctor's Name	
Note for Visiting Staff	CCU patient.

Figure 7:Auto Registration in PCS and HCAH ID and notification mail is send to operations, CS, and Unit Heads

The processer acts as a soul of HCAH where in all details of the patient lies from patient enrolment, the patient package creation and the entire duration the patient spends with HCAH services.

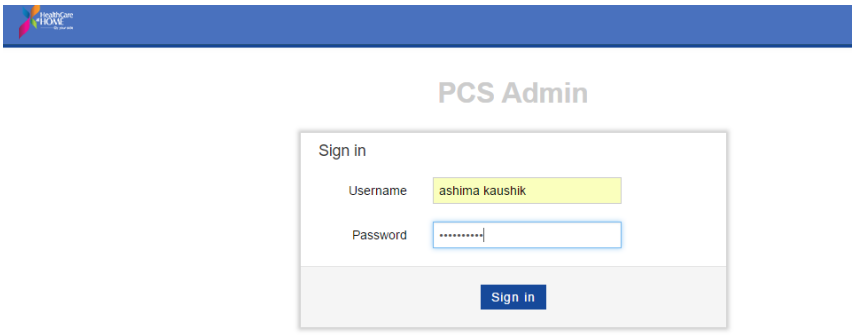


Figure 8:PCS login page

Following is the process of PCS

- PCS collects in a lot of information related to patients package including the name of the package, patients unique identification code, number of visits to be made at patients place, amount to be paid, other sections include billing reports

which includes all the back date billing reports from the date on which the package started till date. PCS also includes the date of package creation and who has created that package so that just in future any further reporting is required can be extracted from PCS as an information.

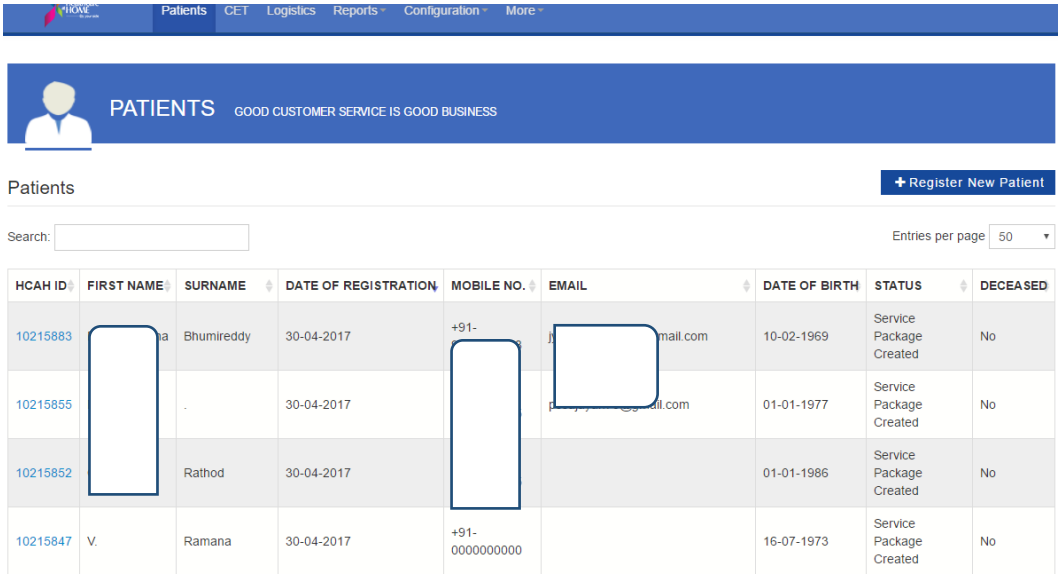


Figure 9: Patient information is displayed once an employee is logged in.

- Once the lead is converted and the patient is willing to take HCAH services the patients basic information is updated on the PCS which can now be accessed by all the employees of HCAH who has particularly enrolled in with the company.

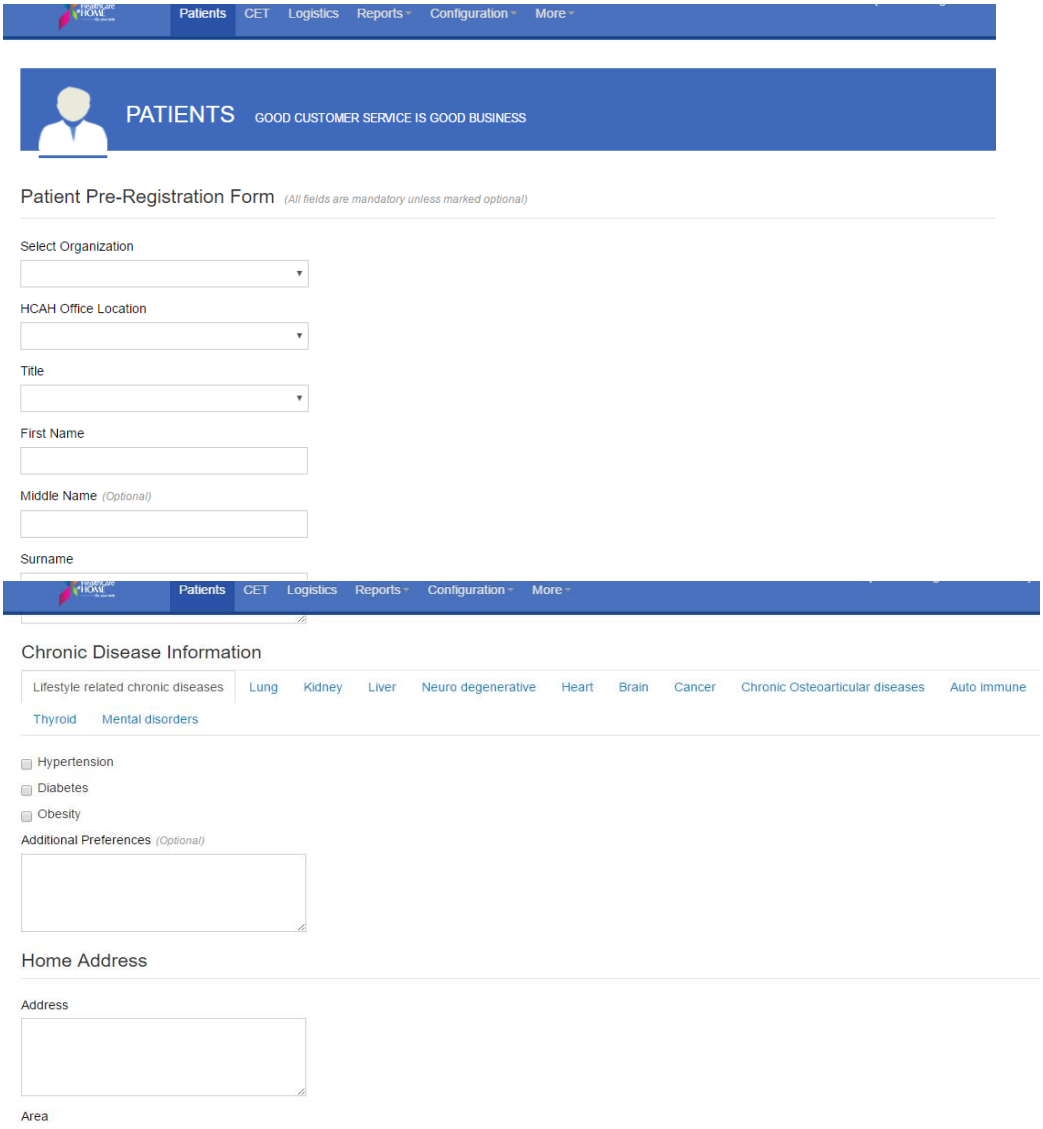


Figure 10: Patient information fill in tab.

- Now the customer support services (CS) makes a welcoming call to the patient enrolled to confirm with the patient the services taken up and the amount the patient will be paying against those services.
- Cloud agent is used for all the inbound and outbound calls.
- CS now raise a financial consent form (FCF), against the services the patient will be opting in with HCAH.
- Now the patient's information along with the patients' needs are mentioned in the PCS against the patient name. A unique HCAH ID is the created for every single patient enrolled.

- Now the unit operations have an access as well for the PCS and according to the patients location and staff availability assign a visit to the patients place to treat the patient in the best of its knowledge.
- A package may demand either a single visit or multiple visits or in case of a Healthcare Attendant, the staff needs to stay with the patient 24hrs around the clock, catering to the needs of the patients unit operations assign the staff against the name of the patient.
- Once the visit is assigned on the PCS, an automatically generated message is send to the patient and the assigned staff.

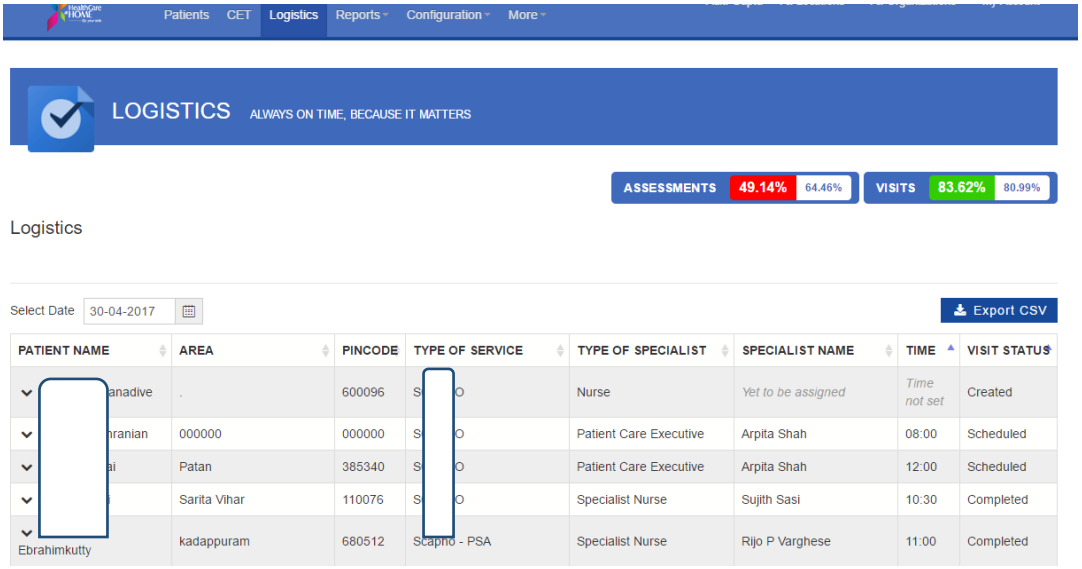


Figure 11: Assigning of Specialist

- In case of patient, the patient along with the NOK receives a text message detailing the staffs details i.e. the name and the phone number of the staff and time the staff will be reaching the patients house, so that the patient knows it before who will be attending him/her.
- While on the other hand, staff receives a message relating to patients information that is where he/she needs to visit, patients name, age and the responsibilities he/she needs to cater.
- All the automatically generated messages is send to them via PCS.
- Now once the nurse/attendant/specialized nurse reaches the patient place, the staff carries a tab with him/herself wherein they have an access to PCS where they login and start their duration of visit, and a pop creates on PCS at unit

operations PCS that staff has reached and has started serving the patient and similarly the staff needs to stop the visit once he/she finishes with it.

- Once the patient is assessed on all the required parameters, an assessment form is filled by the staff on the PCS where in the he/she files in real time status of the patient that includes patients temperature, blood pressure, saturation, condition of bedsores if any, wounds if any, reaction to any medication, and on other clinical parameters.

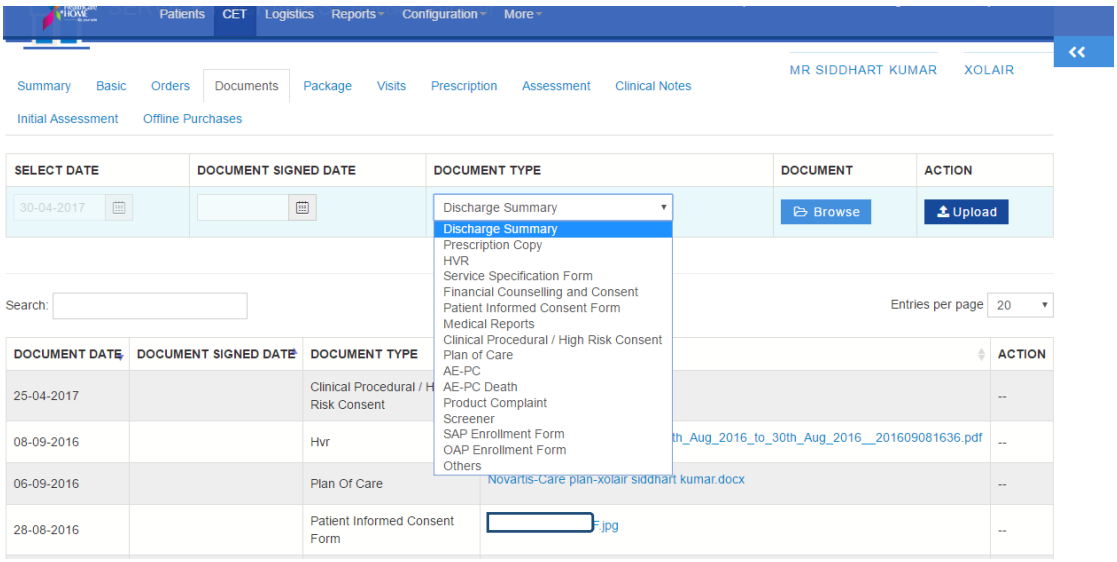


Figure 12: Uploading of patient documentation tab.

- Now depending upon the condition of the patient basis assessment report, head nursing decides onto weather to finally board the patient and start the package services or not. HCAH does not take emergency cases.

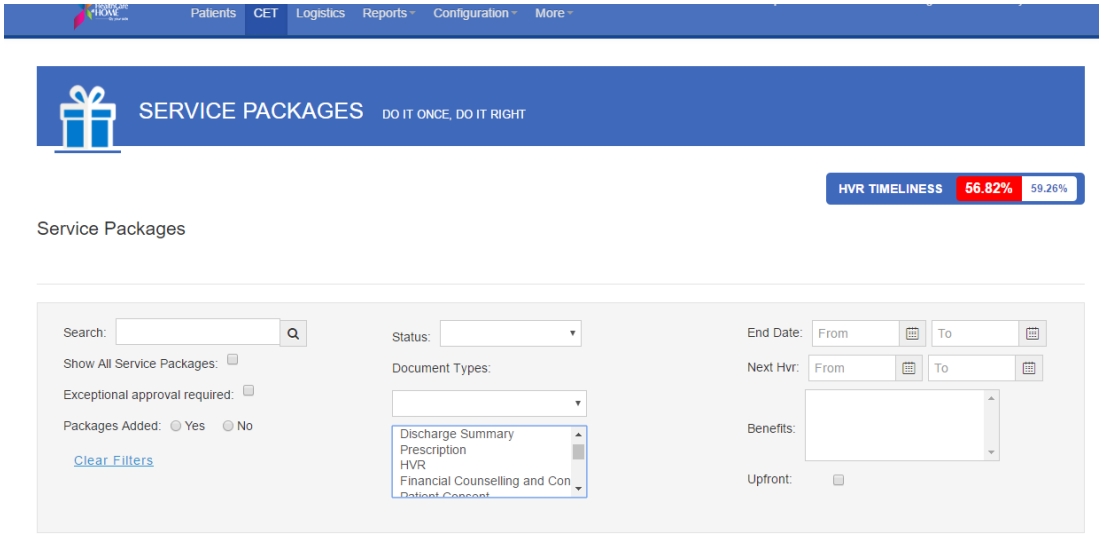
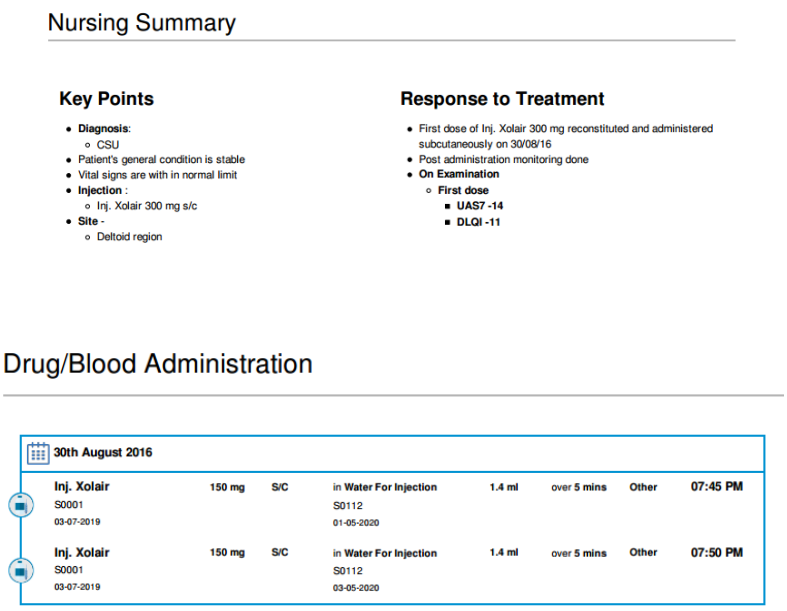


Figure 13: Creation of Service Package.

- Once the patient is on boarded, patient services begins and the PCS shows the running package and other add on services provided by HCAH such as equipment's on rent or purchase, medication, other ancillaries.
- All the payments made or due can be cross checked via PCS and chasers can be send to the patient or their NOK regarding due payments as the company believes in advance payment policy, i.e. pay first and then take the services. Entire package cost needs to be paid by the patient within 24hrs of the start of the package.
- There are certain conditions where in a locking period is given to the patient during which the patient is required to pay for the services taken and is interested in further taking up.
- The locking period can vary from anywhere between 7 to 15 days depending upon the duration of the package.
- Once the package amount is paid by the patient, the amount is updated on the PCS against the invoice raised in the name of the patient and everyone can then know the total amount paid or any other amount left due is depicted in red on the PCS window.
- Now the services start at the patients place, here the nursing staff will update an assessment form on regularly, basis on which a Home Visit Report (HVR) is prepared. HVR is a report which is the collated by the clinical evaluation team and this report is send to the patient or its NOK, a copy of HVR is also mailed to

the treating doctor to give an assurance to the doctor that their patient is in safe hands, and finally a copy of HVR is uploaded on the PCS with the patients name and HCAH ID in case of future use.



Nursing Summary

Key Points

- **Diagnosis**:
  - CSU
- Patient's general condition is stable
- Vital signs are with in normal limit
- **Injection** :
  - Inj. Xolair 300 mg s/c
- **Site** -
  - Deltoid region

Response to Treatment

- First dose of Inj. Xolair 300 mg reconstituted and administered subcutaneously on 30/08/16
- Post administration monitoring done
- **On Examination**
  - **First dose**
    - **UAS7 -14**
    - **DLQI -11**

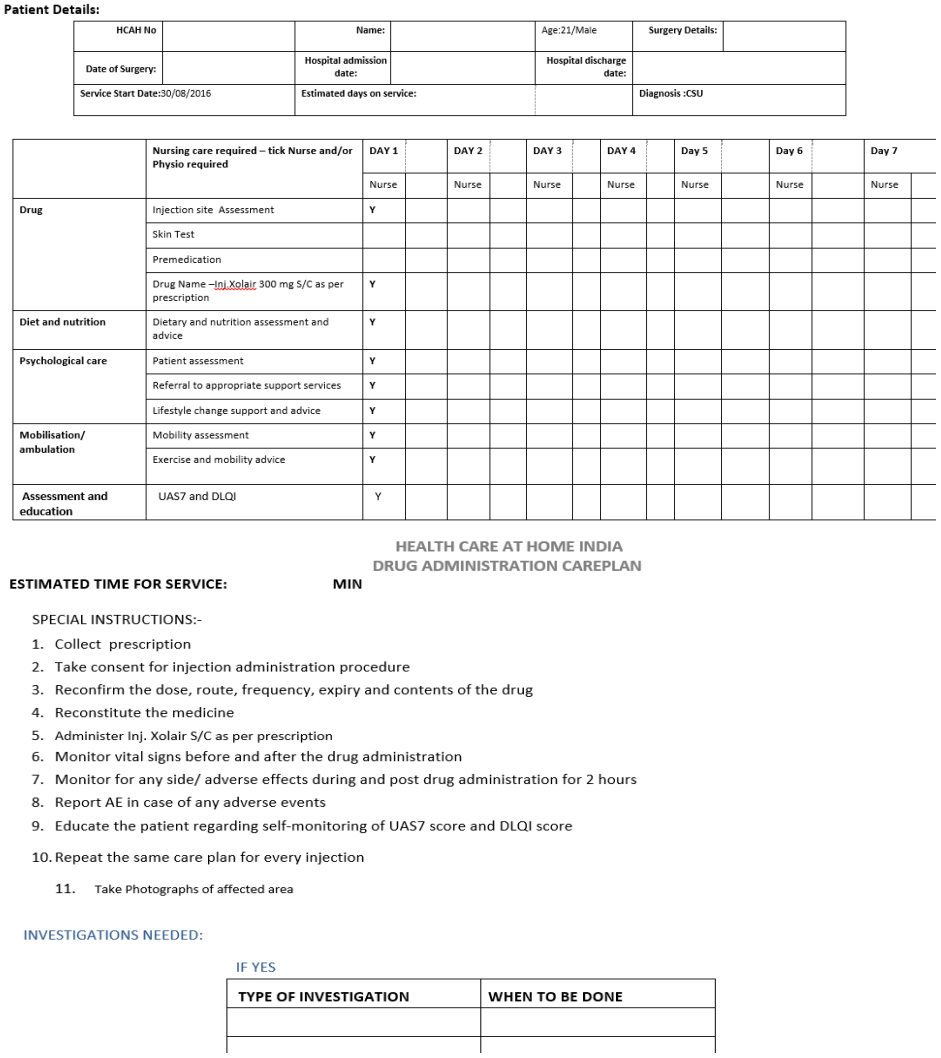
Drug/Blood Administration

30th August 2016

Inj. Xolair S0001 03-07-2019	150 mg	S/C	in **Water For Injection** S0112 01-05-2020	1.4 ml	over **5 mins**	**Other**	**07:45 PM**
Inj. Xolair S0001 03-07-2019	150 mg	S/C	in **Water For Injection** S0112 03-05-2020	1.4 ml	over **5 mins**	**Other**	**07:50 PM**

Figure 14: Home Visit Report (HVR) presentation.

- Each staff visiting the patient prepares a care plan for that patient and uploads it on the PCS system. This is done in order to make sure if there is a change in staff, a follow up of medication, exercises and other treatment can be taken forward by the second staff to make sure there isn't any hindrances which arises during the patient's treatment. For HCAH patient safety and comfort ability lies first.



Patient Details:

HCAH No		Name:		Age:21/Male	Surgery Details:	
Date of Surgery:		Hospital admission date:		Hospital discharge date:		
Service Start Date:30/08/2016		Estimated days on service:			Diagnosis :CSU	

	Nursing care required – tick Nurse and/or Physio required	DAY 1		DAY 2		DAY 3		DAY 4		Day 5		Day 6		Day 7	
		Nurse		Nurse		Nurse		Nurse		Nurse		Nurse		Nurse	
Drug	Injection site Assessment	Y													
	Skin Test														
	Premedication														
	Drug Name –Inj.Xolair 300 mg S/C as per prescription	Y													
Diet and nutrition	Dietary and nutrition assessment and advice	Y													
Psychological care	Patient assessment	Y													
	Referral to appropriate support services	Y													
	Lifestyle change support and advice	Y													
Mobilisation/ ambulation	Mobility assessment	Y													
	Exercise and mobility advice	Y													
Assessment and education	UAS7 and DLQI	Y													

HEALTH CARE AT HOME INDIA
DRUG ADMINISTRATION CAREPLAN

ESTIMATED TIME FOR SERVICE: **MIN**

SPECIAL INSTRUCTIONS:-

1. Collect prescription
2. Take consent for injection administration procedure
3. Reconfirm the dose, route, frequency, expiry and contents of the drug
4. Reconstitute the medicine
5. Administer Inj. Xolair S/C as per prescription
6. Monitor vital signs before and after the drug administration
7. Monitor for any side/ adverse effects during and post drug administration for 2 hours
8. Report AE in case of any adverse events
9. Educate the patient regarding self-monitoring of UAS7 score and DLQI score
10. Repeat the same care plan for every injection
11. Take Photographs of affected area

INVESTIGATIONS NEEDED:

IF YES

TYPE OF INVESTIGATION	WHEN TO BE DONE

Figure 15: Care Plan Table prepared by Clinical Staff Visiting the patient.

- All the documents and bills and reports of the patient are uploaded on the PCS and remains there for any sort of future purposes.

That is how entire PCS system works making sure that the entire journey of the patient with HCAH is smooth and comfortable, and the patient end the services with a smile. PCS is an application system which ease outs the process and ultimately effects health delivery system and improving patient care.

Functional outcome is also achieved at HCAH by another web based platform called ZOHO SUPPORT

ZOHO SUPPORT

ZOHO support is another technological advancement at Healthcare at Home which allows not only the patients journey at ease but also helps the employees to cater the patients journey with HCAH in a comfortable manner, the employees belief lies in patient safety and their wellbeing.

ZOHO Support is all about raising and generating tickets related to the running service packages and enrolment of new service package the patient has opted for. There are various service packages HCAH runs for various health services. Patient is enrolled with the desired service package and Customer Support System follows up with the patient, patient is given a toll-free number on which he/she can call on to report any sort of complications faced during the services. Patient can contact the organisation through other means as well such as text message, Emails, or via HCAH staff present at patients home.

Nurse work environment

Law regulating the Nursing Staff at Home:

Required Resident Services

The Nursing Home Reform Act specifies what nursing services they must give at home to residents and establishes standards for these services. Required services include: a comprehensive care plan for each resident; pharmaceutical services; periodic /assessments for each resident; nursing services; social services; dietary services; rehabilitation services; and, the services of a full-time social worker.

The Residents' Bill of Rights:

The Nursing Home Reform Act established the following rights for nursing home residents:

- The right to freedom from abuse, mistreatment, and neglect;
- The right to freedom from physical restraints;
- The right to privacy;
- The right to accommodation of medical, physical, psychological, and social needs;
- The right to participate in resident and family groups;
- The right to be treated with dignity;
- The right to exercise self-determination;
- The right to communicate freely;
- The right to participate in the review of one's care plan, and to be fully informed in advance about any changes in care, treatment, or change of status in the facility; and

- The right to voice grievances without discrimination or reprisal.

Any or all of the following sanctions can be imposed to enforce compliance with the Nursing Home Reform Act:

- Directed in-service training of staff;
- Directed plan of correction;
- State monitoring;
- Civil monetary penalties;
- Denial of payment for all new Medicare or Medicaid admissions;
- Denial of payment for all Medicaid or Medicare patients;
- Temporary management; and
- Termination of the provider agreement.

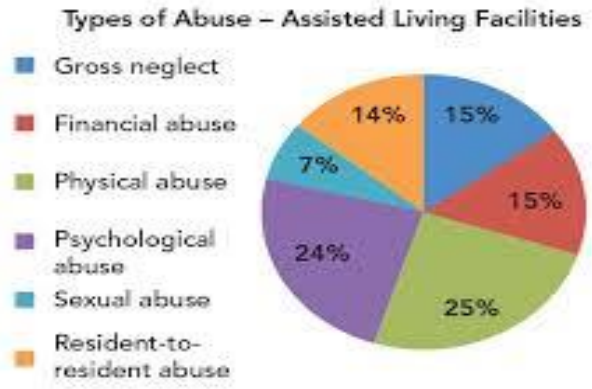
This Nursing Home Reform Act established basic rights and services for residents of nursing homes. These standards form the basis for present efforts to improve the quality of care and the quality of life for nursing home residents.

A Healthy Work Environment is the place where an employee feels he/she is safe, empowering, and satisfying. Parallel to what WHO define it is not merely the absence of threats to health, but a place where physical, mental, and social well-being, supporting optimal health and safety. Safety is one of the most important factor an employee's seeks in for, in which all leaders, managers, health care workers, and ancillary staff have a responsibility as part of the patient centred team to perform with a sense of professionalism, accountability, transparency, involvement, efficiency, and effectiveness.

An employee's work environment plays a larger role in the ability to provide quality care. It impacts everything from the safety of patients to their caregivers to job satisfaction. Studies have consistently shown that how work environment issues, such as nurse staffing, is linked with patient outcome, length of stay, and chance of death. Healthcare at Home focuses on providing a healthy and safe work environment to all their nurses.

A healthy employed nurse is the one who is actively focused on creating and maintaining a balanced and synergy of physical, social, spiritual, emotional, personal and professional wellbeing. A healthy nurse lives life to the fullest capacity, across the wellness/illness continuum, a nurse becomes a stronger role model, advocating, and educating, personally, to their families, their communities and work environments, and ultimately for their patients.

Registered nurses promote and restore health, prevent illness, and protect the people entrusted to their care. They work to alleviate the suffering experienced by individuals, families, groups and communities. In doing so, nurses provide services that maintain respect for human dignity and embrace the uniqueness of each patient and the nature of his or her health problems, without restriction with regard to social or economic status. To maximize the contributions nurses make to society, it is necessary to protect the dignity and autonomy of nurses in the workplace.



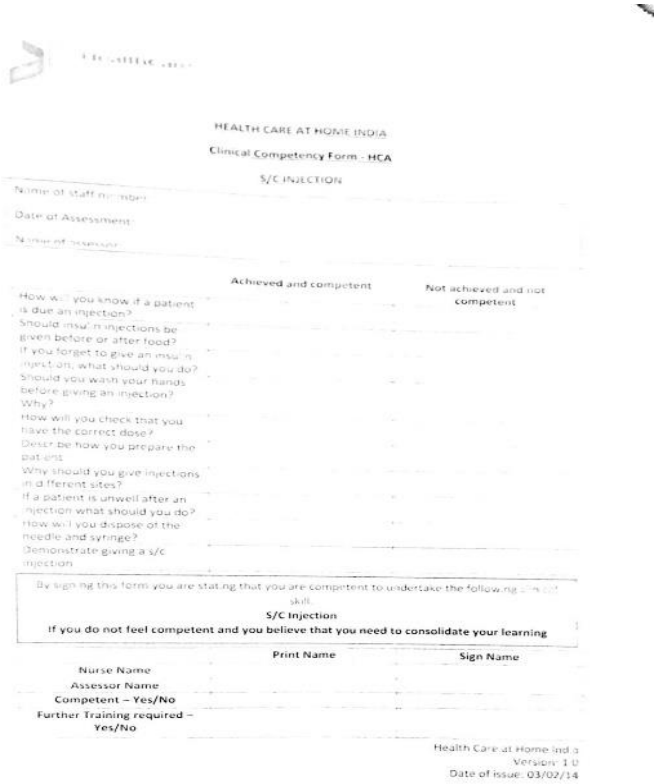
Nurses at HCAH is treated as the most important employees of the organisation as they act as a base to the organisation. No organisation can excel without a dedicated team working day and night on field and in case of Healthcare at Home this base lies in the hands of nurses and the healthcare attendants who are dedicated towards patient wellbeing and patient satisfaction, for them their duty lies in serving the patient in the best possible manner not only will they add value to the organisation but also will gather a special space in the hearts of the patient they treated.

Thus it's the responsibility of the organisation to treat their most important employees in the best possible manner.

Training plays an important role to enhance and improve the delivery of services at patients home and to bring out that efficiency from the nurses HCAH focuses on rigorous hiring and training process. There are set parameters on basis of which nurses are hired and trained, interview rounds includes both theoretical testing, behavioural testing and finally the practical testing.

Once a nurse is hired, he or she goes through six months of rigorous training and the assessment is done on specific parameters which the organisation has set for each and every nurse to go through. A fixed number of 33 parameters have been defined and designed for nurse training, and these include the following:

Both Pre-Post training assessment is done to understand the knowledge the nurse is carrying with him or her and what knowledge he or she has acquired after the training is done. Throughout the entire nursing stay, the nurses go through various activities and training sessions to keep them updated and the trainings can take place even when there is a new technology introduced in the organisation to make sure that the nurses are well equipped and totally updated with the technology and to keep their stay hassle free.



HEALTH CARE AT HOME INDIA

Clinical Competency Form - HCA

S/C INJECTION

Name of staff member:

Date of Assessment:

Name of assessor:

	Achieved and competent	Not achieved and not competent
How will you know if a patient is due an injection?		
Should insulin injections be given before or after food?		
If you forget to give an insulin injection, what should you do?		
Should you wash your hands before giving an injection? Why?		
How will you check that you have the correct dose?		
Describe how you prepare the patient		
Why should you give injections in different sites?		
If a patient is unwell after an injection what should you do?		
How will you dispose of the needle and syringe?		
Demonstrate giving a s/c injection		

By signing this form you are stating that you are competent to undertake the following clinical skill.

S/C Injection

If you do not feel competent and you believe that you need to consolidate your learning

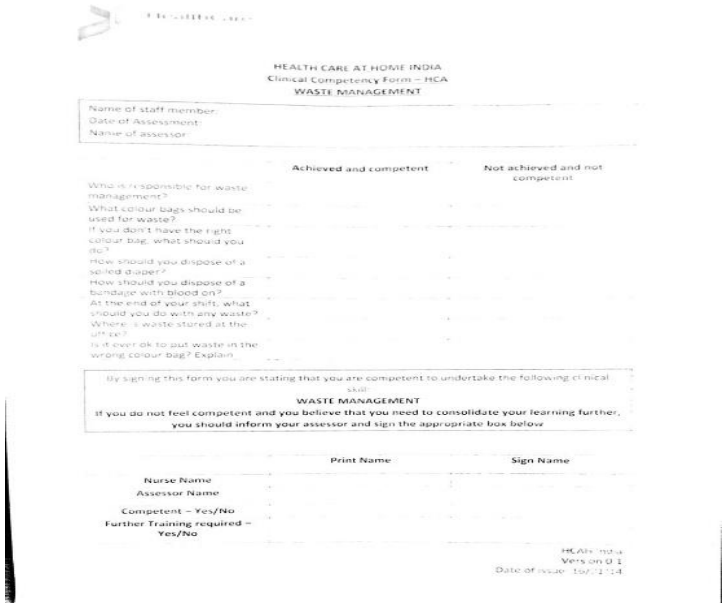
	Print Name	Sign Name
Nurse Name		
Assessor Name		
Competent – Yes/No		
Further Training required – Yes/No		

Health Care at Home India

Version: 1.0

Date of issue: 03/02/14

Figure 16: Training Assessment on Injection



HEALTH CARE AT HOME INDIA
Clinical Competency Form – HCA
WASTE MANAGEMENT

Name of staff member:
Date of Assessment:
Name of assessor:

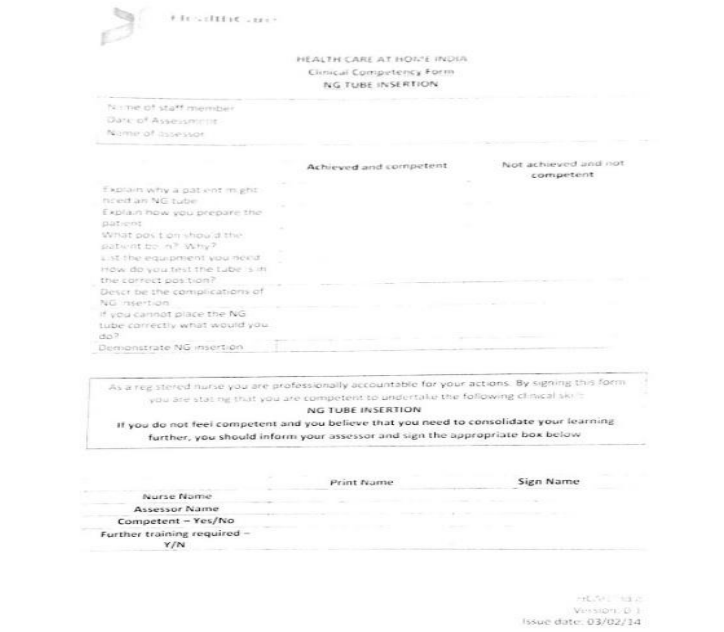
	Achieved and competent	Not achieved and not competent
Who is responsible for waste management?		
What colour bags should be used for waste?		
If you don't have the right colour bag, what should you do?		
How should you dispose of a soiled diaper?		
How should you dispose of a bandage with blood on?		
At the end of your shift, what should you do with any waste?		
Where is waste stored at the unit?		
Is it ever ok to put waste in the wrong colour bag? Explain		

By signing this form you are stating that you are competent to undertake the following clinical skill:
WASTE MANAGEMENT
If you do not feel competent and you believe that you need to consolidate your learning further, you should inform your assessor and sign the appropriate box below

	Print Name	Sign Name
Nurse Name		
Assessor Name		
Competent – Yes/No		
Further Training required – Yes/No		

HCA/F/013.2
Version: 0.1
Date of issue: 03/02/14

Figure 17: Training Assessment on Waste Management



HEALTH CARE AT HOME INDIA
Clinical Competency Form
NG TUBE INSERTION

Name of staff member:
Date of Assessment:
Name of assessor:

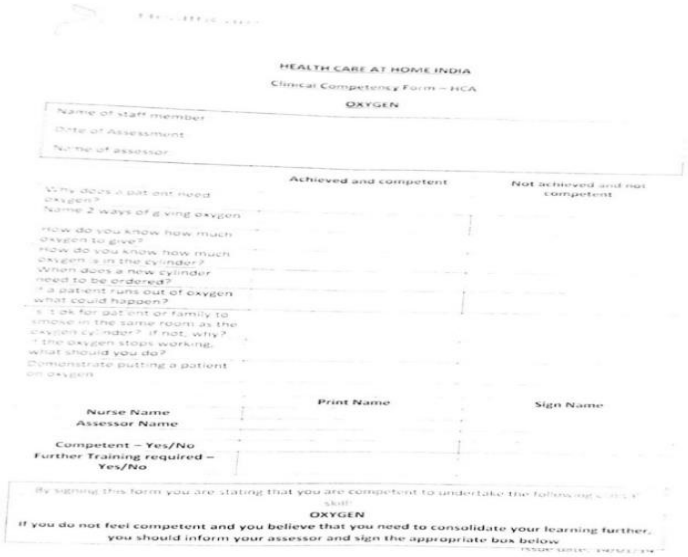
	Achieved and competent	Not achieved and not competent
Explain why a patient might need an NG tube		
Explain how you prepare the patient		
What position should the patient be in? Why?		
List the equipment you need		
How do you test the tube is in the correct position?		
Detail the complications of NG insertion		
If you cannot place the NG tube correctly what would you do?		
Demonstrate NG insertion		

As a registered nurse you are professionally accountable for your actions. By signing this form you are stating that you are competent to undertake the following clinical skill:
NG TUBE INSERTION
If you do not feel competent and you believe that you need to consolidate your learning further, you should inform your assessor and sign the appropriate box below

	Print Name	Sign Name
Nurse Name		
Assessor Name		
Competent – Yes/No		
Further training required – Y/N		

HCA/F/013.2
Version: 0.1
Issue date: 03/02/14

Figure 18: Clinical Competency on Insertion of PEG Tube



HEALTH CARE AT HOME INDIA

Clinical Competency Form – HCA

OXYGEN

Name of staff member

Date of Assessment

Name of assessor

	Achieved and competent	Not achieved and not competent
Why does a patient need oxygen?		
Name 2 ways of giving oxygen		
How do you know how much oxygen to give?		
How do you know how much oxygen is in the cylinder?		
When does a new cylinder need to be ordered?		
If a patient runs out of oxygen what could happen?		
Is it ok for patient or family to smoke in the same room as the oxygen cylinder? If not, why?		
If the oxygen stops working, what should you do?		
Demonstrate putting a patient on oxygen		

	Print Name	Sign Name
Nurse Name Assessor Name		
Competent – Yes/No Further Training required – Yes/No		

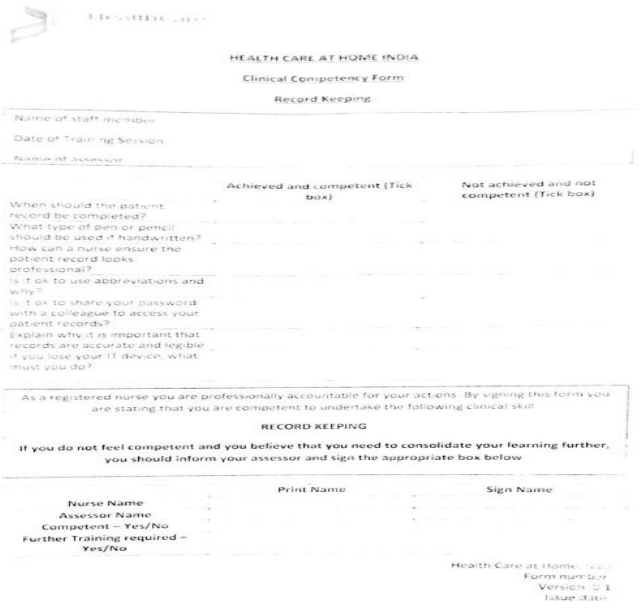
By signing this form you are stating that you are competent to undertake the following clinical skill:

OXYGEN

If you do not feel competent and you believe that you need to consolidate your learning further, you should inform your assessor and sign the appropriate box below

Issue date: [illegible]

Figure 19: Clinical Competency Form on Oxygen



HEALTH CARE AT HOME INDIA

Clinical Competency Form

Record Keeping

Name of staff member

Date of Training Session

Name of assessor

	Achieved and competent (Tick box)	Not achieved and not competent (Tick box)
When should the patient record be completed?		
What type of pen or pencil should be used if handwritten?		
How can a nurse ensure the patient record looks professional?		
Is it ok to use abbreviations and why?		
Is it ok to share your password with a colleague to access your patient records?		
Explain why it is important that records are accurate and legible		
If you lose your IT device, what must you do?		

As a registered nurse you are professionally accountable for your actions. By signing this form you are stating that you are competent to undertake the following clinical skill:

RECORD KEEPING

If you do not feel competent and you believe that you need to consolidate your learning further, you should inform your assessor and sign the appropriate box below

	Print Name	Sign Name
Nurse Name Assessor Name		
Competent – Yes/No Further Training required – Yes/No		

Health Care at Home

Form number

Version: 2.1

Issue date

Figure 20: Clinical Competency Forms on Record Keeping

HEALTH CARE AT HOME INDIA

Clinical Competency Form

Standard Precautions/Infection Control

Name of staff member

Date of Training Session

Name of assessor

	Achieved and competent	Not achieved and not competent
Describe what ANTT is		
Explain the 5 moments of hand hygiene		
Explain when gloves should be worn/hand rub used and why		
Discuss 5 ways of preventing the spread of infection		
Discuss the principles of sharp safety in relation to infection control		
Describe hand washing procedure in the home environment		

As a registered nurse you are professionally accountable for your actions. By signing this form you are stating that you are competent to undertake the following clinical skill

STANDARD PRECAUTIONS/INFECTION CONTROL

If you do not feel competent and you believe that you need to consolidate your learning further, you should inform your assessor and sign the appropriate box below

	Print Name	Sign Name
Nurse Name		
Assessor Name		
Competent – Yes/No		
Further Training required – Yes/No		

Health Care at Home India
Form number: 01
Version: 0.1
Date of issue:

Figure 21: Clinical Competency Forms on Standard Procedural/ Infectious Form

HEALTH CARE AT HOME INDIA

Clinical Competency Form – HCA

EYE CARE

Name of staff member

Date of Assessment

Name of assessor

	Achieved and competent	Not achieved and not competent
Why does a patient need eye care?		
How do you know a patient needs eye care?		
How should you prepare a patient for eye care?		
What do you use to clean a patient's eyes?		
Should you wear gloves when doing eye care? Why?		
Should you use the same swab to clean both eyes? Explain		
If the eye is red, or is oozing, what should you do?		
If eye drops or ointment is needed, should you clean the eyes before or after?		
Demonstrate eye care		

	Print Name	Sign Name
Nurse Name		
Assessor Name		
Competent – Yes/No		
Further Training required – Yes/No		

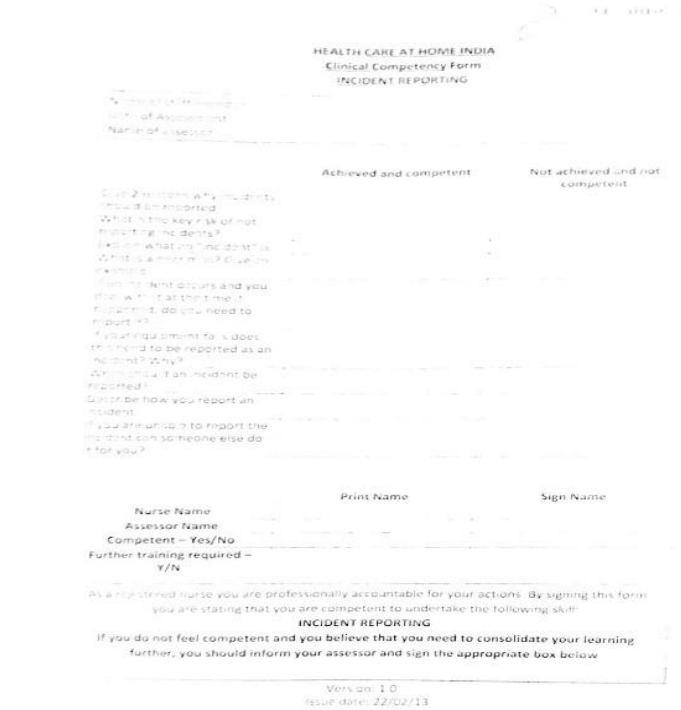
By signing this form you are stating that you are competent to undertake the following clinical skill

EYE CARE

If you do not feel competent and you believe that you need to consolidate your learning further, you should inform your assessor and sign the appropriate box below

HCAH Ind 3
Version 0.1
Issue date: 14/01/14

Figure 22: Clinical Competency Forms on Eye Care



HEALTH CARE AT HOME INDIA
Clinical Competency Form
INCIDENT REPORTING

Achieved and competent | Not achieved and not competent

Print Name | Sign Name

Nurse Name
Assessor Name
Competent – Yes/No
Further training required – Y/N

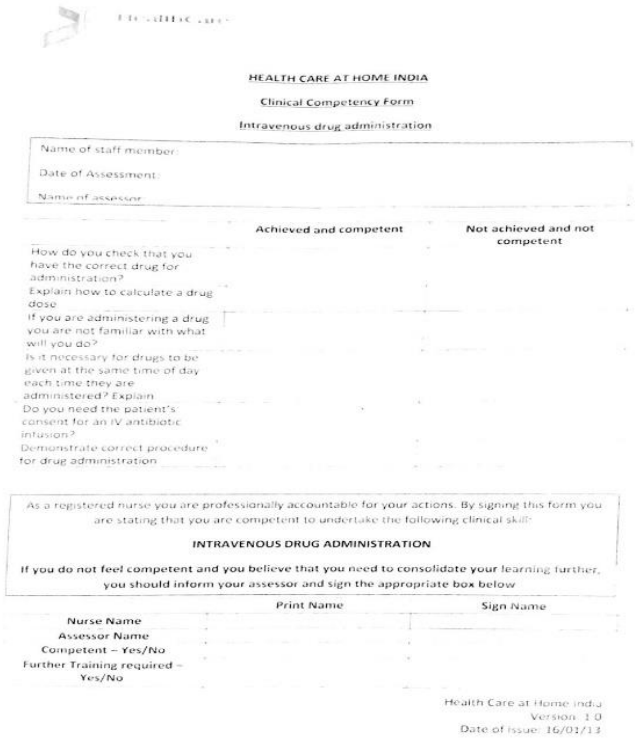
As a registered nurse you are professionally accountable for your actions. By signing this form you are stating that you are competent to undertake the following skill:

INCIDENT REPORTING

If you do not feel competent and you believe that you need to consolidate your learning further, you should inform your assessor and sign the appropriate box below

Version: 1.0
Issue date: 22/02/13

Figure 23: Clinical Competency Forms on Incident Reporting



HEALTH CARE AT HOME INDIA

Clinical Competency Form

Intravenous drug administration

Name of staff member:
Date of Assessment:
Name of assessor:

	Achieved and competent	Not achieved and not competent
How do you check that you have the correct drug for administration?		
Explain how to calculate a drug dose		
If you are administering a drug you are not familiar with what will you do?		
Is it necessary for drugs to be given at the same time of day each time they are administered? Explain		
Do you need the patient's consent for an IV antibiotic infusion?		
Demonstrate correct procedure for drug administration		

As a registered nurse you are professionally accountable for your actions. By signing this form you are stating that you are competent to undertake the following clinical skill:

INTRAVENOUS DRUG ADMINISTRATION

If you do not feel competent and you believe that you need to consolidate your learning further, you should inform your assessor and sign the appropriate box below

Print Name | Sign Name

Nurse Name
Assessor Name
Competent – Yes/No
Further Training required – Yes/No

Health Care at Home India
Version: 1.0
Date of Issue: 16/01/13

Figure 24: Clinical Competancy form on Intavenous drug administration.

Advancement in technology is impacting the way that most people are doing their jobs – and nursing is undoubtedly no different. With innovations in medical industries and technological improvements are factually changing the way that the nurses practice, from how they deliver care to patients to how they manage clinical workflows.

The Nursing Technology- Benefits

The Nursing technology includes an assortment of devices, systems and software designed to reduce the amount of time nurses must spend on tracking down equipment, locating and collaborating with other staff members and updating and uploading patient charts. Healthcare at home, makes sure that the nursing staff visiting the patient at his or her carries all the required and necessary equipment's with him or her. Other technological advancements serves to improve precision and patient safety by reducing medical errors and accessing sensitive patient records. In addition to improved efficiency accuracy, and safety, technology is also allowing nurses to spend more time on direct patient care.

Types of Nursing Technology

The newer technological advances at HCAH include real time data collection and up gradation of data collected on the tabs provided to generate a Home Visit Report HVR which is send both to the patient and the treating doctor.

Other devices include tablet computers and mobile charts. Mobile devices reduce the amount of time nurses spend doing various other activities at patient's home for the patient and their family which can be redirected towards better patient care. In addition, nurses can access patients' records and test results from their bedside as well as clinical resources and guidelines to assist with patient care.

Patient care support system is rapidly becoming the gold standard at Healthcare at Home settings, replacing outdated paper records. In addition to providing instant access to patient medical histories and records, PCS also improves coordination between all members of a patient's care team, alert caregivers to potential prescription drug interactions and flag test results and other items for follow-up.

Nurses at Healthcare at Home are well equipped with a nursing bag containing an emergency kit along with other consumables such as syringes, needles, alcohol swabs, cotton rolls, sanitizers, waste collection bags, oxygen cylinder, and other useful items while managing a critical care patient.

Figure 25: Home visit Bag

Figure 26: Emergency Kit

The **Home visit bag** is a bag carried by the nurses during specialist visit, these bags enables the nurses to perform a nursing procedure with ease and neatness, to save time and efforts with the end view of rendering effective nursing care to clients.

- The bag contains basic medical care and instruments which is necessary for giving care to the patient such as syringes, needles etc.
- The bag should contain all the necessary articles, supplies and equipment's that will be used to answer when there is an emergency at the patients place and is known as an emergency kit.
- The bag and its contents are to be cleaned very often, the supplies are replaced and ready for use anytime to make sure there aren't any expired medications inside the bag.
- The bag and its contents should be well protected from any direct contact with any article in the patient's home.
- The arrangement of the contents inside the bag should be in a manner that its convenient for the user, to facilitate with efficiency and avoid confusion.

Figure 27: Oxygen Cylinder

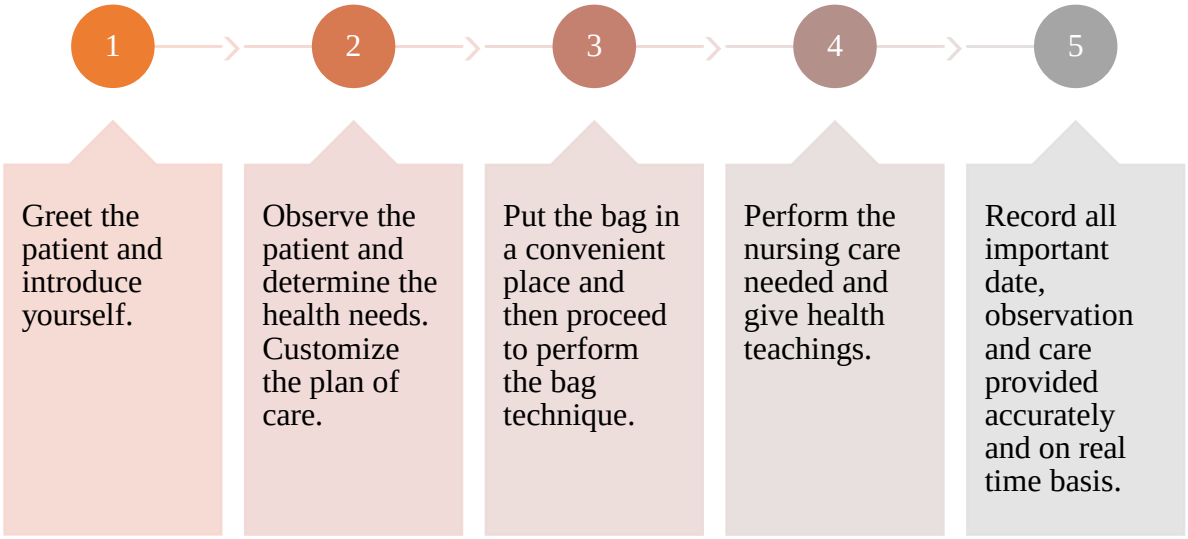
Figure 28: Biomedical Waste bags (BMW Bags)

Figure 29: Sharp Container Box

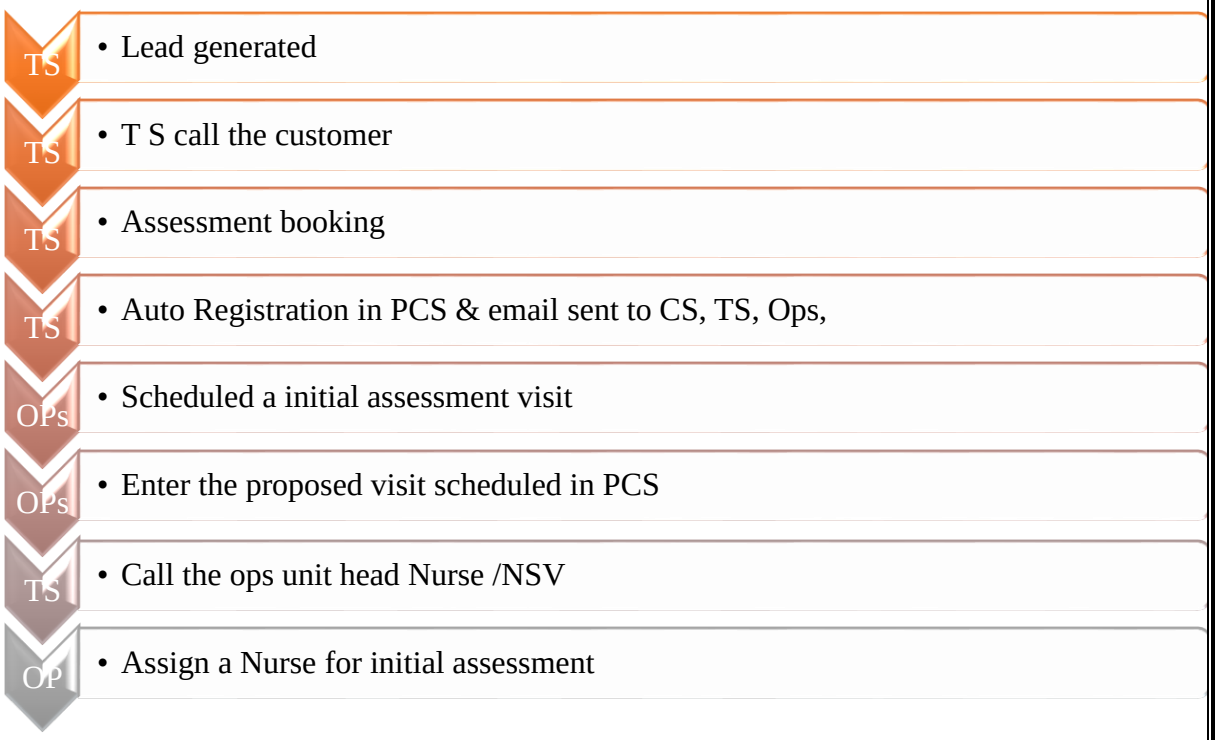
Impact of technology in Nursing at Healthcare at Home

Healthcare at Home allows the healthcare workers to assess the home of the patient and family situations in order to provide the necessary nursing care and health related activities in order to cater the patient and in performing home visits, it is vital to prepare a customize care plan of the visit to meet the needs of the patients and achieve the best results with desirable outcomes.

STEPS OF HOME VISIT

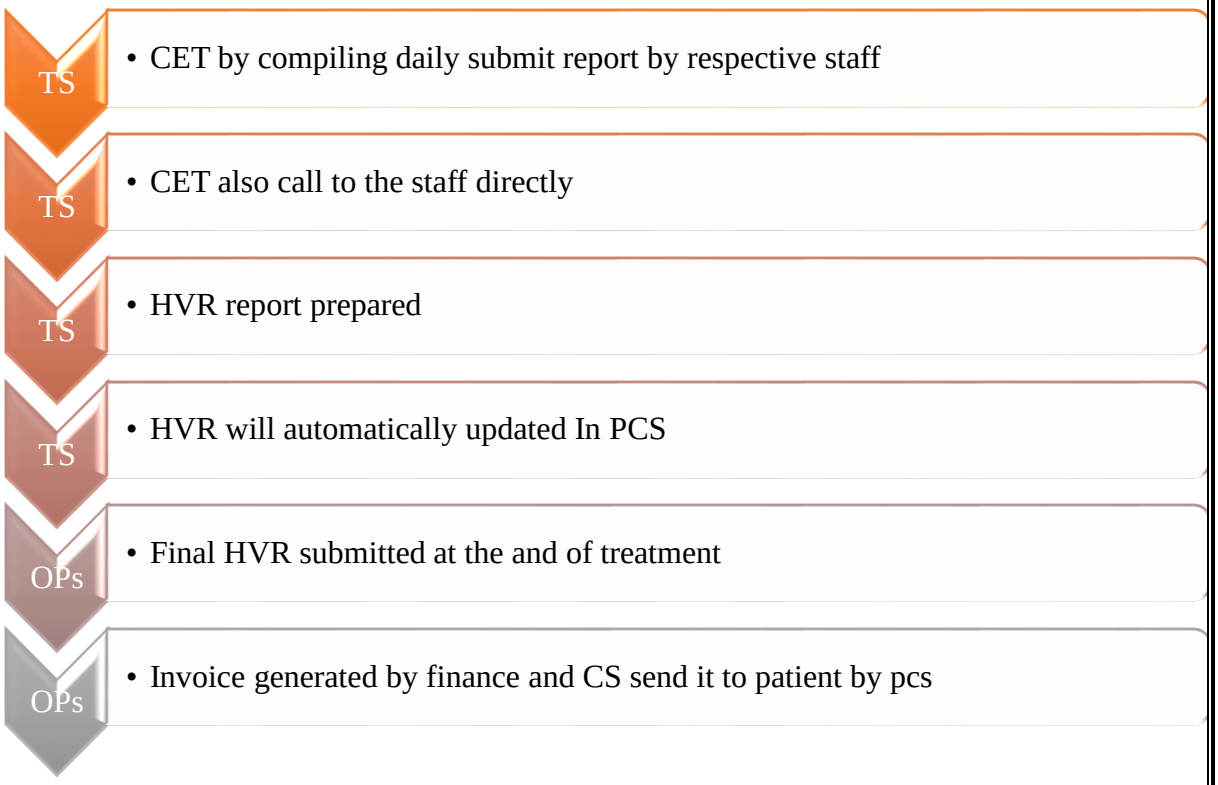


Process of providing Nursing services to patient



- Ops • Assign a Nurse for initial assessment
- Ops • On the basis of physical examination Initial report prepared
- TS • Initial report email to TS
- TS • TS call the customer again ,
- OPs • If patient Agree
- OPs • Staff availability check with Ops
- TS • If staff available than send a mail to CS for FCF
- OP • FCF done by CS

- TS • Welcome call by CS and FCF done by CS
- TS • Service package created by CS
- TS • Unit Ops add the required number of visits
- TS • Coordination with staff (N/P/other) and vendor
- OPs • Visit assigned by local nursing manager /NSV
- OPs • If patient/ NOK want report
- TS • CET will make HVR
- OP • HVR send it to NOK/ Pt/ Dr (depend on id availablity)



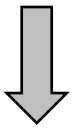
Process mapping of Payments at HCAH

HCAH believes in collecting advance payment before starting with the services, and this is the area where in most loop holes lie in, not all patients are financially so strong to pay entire amount before the starting of the services and specially after paying hospital bills.

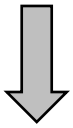
I was made to go through this very important department of HCAH because to understand where are the gaps between the unit and the head office and where is a communication gap lying to be filled to smoothen down the mapping of payments and sooner the payment is collected from the patient, the deposition must be updated on the PCS so as to make sure that the collection has been made and updated on the finance sheet.

Payment Collection Process:

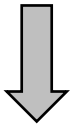
Lead (online through TS or offline via BD)



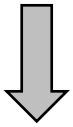
Registration in the PCS



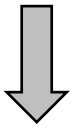
Code creation by the unit ops in case of free initial assessment



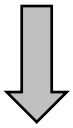
Conversion of the package



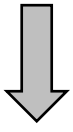
PCS ID created in the name of the patient



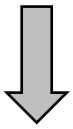
Welcome call by the CS team (package details detailed to the patients NOK).



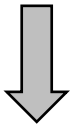
Terms and conditions of the package detailed to the NOK and package breakdown and payment to be made with in advance before the start of the services.



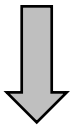
Financial consent form (FCF) is raised on the PCS system by the CS team.



Authorization and consent form & Payment form two tickets are raised on zoho support system by CS in order to get a track of the package and resolve any sort of queries.

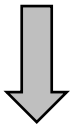


Package starts when at least half of the payment is made by the patient, payment collection starts.

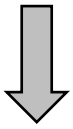


Payment can be collected via following routes:

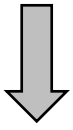
Cash, Cheque, PDC, Paytm, Card, Online transfer via pay u link or NEFT



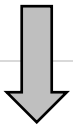
Continuous reminders are send to the patient after two days of the start of the package for the rest of the payment by the unit ops and the CS.



Staff from the unit is send to collect the payment from the patient if the mode of payment is offline such as via cash, cheque, PDC, card or through paytm.

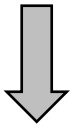


Ezetabs (payment receipts) are cut to get real time data beneficial both for the patient and the unit ops and HO.

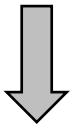


Payment from the staff is then deposited to the unit ops.

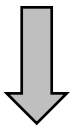
Cash, Cheques are deposited in the banks to generate the deposit slip.



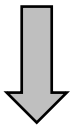
Payment collection sheet is then updated and send to the HO finance by the unit ops along with the deposit slips.



Finance team HO updates the details from the payment collection sheet on the PCS.



Finally the payment are then updated in the tally.



Closure.

Challenges faced by the **Unit during payment collection**:

- **Cheque bounce**: It becomes an issue to recover the payments once the the cheque is bounced delaying the entire payment process on the first step.
- **PDC**: These cheques are either cancelled by the NOK once the services end or is bounced bank, further increasing the outstanding.
- **Online Transactions**: The NOK on the first day ensures of paying online and services start but later keep giving excuses for not making the payment on time, adding to delay of the process.
- **Manpower crunch**: Receiving of payments by the NOK is majorly done by the runners or the staff, which is where the gap starts developing as it becomes difficult for the staff to go to the unit and deposit the pending amount to the unit.
- **Regular reminders:** Inspite of regular reminders calls and text messages patient keeps coming up with various excuses.

Challenges faced in HO:

Customer Support:

- **Lack of coordination between unit and CS:** Unit does not respond on the tickets/ emails send to them by CS but directly update the payment collection sheet, thus increasing the quantity of tickets untouched or late reply hence further slowing the process.
- **Outstanding:** Huge amount is lying outstanding because of payment due or no response on the tickets generated.

Financial team:

- **Closure of reports:** Reports must be closed on regular basis by the unit in order to avoid errors in the report.
- **Bank details- UTR number:** Issue arises when the bank details go missing by the unit while filling up the collection sheet such as UTR number, date of collection and other remarks.
- **Ezetab:** Ezetabs are not cut on real time, hence challenge arises in extracting out the real time data from the system.
- **Date of payment** is different from the slip generated on ezetab.

- **Multiple entries** in one single day regarding the payment received in the collection sheet send to the HO by the unit, which becomes difficult for the finance dept. to manage.
- **Modifications in the packages:** Certain packages which are modified on the spot looking at the patient condition are not informed to the finance dpt. due to which
- **Replies on Reversals** if delayed becomes difficult for the team to further process and accommodate the pending payments.

SUGGESTIONS:

- Payments should be done within 24hrs dividing into two parts 40% in advance and 60% within three days of the package sold. Till the time advance is not received services should not start.
- Tickets must be replied regularly and on time to time to avoid any out standings.
- If possible collection sheet can be updated twice in a day; before and after 2pm.
- If the NOK is willing to pay online, then till the time the transaction has not occurred services should not start.
- Drafts can also be made a mode of payment to avoid cheque bounce issues.
- Regular/Follow up meetings must be held between the unit and the HO either face to face or over a call.
- Payment should only be collected by the runners and not the staff working on the field so that payment is collected on time and collection sheet is updated timely.
- Ezetab and collection sheet should be cut and updated simultaneously.
- Closure reports must be updated on regular basis.
- Date of transaction must be mentioned on the collection sheet.
- CS must promote online transaction over the usage to cheques.

Chapter 5: References

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4. Henderson MD: Operations management in health care, NCBI, Pubmed – 7600237.
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6. Theoretical perspectives in operations management: An analysis of the literature On Theoretical_perspectives_in_operations_management_An_analysis_of_the_literature: publication: 28141889.
7. International Journal of Operations & Production Management 35(8):1182-1206 · August 2015: DOI: 10.1108/IJOPM-02-2014-0089
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