

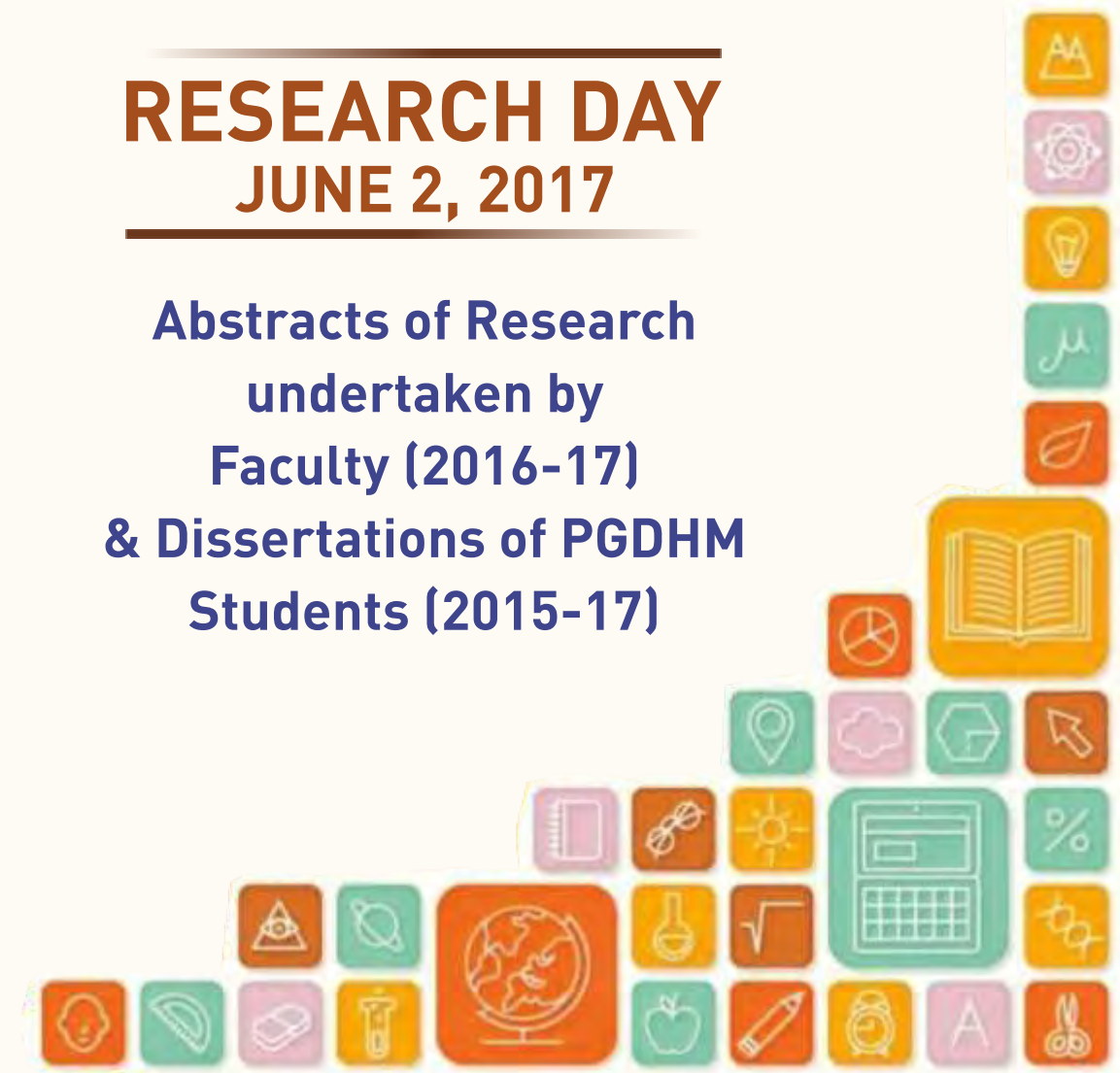


**International Institute of
Health Management Research**

ANUSANDHAN — 2017 —

RESEARCH DAY
JUNE 2, 2017

**Abstracts of Research
undertaken by
Faculty (2016-17)
& Dissertations of PGDHM
Students (2015-17)**



International Institute of Health Management Research

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ANUSANDHAAN 2017 Report released by



Hon'ble. Min. **Shri Faggan Singh Kulaste**,
Minister of State for Health and Family Welfare

Research Day Inaugurated by

Prof. Dr. Saudan Singh,

MBBS, MD, PhD

Vice Chancellor,

Hemvati Nandan Bahuguna Uttarakhand Medical Education University

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FROM THE DIRECTOR'S DESK



Health scenario is rapidly changing. Yet while change is often disruptive, it is important to remember that we in public health are used to it. From preparing for and responding to emerging threats to weathering the unpredictability of resource reallocation and funding shifts, public health practitioners by nature are resilient and committed to leading through uncertainty. These skills have never been more crucial than they are now, with public health, health care and community organizations sharing accountability for improving population health. There is a need to generate and use evidence to anticipate and address these changes.

IIHMR is a premier institute in health management research, education, training, program management and consulting in the health care sector globally. The Institute is known as a learning organization with its core values of quality, accountability, trust, transparency, sharing knowledge and information. The Institute aims to contribute for social equity and development through its commitment to support programs which aim poor and the deprived population.

IIHMR plays a major role in promoting and conducting research in policy analysis and formulation, strategy development and effective implementation of policies, training and capacity development and preparing professionals for the healthcare sector. We undertake capacity building of health professionals through our executive training programs.

In our pursuit of research opportunities, we look to strategic collaboration with local and international research centers with the intention of achieving critical mass and benefitting from multidisciplinary expertise. We will continue to engage in competitive research programs to promote national and international collaborations. The research is mainstreamed into all our activities including academics. Our post graduate students are exposed to research in the priority areas identified by the organizations involved in delivery of health care. Each one of the students' research work is closely monitored by senior faculty. This sets the foundation of the evidence-based practice in their future professional life.

I feel an immense pleasure and extreme happiness to announce the release of "ANUSANDHAAN - 2017" at IIHMR Delhi with utmost care and quality. This is the fruitful result of research undertaken by our dedicated faculty members and dissertation of students who contributed to the compilation. This report will give you a glimpse of research activities undertaken at IIHMR Delhi.

I wish everyone present here a very good luck and may you all continue to shine like a diamond and make the institution proud with your sleepless efforts.

Thank you everyone for being a part of this wonderful event!



Section 1

Research work by IIHMR' Faculties

Evaluation of Tobacco mCessation programme in India

Dr. Preetha G S, Dr.Pradeep Panda, Dr.Sumant Swain, Dr.Vivek Pathak

Nearly 35% of Indians over the age of 15, or some 275 million people, use tobacco. The current cost of tobacco use in India includes 1 million deaths per year (approximately 1/6 of all tobacco-related deaths worldwide), and billions of dollars of direct attributable health cost. The World Health Organization (WHO) and the International Telecommunications Union (ITU) have formed a partnership called the 'Be He@lthy, Be Mobile' Initiative to use mobile technology – in particular text messaging and apps – to help combat non communicable diseases. In 2015, the Ministry of Health and Family Welfare and the Ministry of Communication and Information Technology of Government of India partnered with BeHe@lthy, Be Mobile to create a mHealth programme to help those who want to quit tobacco use. This evaluation is being conducted with the expectation that information on quitting experiences of the registered users as well as their perceptions and experiences related to the programme would provide key inputs to further improving the programme. The objectives of the evaluation were to determine the quit rates, 6 months after enrolment and to understand the user experiences. Telephonic interviews of mCessation subscribers were conducted to assess quit rates. The sample size determined for this estimation was 4500, with the assumption that this sample should provide good precision for an estimate of the prevalence of quitting at 3% in the overall population of 1.7 million registered mCessation programme users. Accordingly, a sampling frame was constructed, of the registered subscribers of mCessation programme between 21 June and 20 September 2016, who numbered to 453990. Telephonic interviews were conducted of 228 subscribers who had not responded after enrolment to assess user experiences. The study findings were presented as one month quit rates, 6 months after enrolment, frequency and patterns of tobacco use, quit attempts among current tobacco users, opinions of the subscribers regarding the programme as well as recommendations for improvement.

Social diagnosis of neonatal deaths in Haryana: the impact of contextual factors on pathways of survival of newborns

Dr. Preetha G S, Dr. B S Singh

The fall in neonatal mortality has not matched up to the more dramatic fall in infant and child mortality in the last two decades. Most of the neonatal deaths are due to preventable causes of prematurity, birth asphyxia or incidents during child birth and infections. The study will provide critical information as to how the access and utilization of interventions for neonatal survival are guided by social, behavioral and health system factors at the local level. The objective of the study is to delineate the contextual factors which affected access and utilization of interventions for neonatal survival through social autopsy of neonatal deaths. The study is of 2 year duration starting from April 2017 and will be carried out in four districts of Haryana- two high infant mortality districts and two low infant mortality districts. A total of 350 neonatal deaths of the previous year will be extracted from the records of the district hospital and community health centers (CHC) and primary health centers (PHC) of two blocks. The principal caretaker of the deceased newborn will be the key informant. The study population will also include the staff of the health facilities as well as members of the community. The technique of data collection will be social autopsy. The social autopsy tool is semi structured and uses a mix of open ended and closed ended questions to elicit information of the social, behavioral and health system factors which contributed to the death of the newborn. This study intends to use the conceptual framework of 'Pathways to Survival' to capture the non biological factors which acted as contributing factors to the death of the neonates and evolve a framework of action points at different levels - community, care centre and their interfaces, which would improve chances of their survival.

National Family Health Survey – 4 (NFHS-4) for the States of Odisha, Rajasthan and Chhattisgarh

Study Team: Odisha - Pradeep K Panda (PI), Ranjanan Prusty, Amiya K Mahant, Sarthak Mohapatra, Rajasthan - Anoop Khanna (PI), B S Singh (Demographer), R S Rathor, Kailash Prajapati, Chhattisgarh - J.P.Singh (PI) , Arindam Das, Amlan Dutta, Sukesh Bhardwaj (IT Coordinator)

The National Family Health Survey 2015-16 (NFHS-4), the fourth in the NFHS series, provides information on population, health and nutrition for India and each State / Union territory. NFHS-4, for the first time, provides district-level estimates for many important indicators. In this round, information on malaria prevention, migration in the context of HIV, abortion, violence during pregnancy etc. have been added. The scope of clinical, anthropometric, and biochemical testing (CAB) or Biomarker component has been expanded to include measurement of blood pressure and blood glucose levels. NFHS-4 sample has been designed to provide district and higher level estimates of various indicators covered in the survey. However, estimates of indicators of sexual behaviour, husband's background and woman's work, HIV/AIDS knowledge, attitudes and behaviour, and, domestic violence will be available at State and national level only. As in the earlier rounds, the Ministry of Health and Family Welfare, Government of India designated International Institute for Population Sciences, Mumbai as the nodal agency to conduct NFHS-4. The main objective of each successive round of the NFHS has been to provide essential data on health and family welfare and emerging issues in this area. NFHS-4 data will be useful in setting benchmarks and examining the progress in health sector the country has made over time. Besides providing evidence for the effectiveness of the ongoing programmes, the data from NFHS-4 help in identifying need for new programmes with area specific focus. IIMR gathered information from Odisha (30,242 Households, 33,721 Women, and 4,209 Men), Rajasthan (34,915 Households, 41,965 Women, and 5,892 Men) and Chhattisgarh (20,275 Households, 25,172 Women, and 3,529 Men) .

Assessment of Urban Primary Health Centres (U-PHCs) in National Capital Territory of Delhi

Dr. Pradeep Panda, Ms. Kirti Udayai, Ms. Shikha Bassi and PGDHM students

The International Institute of Health Management Research (IIHMR Delhi), with financial support from The National Health Systems Resource Centre (NHSRC) carried out a study to assess the selected 131 Urban Primary Health Centres (U-PHCs) in NCT of Delhi (50% of all U-PHCs) using thematic checklists of U-PHCs defined under the National Quality Assurance Standards, Ministry of Health and Family Welfare, Government of India. The study generated scorecards based on the assessment, and prepared baseline assessment reports for assessed facilities and provided recommendations for improvement in the quality of services at the facilities. In order to strengthen the public health research capacity, IIHMR facilitated the students to have a bird's eye view of public health systems and functioning of the facilities. IIHMR and NHSRC jointly provided the necessary training to the students on the evaluation methodology and use of quality assurance standard to assess the facilities. The students collected and analyzed the data as per guidelines and quality parameters, and identified the gaps of each U-PHC. This study presents a successful example of engaging the students in research projects to generate insights and find solutions by applying their knowledge and analytical skills in the urban community health settings.

Pretesting of IEC Materials (Training Videos, Awareness Videos and Print Materials) on Maternal Infant and Young Child Nutrition (MIYCN) for Front-line Workers and Community Mobilization

Dr R. Sarala, Dr. Pradeep Panda, Dr. Veena Nair

At the 65th World Health Assembly, May 2012 as WHO member state, India has endorsed the comprehensive implementation plan for Maternal Infant and Young Child Nutrition (MIYCN) and reaffirmed commitment for achieving the set targets. Despite India achieving, substantial gains in the health and nutrition front, 39% of India's under 5 year children are stunted and 15% are wasted. In order to support behavior change strategy for MYICN, we wish to know the effectiveness of the communication materials in reaching out to the target audiences. The objective is to pretest the developed communication materials with the intention of understanding whether they have the capability to convey the intended message and motivate the audiences to change behavior. The specific questions of the study are: (a) Can the audiences comprehend the material?, (b) Is the material persuasive enough to induce change in audiences and nudge them towards the desired behavior?, and (c) Is there any negative reaction/feeling generated by the material and how to fine tune the material to replace the negative elements and make them positive? The pre-testing of print materials and videos will be conducted in rural and urban areas of Hardoi district in UP and Nalanda district in Bihar. In total, 18 Focused Group Discussions (FGDs) and 38 In-depth Interviews (IDIs) will be conducted to pre-test 6 types of print materials such as family calendar on diet, flip chart on MIYCN, Job aid-reminder card and flyer on MYICN. In addition, 8 small group discussion (4 Small group discussion* 2 state) and 16 IDIs (8 IDIs * 2 states) will be conducted to pre-test 6 type of videos on maternal nutrition, complementary feeding and diet. The key target audiences to be considered are mother-in-laws, husbands, pregnant women, community leaders, Auxiliary-nurse Midwives, Anganwadi Workers, self-help group members and private doctors/chemists. We will conduct content analysis of the responses from the FGDs and IDIs, determining the categories for the relevant variables specific to the objectives.

Review of MIS Used to Deliver Social Protection Programmes

Dr. Anandhi Ramachandran, Mrs Veena Sarkar Nair, Dr B.S.Singh, Dr. Dhananjay, Dr. Sumant Swain, Mr. Ashgar Abbas

The objectives of the study were to conduct a comprehensive review of the existing MIS related to social protection in India and beyond, identify the key success factors and lessons learned, identify the main components of the MIS, to identify the gaps in the information flow/ linkages between the stakeholders and community and understand the barriers in information management. This research is based on both secondary and primary data sources. A broad-ranging literature review provided a foundation for the study and an understanding of the wider context and debate. This resulted in a conceptual framework and short listing of government schemes that were then targeted for fieldwork methodology. An inductive approach to data analysis was taken whereby the themes were allowed to emerge independently from the fieldwork data, and then cross referenced with those from literature review. This process resulted in four areas of components of MIS, good practices followed, key success factors and limitations and barriers to information management in MIS. The existing MIS of the schemes were selected for reviewing and the characteristics were evaluated that could suggest a reliable and effective MIS that could enable the program implementers to use the data collectively in disaster risk reduction of vulnerable children, to plan, prepare, prevent, respond and recover from stress and shocks. These characteristics have been based on the four components of framework for assessment of MIS in Social Safety Net programs: Governance and Organizational Structure, Information Management, Application Management and Infrastructure. Based on the framework developed recommendations have been provided for designing and implementing social protection related MIS in India.

Evaluation of Life Skill Assessment Tool Kit

Dr Vanishree, Dr Anandhi Ramachandran, Dr Sumesh Kumar, Dr Sumant Swain, Mr Gaurav Srivatsava

Life Skills Education (LSE) is an important activity which enables children to identify the problems in their lives, think of probable solutions and practice them. The LSE Assessment toolkit (LSAT) developed by Room to Read (R2R) discusses the various dimensions related to life skills education based on the WHO conceptual framework and adopted by R2R as a part of the Girls Education Program (GEP) curriculum in all their project countries. Ten dimensions of life skills are assessed through this tool kit that involves various methods like Likert type questions, mind mapping games, mirror drawing, short stories and self assessment questions. Totally nine Government schools from Phalodi and one from Jasola were selected and a total of 350 samples of students from various age groups and grades were inducted for the survey. The tool was checked for reliability and effectiveness. The overall reliability of the tool was found to be 0.70. The major observations are that the tool is validated and can be adopted for rapid Life Skill assessment in a scalable way with larger samples. Positive aspects of the tool are the sections related to scenarios, relationship building, short stories and mirror drawing. These extracted quick responses from students invariable of the age. The tool seems to have clearly defined sections that can be administered together or separately. Overall the tool is effective in capturing all the dimensions mentioned in WHO framework and can be easily adopted by all - social workers, educators, trainers, program managers etc who are working towards imparting Life Skill Training to the young girls so that they become capacitated to take safe, healthy and own decisions in profession and personal lives.

Geospatial Mapping of Diabetes, CVD and Cancer Risk Hotspots and study of Risk Assessment

Dr. Anandhi Ramachandran, Dr. Sumant Swain, Dr. Vivek Kumar Pathak, Mr. Ashgar Abbas

Non-communicable diseases (NCDs) are a major cause of morbidity and mortality in India. People of all age are affected and it is gaining prominence among rural population also. All this necessitates seeking best practices to raise awareness; education and prevention around NCDs. Geographical Information System (GIS) are being extensively used to map the epidemiological information of chronic diseases with reference to space and time. Its applicability to NCDs, especially in tracking individual context is less. The current study has been carried out in the rural areas of North East Delhi (Delhi) and Jhajjar (Haryana) The main focus is to explore the possibility of using GIS to develop maps based on modifiable risk factors. Using the WHO stepwise approach, a cross-sectional study was carried out among a total of 3200 rural people of 15-64 years age-group in the districts covering nearly 18 villages. Information on common modifiable risk factors of diabetes, cardiovascular disease and cancer was obtained through standardized protocol through household survey. Trends related to smoking, use of smokeless tobacco, alcohol drinking, average consumption of fruits and vegetables, salt and fat consumption between males and females and different age group have been calculated. Prevalence of overweight and obesity was calculated among men and women in all age-groups. In addition presence of second hand smoking, family history related to NCD occurrence, awareness to risk factors and health seeking behavior have also been examined. In addition categorization of the risk groups into high, moderate, low is expected based on the identified risk factor for developing thematic maps using GIS. It is hoped that the results will provide an insight of utilizing GIS as a best practice to map NCD risk factors that can be further used for a targeted approach of community based health promotion and monitoring of NCDs.

Rotavirus Vaccine in UP – an exploratory study

Singh BS, Srivastava DK

Rotavirus is the leading cause of severe diarrhea in children and in India and if severe Diarrhea not treated properly, it can lead to severe dehydration, hospitalization or even death. The objectives of this study were to understand demand and usage of Rotavirus vaccine, frequency of administration of the Rotavirus vaccine, profile of the clients with demand of Rotavirus vaccine for their child, experience on side effects, challenges related to demand and acceptance of Rotavirus vaccine and suggestions of pediatricians for higher usage of Rotavirus vaccine. This study had been conducted in Lucknow, Bahraich, Balrampur, Pilibhit and Shravasti. Some randomly selected clients had also been approached for detailed profile of the children receiving or refusing Rotavirus vaccine and experience on side effects and details related to reoccurrence or occurrence of the diarrhea to the child based on details available with pediatricians. Pediatricians has been selected randomly with the help of project team members of the Save the Children. It was observed that Rotavirus vaccine is available mainly at Private Nursing Homes, Private Clinics, and Medical Shops of district headquarters, and because of limited availability and affordability. Most of the parents are not aware about benefit, side effect of Rotavirus vaccine. Since Rotavirus vaccine are available only at nursing home/clinic and it cost too much, economically poor people unable to get Rotavirus vaccine. Development of an action plan is recommended to map the government health facility/provider and increasing awareness regarding use of Rotavirus vaccine in the community through IEC and BCC. Dissemination of need, benefit and timing receiving rotavirus vaccine through Print and Mass media is also required and study highly recommend to address WASH issue i.e. Safe drinking water, hygiene and open defecation in the community.

Climate Change and Malaria in Sub Himalayan Region and Central India

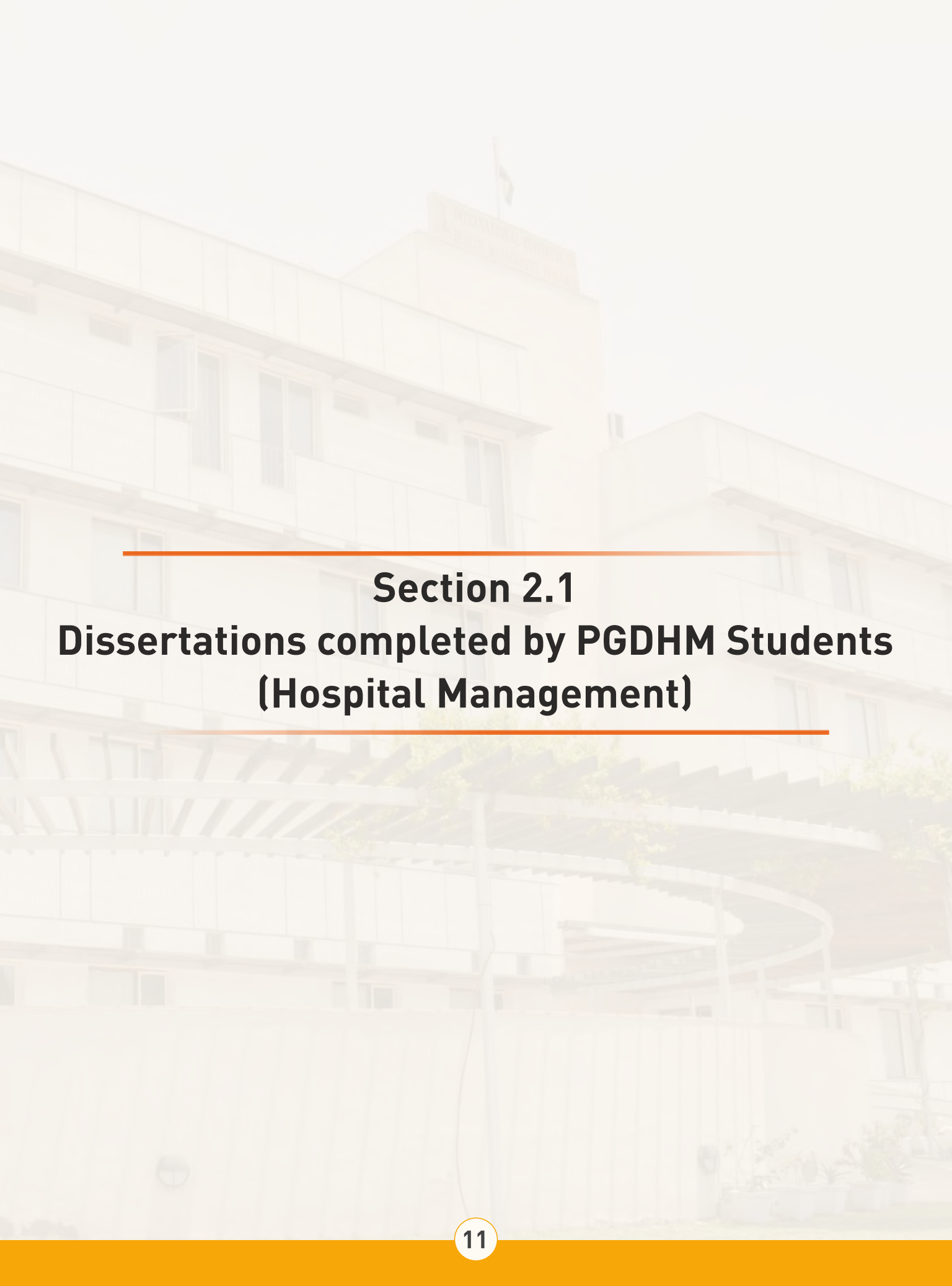
Dr. Vinay Tripathi, Prof. Rais Akhtar, Dr. Preetha G S, Dr. Nemika Relhan, Dr. Sumant Swain, Dr. Vivek Kumar Pathak, Gaurav Shrivastava, A Abbas

Climate change is a matter of concern and deliberation, both at the national and international level, due to its potential consequences and direct and indirect impacts on human wellbeing. Human health is one of the spheres where the impact of climate change is inevitable. The impacts on human health ranges from events like deaths or diseases to events, such as, wider spread of different vector-borne diseases, which are sensitive to climate change. Malaria is one such vector-borne disease which is most sensitive to long-term environmental change. Three main climatic factors, namely, temperature, precipitation, and relative humidity predict (to a large degree) the natural distribution of malaria. Other environmental variables, such as, land use and land cover change also affects vector dynamics. Further, the role of socio-economic determinants cannot be undermined in the case of malaria. All these factors- climatological, environmental and socio-economic factors- can affect malaria occurrences. Accordingly, in this study, which was funded by the DST, an attempt was made to study the relationship between climate change and malaria from the holistic perspective. There were three main objectives of the study, namely, to (i) identify the association between malaria and mean temperatures, and rainfall and mean humidity; (ii) study the impact of social and environmental determinants and climate change on malaria in physically and socio-economically distinct districts; and (iii) study how non climatic factors modify the relationship between climate variables and malaria. Mixed method approach, which provided the scope of combining both quantitative and qualitative research techniques, was used to achieve the objectives of the study. Out of many findings, few significant one are mentioned here: Firstly, community, at large, could not decipher the meaning of the term climate change (or its literal translation in vernacular language). However, when assisted with probes like changes observed in temperature, rainfall and humidity, many agreed to experience such changes mainly on temperature and rainfall variables. Secondly, with respect to the impact of climate change on human health in concerned, it was found that community found it hard to relate climate change to the diseases such as malaria without any probing assistance. Thirdly, so far as the health related data collection is concerned, the presence of private health facilities and penetration of local unregistered medical practitioners in interior pockets make it difficult to account malaria cases treated by them into the national reporting system. Fourthly, in terms of awareness and knowledge related to malaria transmission, its symptoms, treatments, and prevention strategies, more or less half of community members had complete and correct knowledge.

Climate Variability, Human Health Impact and Economic Burden in Tribal Communities of selected Geographical Regions in India

Dr. Vinay Tripathi, Prof. Rais Akhtar, Dr. Preetha G S & Dr. Pradeep Panda

There is a wider consensus now, among the scientific community as well as policy makers, that the phenomenon of climate change is happening not only due to natural variability, but mainly due to anthropogenic causes and it is going to impact each and every sphere of human life including health. Indigenous populations or tribal populations are few communities which are most vulnerable to climate change impact. There are limited studies which have examined how climate change is perceived by these communities, how does it impact their life (including their health) and what are its economic consequences. This study, which is being funded by the DST, attempts to address this gap by (i) studying how tribal communities residing in selected geographic regions comprehend climate variability, their vulnerability to it and perceive its different impacts (including health); (ii) studying how tribal communities respond to vector-borne diseases (mainly malaria), water borne diseases (mainly diarrhoea) and heat stress in different geographies; and (iii) studying the economic burden of vector-borne and water-borne diseases as well as heat stress related health impact in tribal communities. The three-year long study has just been started (April 2017) and will adopt mixed method approach to achieve the objectives. Participatory tools and techniques will be an integral part of the study. The study will be conducted in five states of India, namely, Orissa, Madhya Pradesh, Jammu & Kashmir, Kerala, and Meghalaya. Currently, the literature review is being prepared for the study.



Section 2.1

Dissertations completed by PGDHM Students (Hospital Management)

A study on estimating potential benefit of newly implemented EMR system on Healthcare delivery at a Tertiary care Hospital

Vipin Pal Tomar

Evaluation is a challenging but necessary part of the development cycle of clinical information systems like the electronic medical records (EMR) systems in hospitals. EMR systems handle the storage, distribution and processing of information needed for health care delivery of each patient. Such systems have been described as "complex systems used in complex organizations", and their evaluation seems to follow that logic. This study was designed to estimate the potential benefit of newly implemented EMR System on the healthcare delivery at a super speciality Tertiary care Hospital by evaluating the clinician's perspective of EMR system by utilizing task-oriented questionnaire modified for use in Moolchand Medcity Hospital and thereby providing any remedial suggestions to improve health care quality and safety. The study had an observational, cross-sectional design and was conducted over a period of 3 months in a tertiary care hospital in New Delhi. The study instrument used is reliable and validated paper based, self-administered task oriented questionnaire. (4) The task oriented questionnaire included 24 general clinical tasks essential to physicians' work. The interviews included structured questions about task relevancy, frequency and time consumption. The instrument included 3 questions pertaining to each task measuring task relevancy, frequency and time consumption for each task which were measured on a Likert scale of 1-5. The results showed that individual task 18 and 19 were the major tasks disagreed by the clinicians and hence, never performed. This study concluded that most doctors agree that most of the 24 tasks present in the questionnaire were an important part of their work as a physician/clinician and they usually performed these tasks regularly and average time taken by each doctor is in between 1-10 minutes.

Employee Attrition in Super Specialty hospital

Khushboo Gulati

Control on employee attrition rate has become a challenge for the growing healthcare industry as the demand for professionals is growing rapidly. General reasons of high attrition rate in the industry are many such as better opportunities in terms of salary and designation, better working conditions, can't get along with their co-workers or want a change etc. Employee retention has become a major concern for hospital administrators. Attrition is an important phenomenon because it involves costs i.e. recruitment cost, time and manpower for recruitment, training and orientation cost, new hire cost etc. The present study is descriptive, cross sectional research that explores all the possible causes of employee attrition. The targeted population included all the 225 employees who left the hospital during this three months period i.e. February to May 2017. Employees have been divided in medical, non- medical, paramedical, nursing categories. The study reveals that more employee leave the organization in the month of March when medical & nursing personnel pursue higher studies or get their results for government jobs. Highest attrition categories of employees are nursing (137) and medical (47). Most prominent reason for attrition is better prospects, higher studies & family circumstances. Based on the analysis, the study recommends regular counseling and mentoring of the staff that helps them to overcome difficulties at work place. Moreover continuous development of the employees by way of trainings should be implemented and employee engagement is one of the options to retain the employees.

Oral hygiene awareness amongst patient attending dental opd at CHC Nawabganj

Swati Singh

This study was carried out to assess the oral hygiene awareness and practices amongst patients visiting the Department of dental surgery at CHC Nawabganj Bareilly Uttar Pradesh and make necessary recommendations. The study was carried out in CHC Nawabganj Bareilly during Feb- April,2017. The study population consisted of patients attending the dental OPD and the sample size was 100. A self-constructed 16-item close-ended questionnaire was distributed to all subjects above 18 years of age in English and was filled by the researcher herself for illiterate persons. The questionnaire included information related to the patient's name, age, gender, occupation, and residential area It was further categorized to evaluate the knowledge, practices, and behavior pattern related to oral health. After distribution of questionnaire, 10 min were allotted for completing the questionnaire. The completed questionnaires were then analyzed statistically to obtain the results in terms of percentages. Data was entered in a Microsoft excel sheet and was analyzed using table ,graphs and pie charts in terms of percentages and numbers. The results of the study show an acute lack of oral hygiene awareness and limited knowledge of oral hygiene practices as well as effect of poor oral hygiene on systemic health. There is an urgent need for comprehensive educational programs to promote good oral hygiene and impart education about correct oral hygiene practice through posters, charts, pamphlets. Sensitization of staff through seminars. School dental camps to increase awareness amongst children. Outreach program through field staff would help to increase awareness regarding oral hygiene in masses.

Procurement Plan of Opex items for an upcoming 230 bedded Hospital in Dwarka

Rohit Vashisht

important processes (among many others) in the hospital system, which can influence the hospital efficiency and performance. It helps the hospital management in mitigating the expenses by ensuring a regular monitoring of the gap between demand and required resources be it medicines or health supplies. A procurement plan of opex items was developed for an upcoming 230 bedded hospital in Dwarka under this study. The study adopted different methods to collect the data. The data were collected for a period of over three months starting from March. 2017 to April 2017. Both quantitative and qualitative data were collected. The quantitative data were largely collected in the form of secondary data consisting of lists of non-medical items and vendor's quotations. The primary data was collected in the form of inputs from key hospital staff, mainly, officials from finance & purchase department and representative of vendors. Techniques, mainly, ABC, VED and ABC-VED were used to analyze the data and for preparing the plan. Out of the 152 items, around 16.4% of the items (25 no.) were found to account for almost 71% of the total cost under the Phase I and were classified as 'A' category items. Another 22.4% of the items (34 no.) consumed 19.5% of the total cost (and were classified as B category), while the remaining 61.2% of the items (93 in number) accounted for only 9.6% of the total cost (and were classified as C category). Under VED analysis, 60.5% items (92 in number) were classified as Vital, 25% items (38 no.) and 14.5% item (22 no.) were categorized as Essential and Desirable respectively. Further, based on ABC-VED matrix analysis, around 67.8% of items were classified as category I, 25% were Category II items, while the remaining 7.24% were category III items. The use of inventory control techniques helped in making the procurement plan for the hospital and expected to help the hospital in the procurement process by ensuring the optimum quantity of items as well as in budgeting and utilization. The procurement plan will also help the hospital in monitoring and tracking the vital items required for the smooth OPD functioning under phase I.

Barriers and Facilitators in implementing EMR in USA, Saudi Arabia & India

Aayushi Soni

Hospitals throughout the world are looking for ways to keep improving the quality of care while containing or reducing costs. One of the ways in which hospitals are trying to achieve this, is by improving their healthcare IT capabilities by implementing an integrated new generation Electronic Medical Record (EMR). An EMR is optimally utilized if the entire organization uses the software. The decision of a health care professional to make full use of the EMR is called EMR adoption. The primary aim of this research was to gain an understanding of the implementation of Electronic Medical Records (EMR) systems in developed and developing countries. There is a direct relationship between the income of the country and the use of electronic information and communication systems as part of healthcare systems hence the division between developed and developing countries. This study provides a systematic evaluation of various dimensions of EMR in 3 countries- USA (Developed), Saudi Arabia (High Income Developing) and India (Low-middle Income Developing) and its correlates which is essential to understand reasons and barriers for success. To support this aim, a systematic literature review was carried out. The literature review led to the inclusion of forty eight articles from PubMed, Web of Science, Google Scholar, and HIMSS Analytics. We extracted barriers, solutions to barriers, facilitators, and benefits to EMR adoption and categorized them in a taxonomy of eight using inclusion and exclusion criteria's. The level of implementation in USA is higher when compared to Saudi Arabia and India. The reason being lack of trained manpower, finance, accessibility to health care services, lack of e-health development strategies and language issues. Some of the lessons that should be learned from developed countries are how to develop information system standards, how to manage the costs of EHRs, how to enhance the participation of remote communities, and how to protect patient privacy and confidentiality. Even though there are challenges with the implementation and maintenance of the systems; as long as the EMR systems are designed to accommodate the limited infrastructure and resources, they can turn out feasible.

Framing clinician engagement models and key negotiation strategies for star clinicians across various specialties for upcoming 230 bedded hospital in Dwarka, New Delhi

Aditi Choubey

This descriptive study was conducted in 230 bedded Aakash Healthcare Pvt. Ltd, Dwarka, New Delhi from 1st Feb - 30th April 2017. Clinicians are the key drivers to the successful functioning, profitability & business of hospital. Good mix of doctors contribute to the brand building of the hospital & to provide the right mix of medical and surgical care to patients we need a multidisciplinary team. This team forms the basis of care for all patients availing out-patient and inpatient services of the facility. Also, the team will set the pitch of standard of care and services provided by the hospital and hence should be done after proper research & due diligence. In this study, we devised the engagement model for clinicians and tried to narrow down on number of doctors per specialty who will act as the key drivers for hospital business growth plan for which primary data was collected by conducting informal interviews with the organization staff and secondary data was collected from online journals, reports and articles addressing clinician engagement models. Three models were proposed for clinician engagement namely, Full time, Part time /Visiting and Courtesy model. Also payout models and doctors mix for different specialties were suggested. The engagements of star clinicians were suggested only for key specialties. The hospital therefore, following key negotiation strategies, will frame contracts for Star clinicians -Dedicated OT's for Star surgeons, Dedicated OPD's for Star clinicians, Single unit model for star consultant, Higher Minimum Guarantees to ensure support during lean periods, Provision of existing team movement/relocation of their choice from their current practice to our facility and Arrangement of OPD slots and call days based on the preferences and models proposed by star clinicians. Few recommendations were suggested before selecting a Doctor and Engagement Model; Doctor's background should be checked in terms of clinical outcome, Ethics- in terms of exclusivity, commitment to the organization should be considered, Past employment record and reason for separation should be taken into account, Last contract/s Term and Conditions – payout, minimum guarantee, separation, and other contractual bindings should be taken into consideration, Attitude towards the organization and developing the department should be prime focus.

Analysis of Medicare Payments model and Physician awareness about The Medicare Access and CHIP Reauthorization Act (MACRA)

Aditi Ray

This report represents the information about the MACRA 2015. The purpose of the study was to know about the Quality payment program, changes in Medicare payment for the physicians and physician awareness about MACRA. A document review was done and last two years data was reviewed from various articles, reports and journals to understand "MACRA". Study reveals that MACRA repeals the Medicare Sustainable Growth Rate (SGR) methodology for updates to the Physician Fee Schedule (PFS) and replaces it with a new approach of payment called the Quality Payment Program (QPP). QPP rewards the delivery of high-quality patient care through two avenues: Advanced Alternative Payment Models (Advanced APMs) and the Merit-based Incentive Payment System (MIPS). MIPS will consolidate components of three existing programs, the Physician Quality Reporting System (PQRS), the Physician Value-based Payment Modifier (VM), and the Medicare Electronic Health Record (EHR) Incentive Program for Eligible Professionals (EPs), and will continue the focus on quality, cost, and use of certified EHR technology (CEHRT) in a cohesive program that avoids redundancies. Conclusions- Physicians who participate in Advanced APM i.e., physicians who are QPs will receive a 5 percent lump sum bonus payment on their fee-for-service reimbursements for years 2019-2024, physicians who participate in MIPS receive payments based on composite performance score (CPS), CPS score determines whether the physician will get positive payments, negative payments or neutral payments. The Deloitte Center for Health Solutions 2016 Survey of US Physicians sheds light on physicians' awareness of MACRA, their perspectives on its implications, and their readiness for change, Deloitte survey found that many physicians are unaware of MACRA. Many also realize they are likely to make changes to their practice to succeed under it; recognize they will need to bear increased financial risk; and understand they will require resources and support to develop the capabilities to do so.

National Quality Assurance Standards for Urban Primary Health Centres

Col Anil Yadav

National Quality Assurance Standards for Urban Primary Health Centres have been developed to measure the quality of services at Urban PHCs. NSSO in 71st Round Report compiled data on out of pocket expenditure (OOPE) on outpatient department (OPD). This study attempts to explore whether there is any correlation between quality of care and OOPE on OPD. The main objectives are to analyse the correlation between quality of care and out of pocket health expenditure on OPD in selected states of Bihar, Jharkhand, Orissa and Madhya Pradesh. An analytical study was done on secondary data of four states of MP, Bihar, Orissa and Jharkhand during the months of March-May 2017. The three UPHCs from each state were selected randomly. The quality score for the state was obtained by taking the average of three UPHCs. The OOPE on OPD was extracted from NSSO 71st Round Report. The Pearson correlation was used to find the correlation utilising IBM SPSS Statistics 22 Package. An analytical study was done on secondary data of four states of MP, Bihar, Orissa and Jharkhand provided by NHSRC, New Delhi. The analysis shows an inverse correlation between the quality of care and OOPE. The quality is strongly negatively related with OOPE with (Pearson correlation value = -.958). This relationship is statistically significant (p value = .042). In other words if the quality of care is improved the out of pocket expenditure reduces and vice versa. There is very strong negative correlation between quality of care and OOPE for OPD in selected states.

Medical Record Keeping Standards

Lt Col Amit Chatterjee

The medical record is the most important practice tool used by physicians, regardless of specialty, because it supports and enhances the care that our patients receive. It is also a legal document that details the care you provide to your patients, and acts as a record of your billing practices. In the event of a random or specifically indicated review of a physician's medical or billing practice, the medical record will come under scrutiny. Auditing your own medical records is an excellent self-directed learning and experience, as well as a tool to help you prepare for an assessment. The main objectives of the study to review the current protocol and methods for medical record keeping standards and retention and destruction of old medical records. To perform the standard analysis of the nascent Medical Records Department of Cantonment General Hospital Delhi Cantt and to identify gaps in the current protocol of record keeping standards and of retention and destruction of files. It will make recommendations for developing and improving the record keeping standards as per the NABH guidelines at Cantonment General Hospital Delhi Cantt and best practices being followed. The study will be conducted in Cantonment General Hospital Delhi Cantt. The source of the data will be responses of dependent Patients and Healthcare professionals of Cantonment General Hospital, Delhi Cantt. It is expected that Cantonment General Hospital, Delhi Cantt. Being one of the best Cantt hospital located in the district of South West Delhi which is catering to the civil and affiliated villages around the cantonment, therefore best practices are followed. The Doctors, Nurses and Staff employed have adequate knowledge of OPD management.

Price positioning of EHC services for an upcoming 230 bedded Super Speciality Hospital in Dwarka

Anshul Sharma

"Prevention is better than Cure". Regular health check-ups can help in detecting and diagnosing fatal diseases which may otherwise remain hidden inside the body. Along with improving long-term health quality a regular health check-up also reduces your long-term healthcare costs. Preventive Healthcare is at a very nascent stage in our population in terms of both awareness and utilization. To make a best effort for the same and motivate maximum masses for their screening well before time, preventive health check-ups have to be priced in a manner that they fall in the economical price range for a maximum spectrum of population. The study was conducted in Aakash Healthcare in Dwarka, New Delhi. We, at Aakash Healthcare after in depth analysis of the current market trends and offerings of key market players have drafted six (6) EHC packages for our clientele. These packages take into account the health seeking behavior, disease pattern, diagnostic and therapeutic needs of the target population. The recommended price positioning of health check-up packages other than the basic packages shall be kept a north of 20% in all apple to apple comparisons with our Major Competitor. This will send a message in the market of the superior infrastructure, customer centricity and unparalleled services at Aakash Healthcare which will form a benchmark in the industry in the time to come.

Title of the dissertation: Assessment of the discharge process in order to reduce the discharge delays

Antra Anand

The discharge process remains a major obstacle for healthcare leaders who want to improve outcomes and reduce readmissions, in large part because patients often don't understand the instructions. This was an analytical study done for a period of 1 month at Venkateshwar Hospital, Delhi. Total sample size taken was 207. Out of which total cash patients are 149 (72%) and total TPA patients are 58 (28%). We have taken the the mean value of cash patients - 95.98 which exceeds the assumed limit i.e 90 mins, whereas the mean value of TPA patients - 161.01 which is under the assumed limit i.e 300 mins. Therefore we applied one sample t-test to show the comparison between observed value and assumed value. The result of cash patients was significant value is greater than 0.05 that predicts we could not apply this result to a generalized population. When the assumed value of cash patients is 90; For TPA patient's significant value was found to be 0.00 which is less than 0.05, when the assumed value is 300, this means we can apply this result to a generalized population. Sample: Convenient sampling (All in-patients during the 1 month period of study). Data has been collected for discharge patients taking place in the hospital through HMIS (Hospital management information system) Process of discharge is initiated after administration/ consultant advice. On completion of hospitalization a detailed discharge summary covering investigation reports, treatments given and advice on discharge will be provided by the attending doctor. Results were analyzed with help of Microsoft Excel using tables and bar graphs. Analysis was done to calculate the average TAT of month of May. The percentages of discharges occurring . Planning the discharges reduced the total time of discharge process substantially. Discharge time was substantially high for insured patients that need to be controlled. Departmental clearance and patient-related factors also impact the discharge time. Before clearance; time is consumed in preparation of discharge summary and sending intimation to departments; whereas after clearance is obtained, time is consumed in final bill settlement by patient, their request for discounts, and so on. In maternity cases, bill of mother and baby has to be settled and paid together so if one bill takes time the other is also delayed. This is more so in case of unplanned discharge.

International Patient Safety Goals Audit at Max hospital, Shalimar Bagh (New Delhi)

Anupriya Sharma

One of the approaches to assuring quality in hospital services and processes is through the implementation of accreditation, which involves the assessment of work and organizational practices against predefined standards, conducted by multidisciplinary clinical and support service teams. The level of compliance against standards is then evaluated by the external teams of surveyor and on that basis accreditation rating is arrived at for the organization. Joint Commission International (JCI) is an international body issuing healthcare standards following the principles of Total Quality Management to improve quality and patient safety. The objective of this study was to check the compliance level of international patient safety goals as per JCI guidelines among the staff (Doctors, Nurses, Lab technicians) of Max Hospital, Shalimar Bagh (New Delhi) in various departments. The study was a descriptive study with a sample size of 100 in six departments extending over a period of three months. The compliance rate of each department was identified with an overall compliance of 91%. Training of the staff regarding all the 6 International Patient Safety Goals should be done periodically. Focus to be done on the Hand over communication goal. Regular Audits to be conducted to assess the level of improvements.

To create a Culture of Patient Safety in a Super Specialty Hospital through learnings from Patient Safety Events

Apurva Relan

Many patients face adverse events during their hospital stay. Preventing errors and the harm that results requires putting systems and procedures in place. To obtain insight into safe hospital care, reliable data about the occurrence, causes, and preventability of adverse events have to be collected and made available. In this study, we are focusing on studying the types of patient safety events being reported, the process deficiencies and look out for the opportunities of improvement to improve our system and processes, thus creating a culture of patient safety in the organization. The study was conducted in Outpatient Clinic at Aakash Healthcare Clinic in Dwarka, New Delhi. A system of patient safety event reporting was established and put in place. Patient Safety Event Reporting and Analyzing forms were designed. The events reported from July 2016 to April 2017 were studied and analyzed to determine the system failures and process deficiencies. A total of 18 patient safety events were reported and analyzed in this period. Different types of events were reported. Most of the errors were Medication errors. The analysis for all 18 events was done and the process deficiencies and the system failures were identified. The corrective and preventive actions were recommended and improvements in the policies and processes were suggested. Recommendations were given to minimize the Prescription, dispensing, administration errors. The most important knowledge in the field of patient safety is how to prevent harm to patients during treatment and care. It is important to share what they have learned when an investigation has been carried out. Process deficiencies identified in this study have the potential to enhance patient safety and make the systems strong at Aakash Healthcare so that patient safety events are prevented in future.

A survey on hospital information system (HIS) acceptance and satisfaction by end users

Apurva Sorte

Nowadays the adoption of hospital information systems plays critical role in advanced health care delivery, reduction of medical error and promoted patient care. Hospital Information Systems (HIS) play a significant role in providing quality healthcare services. However, HIS lag behind their industrial counterparts in providing quality (i.e., timely, accurate, complete) information and have been the target of many criticisms for alleged shortcomings. Evaluation of hospital information systems is mandatory for its successful adoption. In the hospital environment the evaluation of hospital information systems is difficult due to the several factors that are involved. One of these factors, of special importance, is user satisfaction. The aim of this research is to evaluate the level of satisfaction of users in MoolchandMedcity Hospital, New Delhi, where the new HIS infrastructure is in early stages. To this end, a questionnaire was designed to assess the level of acceptance and satisfaction of different HIS users. The study population included operation staff of the hospital. Users scored the existing information system as fairly Usable. However, they felt the need of minor changes in the software as well as the support system to make it more user friendly.

Market Review for Business Expansion Opportunities in Indian Dialysis Industry

Arpita Mehta

The demand for dialysis is growing at a rate of 31 percent in India, compared to eight percent globally. India's high rates of diabetes and hypertension, as well as increased awareness of Chronic Kidney Disease (CKD) and treatment options, have contributed to rapid growth in demand for dialysis. Despite the importance of dialysis, more than 90 percent of the 230,000 Indians newly diagnosed with CKD each year die within months due to lack of treatment. Dialysis services in India are fragmented and largely concentrated in big cities. Also, high prices and the need for frequent treatments make dialysis a financial burden for many patients and unaffordable for others. A kidney transplant is a permanent solution, but availability is extremely limited due to stringent regulation, low kidney donation rates, and poor infrastructure in the country. Moreover, kidney transplants can fail. This makes dialysis a critical alternative for people living with CKD. Yet dialysis providers have shied away from expanding services as they struggle to make clinics profitable in a low-margin industry. Industry-wide operational inefficiencies, often related to equipment deployment and organizational structure, keep costs high. A shortage of trained nephrologists, nurses, and technical staff has also constrained the expansion of dialysis services. This review is a Descriptive study carried out on dialysis service providers and beneficiaries in India. The research methodology consists of an ideal mixture of primary and secondary methods of data collection. The current dialysis market size in India as brought out by this review is about Rs.2774 Crores and it is growing at about 15 per cent, annually. In countries like US, hospitals typically only do acute dialysis or initiation of dialysis after which patients are discharged to standalone centers for long-term chronic dialysis. This is primarily because it is neither cost effective to provide dialysis within a hospital, nor is it a core competency for hospitals since their bandwidth can be spent more effectively on high-end services and in-patient care. All this attribute towards the immense scope in this industry. However, it is a challenge to provide quality treatment at prices that are affordable to patients across the length and breadth of India. One large challenge is the massive shortage of skilled talent—right from technicians, to nephrologists—in the dialysis sector. The demand for dialysis and transplantation is increasing constantly. The Indian government has included care for kidney disease in its budget 2016, and has currently allocated around Rs.154 Crores across the country for providing dialysis in all districts of India through the PPP mode. The centers will be managed by the private sector, and the government will reimburse these centers' costs at a predetermined rate. With the increasing demand for dialysis and increased government's focus in providing these services, the future of this industry has also been projected in this review. The market has been projected to reach around Rs. 13,400 Crores by 2025.

Title of the dissertation: Study on the Satisfaction of Patients With Reference To Hospital Services

Jaya Rakheja

The study has been designed to analyze the factors that are responsible for influencing the satisfaction of patients with respect to selected hospital related services. It attempts to identify factors that are related to pharmacy, laboratory, radiology, blood bank and laundry & linen services. Sample of 400 patients at different educational backgrounds have been selected and studied with reference to various factors of patient's satisfaction. Based on the importance given by the respondents on various factors, opinion scores have been calculated and relative importance for each of the variable has been established. The level of patient satisfaction has been divided into low, average and high. The study shows that satisfaction level is highest for blood bank 73.86 percent and lowest for pharmacy 71.57 percent. Satisfaction level of other departments such as radiology, laboratory and laundry is 71.85 percent, 72.45 percent and 72.54 percent respectively. The study recommends the need of training of staff in the departments where the satisfaction is less and also advocates improved procedures of report issuance in laboratory and blood issuance during the emergency in the blood bank.

Perception of Policy Holders towards Health Insurance & TPA in Gurugram

Arsh Shahin

TPA in India's health insurance industry was a significant step towards addressing the need of a hassle free system for delivery of quality ensured healthcare for the policyholder. The services were designed to address the cost and quality issues prevalent in the sector but still date the implementation of TPA concept has not been as smooth and efficient as it was expected to be: a lot of work is still needed to be done in with respect to the current issues. This survey study was conducted perception of the policyholder towards the TPAs. & to know their knowledge about what roles and functions a TPA is supposed to perform, The study was conducted in Gurugram concentrating on the hospital of with a total sample size of 75 respondents was used to collect data and a questionnaire was designed for that purpose. The major findings of this study are as follows: a) Policyholders have low awareness regarding the existence of TPAs; b) Most of the policy holders rely on the insurance company or the insurance agent; c) The policyholders are unaware of the services they can avail as a client of the respective TPA. This shows that the regulatory body IRDA should take initiatives for designing an appraisal mechanism which keeps a check upon the performance of the TPAs. The study was conducted in Gurugram (Haryana) and the areas covered were Gurugram hospitals. The study design is an qualitative study and the samples were collected from IPD policyholder patients, which have a sample size of 75. For collection of primary data a questionnaire was designed. Tools & technique-a questionnaire of total 22 questions was administrated from IPD policyholder patient. The Study was conducted among 75 IPD policyholder patient & results shows that only small percentages (15 per cent) of the policyholders in the sample have knowledge about existence of TPAs. General awareness about the TPAs existence and services they provide is low. Policyholders rely more on their insurance agents than on the insurance companies or third party administrators. TPAs are the interface between the insurer and the insured and they are in a position to educate the policyholders about health insurance. However, their role in consumer education does not infuse much confidence on their intention or ability to do so. The feedback shows the need for further research to examine the impact of TPAs on the Health sector functioning.

To study the existing level of I.T penetration in the medical stores of a 100 bedded government hospital with a view to suggest achievable changes

Col B Anil Kumar

The present day role of the Pharmacist has changed from compounding and dispensing medication, to being a provider of Pharmaceutical Care. This study was undertaken to examine the existing level of automation and the degree of use of information technology in the Medical Stores, the feasibility of implementation of modern I.T, the barriers in implementation and to recommend strategies for adoption of automation. Methodology used included review of published literature, document study, observational method and interview of the functionaries using structured questionnaire. The study showed that job description of the Pharmacists did not mention Pharmaceutical care as one of their roles. Traditional role of product procurement, storage, distribution and record keeping were only being carried out. There was no Pharmacy Management Software available. Computers were being used at a very basic level, for duplicating the data in the ledgers and for updation of stock availability on a monthly basis. Tremendous potential of the Information Technology was not being harnessed by the Medical Store. To examine the feasibility of implementation of the Information Technology& to bridge the gap between what presently existed and what should be, the study recommends conducting asystems review. Some bigger and radical implementation would need support at a higher level. In the short term, implementation of the Pharmacy Management Systems software, BCMA, E-prescribing etc needing lesser education and training could be executed at the hospital level itself. All aspects could be gradually introduced as the system matures and the users gain confidence in the system. Change in Policy decision, to dispense medication from the Pharmacy instead of the Ward Store needs to be introduced. In the long term, inclusion of Pharmaceutical care aspects, recruitment of Doctors of Pharmacy qualified in Pharm. D / trained in the Clinical Pharmacy aspects needs to be carried out. Availability of EHR, CPOE& CDSS would be a prerequisite.

Comparative Operational Cost analysis of Human Based Transport with Pneumatic Tube Transport and Automated Waste & Laundry System

Damini

The descriptive study has been conducted in 230 bedded hospital in New Delhi from 1st Feb - 30th April 2017. The continuous rise in financial burden in healthcare industry leads to affect quality patient care which forces the administrators across world to focus on innovation in management of hospitals. The present study has been done to see the cost benefit of automated transport i.e. Pneumatic Tube System and Automated Waste and Laundry System and compare it to the conventional human based transport. The capital expenditure and operational expenditure for next five years after installation of PTS & AWLS in the hospital are projected and compared to manual capital and operational expenditure. The capital expenditure includes equipment cost, installation cost and machinery cost whereas the operational expenditure includes electricity cost, manpower cost, equipment cost, maintenance cost and depreciation of equipment. The secondary data has been collected from staff of the hospital and vendor of PTS & AWLS by informal interviews. The study shows the cost benefit of 65 percent i.e. 42,618,114 Rupees over next five years after installation. The operational costs for the automatic-pneumatic systems are less than those for the conventional-manual systems but the initial capital costs of the pneumatic systems are relatively high when compared to conventional systems. The study concludes that automated transport system is a valuable alternative to human based transportation. An automated transport can promote rapid delivery, saves time, controls cross infection rate, reduces manpower cost, reduces operational expenditure and thereby increases efficiency. Education and training of all users is essential to ensure that the tube system does not suffer downtime due to carelessness or lack of understanding.

Knowledge and practices about hygienic milk production among dairy farm workers, South West Delhi

Ikra Ahmed

India has emerged as the highest milk producing country in the world. The quality of contaminated milk deteriorates quickly and produces diseases if consumed. Various Zoonotic diseases can be transmitted from contaminated milk of a diseased animal to human being. This study aims at assessing the knowledge and practices of hygiene milk production among small dairy farmers in Peri urban area of South West Delhi. This exploratory cross sectional study is conducted among 60 dairy farm workers from 30 dairy farms. They were selected conveniently from Nangla dairy, Najafgarh in South West Delhi. Practices and knowledge levels were assessed using a pretested semi-structured questionnaire. This study revealed that dairy farmers had satisfactory knowledge on few aspects of CMP like importance of hand washing (76.6%) both pre (76.6%) and post (70%). Less than 50% had knowledge on the activities such as importance of clean clothes and prevention of Tobacco use. Health of the farm workers was neglected and 55% of workers worked even when they were sick. There is high dependence of farm workers on tobacco products. There was low practice of activities like isolation of cattle from the diseased ones (46.6%) and vaccination of cattle (45%). Quality is required in each aspect of clean production of milk. Proper standards which guide the working condition of the farm workers should be made. Information on hazards of consuming contaminated milk should be extended to public. Veterans, subject matter specialist and health workers can be sent to train farm workers regarding hygiene practices.

Price Positioning of Obs. & Gynae Dept. in an Upcoming Hospital in Dwarka Region

Jigisha Chawla

In today's scenario, healthcare is one of the largest industry and the hospital market forms one of its key components. There are various factors that continue to fuel this industry to grow in an exponential manner such as rising penetration of health insurance & increasing affordability of people to take better treatments for their ailments. This study has been carried out with an aim to devise price positioning strategy for obstetrics and gynecology department of an upcoming 230 bedded super specialty hospital in Dwarka region in Delhi. Pricing strategy can be defined as a strategic procedure an organization needs to undergo to attach price to their services. Price positioning is a critical activity during the launch of any service because it defines the market segment and client base it caters to, acts as a major pillars for brand establishment. In this study various pricing strategies have been discussed and a price comparison has been done with current market players. The time duration of the study is three months and the location is Dwarka. Secondary data has been collected and analyzed with the help of excel spreadsheet. The study analyzes various pricing strategies and after the comparative analysis, it concludes that competitive pricing strategy should be adopted by the upcoming hospital under study. After comparing various strategies a detailed schedule of charges has been prepared based on competitive pricing method and was recommended for use in the hospital.

Study of hospital security and associated risk threat and vulnerability assessment at Cantonment General Hospital, New Delhi

Col J S Rawat

A three months internship cum study on the Hospital Security and Associated Risk, Threat and Vulnerability Assessment at Cantonment General Hospital (CGH), New Delhi was carried out. There are a multitude of reasons mandating the provision of the proper level of security for the healthcare environment such as moral responsibility, legal concerns, complying with accreditation/regulatory requirements, contributing to the provision of quality patient care, maintaining the economic/business foundation of the organization and maintaining sound public, community and staff relations. The joint commission standards and NABH standards require that hospitals identify and manage security risks. An Observational & Retrospective study combined with data analysis for the year 2015 and 2016 with help of validated tools was carried out. The data for incident analysis was collected and analyzed for CGH. Review of literature about healthcare security was done and existing security system at CGH was reviewed. Security Incident reports for the year 2015 and 2016 were studied and data regarding type and frequency of security related incidents was collected from the records of security officer, supervisor, Police post Sadar Bazar and administrative office. Based on this historical data of past incidents, review of literature and those events that either had a high incidence in the past at CGH or have the potential to occur in the current environment, 14 security related events were selected for this study. The events selected were Theft, Terrorism/Bomb Threat/ Hostage Situation, Conflicts/Workplace Violence, Infant Abduction, Strike, Misbehavior, Fire, Hazardous material Exposure/ leak, Traffic Management, Sexual offence, Absconding, Animal Nuisance, Suicide/ Attempted Suicide/ General and Fraud/ Imposter. New Jersey Hospital Association Security Readiness Assessment Tool was used to assess selected events. The tool incorporates three main components, which assess and score probability, risk and preparedness of security events in an organization. No security incidents were found documented as per the records over the years 2015 and 2016. Probability of all events is therefore low (Probability score zero). Terrorism and fire have the highest risk (Risk score 4). The overall preparedness is 62.39%, suggesting a 37.61% scope for improvement. This study revealed that Terrorism, Fire, Strike, Theft, workplace violence/ conflicts, misbehavior, traffic management and sexual offence (Total score ≥ 4) are the security risk requiring immediate attention and priority in terms of planning, policy, decision making, resource allocation and process change. CGH has a well-organized security system in place; however preparedness level can be further improved. Some of the steps include, preparing a written Security management plan, More CCTV monitoring, Training, Access Control and conduct of annual internal fire audits.

Impact of clinical pharmacists in a tertiary care hospital

Kanika Gupta

The provision of drug therapy by a medical provider to a patient is a complex process. Medication error is an inevitable problem in a hospital and activation of clinical pharmacist role is of great importance in reducing the medication errors. The medication errors could be prescribing errors, indenting errors, dispensing errors, and administering errors. To evaluate the effectiveness and impact of the customized clinical pharmacology services managing medication management in a tertiary care hospital. The methodology adopted was the retrospective, descriptive analysis of the process and the data on medication errors from November-2015 to January-2017. The comparative analysis between the pre-and post-implementation indicated that the average indents/patient/day had reduced by 13.27%. The average dispensing time for routine and urgent orders had remarkably reduced by 65.45% and 66.3% respectively. The average number of urgent orders out of total had reduced by 20%. The percentage of medication errors had declined to 0.3% in January 2017. The study indicated that the clinical pharmacists played an important role in the operational impact in terms of reduction of daily transaction load on the hospital with an improved quality of medication services by identification, reporting and corrective actions.

Awareness about an interrelationship between systemic diseases and Oral foci among employees of Aakash Healthcare

Karamjit Kaur Ralh

The study was conducted in Aakash Healthcare, Dwarka. Employees of Aakash Healthcare were taken into consideration. The study involved employees of age between age 25 and 60 years. Both male and female employees will take part in the study. 66 participants were involved in the study. Convenience sampling method (Non Probability) was used. Time period for data collection was 11 April 2017 to 30 April 2017. In this study, both male and female employees are included. Focus was to collect information from Non Medicos (HR, purchase, marketing, security, Housekeeping department) A self-administered closed ended questionnaire was used. The questions were in English and Hindi. Respondent gave a verbal consent. Then the respondents were given a questionnaire which he/she filled anonymously. Data Analysis Tool used was SPSS 16.0. The presentation of data will be in form of tables and graphs. The aim of this study was to assess the awareness about an association between systemic diseases and oral foci among employees of Aakash Healthcare. According to observations from study maximum employees were not aware about this association, so counseling activity should be planned in the organization. There should be regular dental checkups after 6 months as a part of managing general health so that fast and accurate oral health measures can be taken by employees to limit or reduce the speed & extension of oral complication. People with diabetes have a higher chance of getting gum disease, they need to get oral prophylaxis done. If left untreated, gum diseases can lead to tooth loss and may also make diabetes harder to control. As majority of participants brush once a day, importance of brushing should be explained to participants. Majority of participants use tooth pick, it may damage teeth and gums. Regular dental checkups can increase the patient footfall in Dental department of our hospital. This step not only increase awareness about interrelationship between oral diseases and systemic diseases but can also increase the OPD number in dental department.

Time And Motion Study in Indoor Pharmacy at National Heart Institute

Karamjit Bhullar

Pharmacy is an important part of the hospital as it acts as a major department for the treatment of the patient. The main role of the pharmacy is to provide the medication for the patient on time. The purpose of the study is to understand the process flow from prescription of medicine by the consultant in the wards to dispensing of the correct medicine at the nursing station, to identify the bottlenecks in the process flow which lead to delays in the process and to recommend measures that can be adopted to streamline the process and to suggest the ideal indenting. It has been observed during the study that the time taken for the whole process is more than an hour which leads to delays in the administration of the drug to the patient. This is a major setback in providing quality service. The study is a cross sectional study and sample of 100 cases has been taken with the help of non probability convenient sampling. It has been observed in the study that turnaround time for dispensing of the medicine is around one Most of the time is consumed in receiving of prescription slip in pharmacy and in dispatching of medicine in the respective area. The other reason of delay is lack of manpower in pharmacy to dispense the medicine. The present study recommends that instead of making prescription slips, directly indent can be raised on HMIS by the nurse from the respective ward. Increase in manpower in pharmacy can also add the value in the quality of service and will prevent the unnecessary delays. Return of the medicine should be done on 24 hours basis by using barter system.

Quality Assessment of Artemis Hospital, Dwarka, New Delhi

Col Madan Mohan Thakur

This study is focused towards Quality Assessment of ARTEMIS Hospital to review the available service management to ensure continuous Quality Improvement. Study identifies the areas for improvement on all the observed Clinical areas and non-clinical areas of hospital. The main objective is to carry out Quality assessment of Artemis Hospital, Delhi. This was an observational descriptive hospital based cross sectional study. Evaluation was done on the parameters of Quality Assessment Tool Kit. Information regarding the organization's location, history, manpower, organizational hierarchy, Standard Operating Procedure, Legal Compliances applicability with current working and future plans were identified for clinical and non-clinical services. A score of 5, 0, 10 is given against each objective element by using NABH checklist. The study included the healthcare personnel at random including doctors, nurses & Technicians. The study compared NABH checklist with Quality Indicators. It was found that the hospital was fulfilling requirements as per NABH standards. It is recommended to have an independent duct in OT to extract the foul odor produced at the time of procedures & Surgeries. There is a requirement of wash room in the O.T. The waiting area at radiology has very few seats, causing inconvenience to the patients and their attendants. Laboratory needs to work on the zoning of sample collection area and the dispatch area. At present the area is very compact and the movement is restricted. ICN is efficient in maintaining the records of pre-exposure prophylaxis records of Hep B vaccination, but the staff is not active to get them vaccinated. Usage of PPE's by the staff on night duty is not adhered due to limited supervision. The stock outs of identified item in Pharmacy reoccur when the flow of the patient increases as the stocks are received from the Gurgaon unit. MRD has space constraint in keeping the old Medical Records. The food is checked by the F&B in charge but the food prepared on holidays are not checked. CSSD follows the quality assurance but the internal hospital staff occasionally fails to comply their restricted movement in the department. This study revealed that there is the necessity towards continuous training and awareness for Quality Improvement of Hospital. Hospital is fulfilling the required criteria in maintaining the Quality Standards desired by NABH. However, administration needs further protocols put in place for better compliance.

Mapping the progress and shortcomings of EAG states based on CRM reports

Col. Parag Mukherjee

One of the challenges that massive complex health programmes like the National Rural Health Mission, faces, is the ability to generate objective reports of progress in diverse contexts, and use these learning's for constantly improving on programme design and implementation. The National Rural Health Mission had put in place a concurrent evaluation and also sanctioned a number of component evaluations. The International Advisory Panel of the NRHM and the Planning Commission also conducted evaluations. However the most commonly used source of information on progress, especially for informing management decisions has been the Common Review Missions. The Common Review Missions, which have been held annually every year since 2007, far from being limited to an assessment, has now become one of the NRHMs most celebrated and visible programme components. After the launch of National Urban Health Mission (NUHM) as a Sub-mission of an over-arching National Health Mission (NHM), with National Rural Health Mission (NRHM) being the other sub-mission of National Health Mission (NHM), 10 CRMs have been conducted so far. The EmpoweredAction Group (EAG) set up to facilitate preparation of area-specific programmes in eight States, namely, Bihar, Jharkhand, MP, Chhatisgarh, Orissa, Rajasthan, UP and Uttarakhand, which have lagged behind the other states. The paper assesses the effectiveness of Common Review Missions as a methodology for programme assessment, and goes on to map the progress and shortcomings of the EAG states based on these CRM reports. The paper presents a summary description of the ten common review mission in terms of its composition, structure, methods of assessment used and outputs. It looks at progress and shortcomings of EAG states on some key parameters as assessed over the Ten CRM reports. Citations of reports of Common Review Mission in various research publications. It's a secondary research stud. The performance of EAG states needs to be monitored to affectively measure their progress. The yearly CRM G reports provide enough substance to validate the progress of these EAG states. Hence there is an need to study these reports to validate progress and shortcoming. A review of literature is an essential aspect of any research. It helps the investigators to establish support for the need for the study, select research design, developing tools and data collection technique. This dissertation reviews literature relevant to the study. The literature encompasses both theoretical and empirical works that bears on the study and the variables are measured. There have been Ten Common Review Missions to date. The first of these was undertaken in November 2007. All Common Review Missions are collaborative efforts of a multidisciplinary team of Government functionaries, public health experts, civil society members and development partners to reflect and examine the changes achieved under the Mission. On an average 170 such experts constituted into 12 to 15 teams, The administrative coordination is by the ministry and NHSRC leads the analysis, the drafting, discussions and finalization of the report. The CRM process makes use of existing data. Its focus is on process and root cause analysis for gaps. Given the above scenario EAG States now needs to concentrate on much faster up gradation of infrastructure, increase bed capacity, ensure optimal utilization of available HR, take steps to make monitoring effective and develop a robust system for capacity building. The areas of priority action may include: Differential facility/block/district plan and its speedy execution especially infrastructure at SC/PHC/CHC level, Strong and responsive capacity building system which can take care of the dynamic requirements of the health system, reviving SIHFW, exploring PPP in training, Empowerment of staff for effective monitoring and supervision and ensuring follow up action, Long term systemic changes in terms of comprehensive HR policy which explores absorption of contractual staff and building up a public health cadre, Past CRMs have highlighted similar issues however pace of implementation in the States seems to be slow. Most of the studies/plan and decisions recommended in past years are still under consideration by the States. The very ethos of Common Review Mission is to take corrective and mid-course action at the State level and states are also required to include these recommendations in their PIP. On review of all CRM reports it has come to fore that the structure of reporting doesn't include a section for the action taken by the States on the Recommendations by previous CRM reports.

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A section to include the actions taken on previous CRM reports would ensure better action by the states. In spite of the gaps, the performance/achievement of the EAG States in terms of goals and outcomes in the last five years in some areas has been impressive. The achievements have primarily been possible for the high commitment of the numerous people working at various levels within the health system to improve the health situation. However the pace needs to be much faster so that in the coming years the momentum itself can sustain the rate of progress. Time to care approach is yet to be institutionalized in most Uttaranchal, largely due to poor road connectivity and challenges related to inclement weather conditions in such remote areas. This needs immediate attention. Under the Pradhan Mantri National Dialysis Programme, BPL populations have been exempted from user charges for availing dialysis services across all States. While most EAG States have reported availability of dialysis services in varying degree; Jharkhand is yet to operationalize dialysis services at district level through PPP mode. Whereas Bihar (17 centres) has made substantial progress.

A Study on Surgical Bed Utilization in Economy Ward, Ground Floor, Max Super Specialty Hospital

Parul Chanana

This study was intended to find out the utilization of the beds in the economy ward. It helped us to find out if there is a delay in the process of patient flow and the reasons for this delay. This delay leads to bed-blockage which further results in ineffective utilization of the beds and improper usage of hospital resources. The study was carried out for a period of two months, track of 50 patients (entry to ward and exit from OT) was recorded and using the data, the areas of delay was analyzed. We observed that the main delay occurs due PAC (Pre- Anesthetist Check-up), where the Anesthetist turns up late for PAC review. Further, delay occurs due to financial clearance, medical clearance, and lab reports not ready. Some delay has been observed in the OT due to unavailability of surgeons, anesthetist, GDA, OT not prepared. The main recommendations were to reduce TAT for PAC to be done by the anesthetist as PAC clearance has been observed to be one of the major reasons. A day before the surgery, a list of the patients should be made and given to the anesthetist, to help him with scheduling of PAC. The nursing staff should check that the patient's record file contains all the required reports needed before surgery and then only the bed should be allotted to the patient. The OT team should send the GDA to the economy ward on time, to shift the patient to the OT. The patient should not wait unnecessarily in the pre-operative recovery area due the improper management of OT scheduling. There should be availability of concerned surgeon and anesthetist and no delay on their part. The OT should be prepared and cleaned before the arrival of the patient. These steps will help in proper utilization of the beds and make proper use of the hospital resources.

Challenges in Perpetual Application of Accreditation Standards at a Tertiary Care Hospital, with Special Reference to Medical Care

Priyanka N. Thakre

The quality of medical care in both private & public hospital remains a matter of concern to knowledgeable people. To ensure quality of care certain national & international organization like National Accreditation Board for Hospitals & Healthcare providers (NABH) & Joint Commission International (JCI) have developed Standards to measure and assess quality of care being provided. These organizations conduct rigorous independent assessment based on Standards and Measurable Elements spread over few days & then accredit the hospital for quality of medical care and patient safety. This study has been undertaken to identify the challenges in perpetual application of various Quality Standards with reference to medical care at a tertiary care hospital in a metropolitan city. This study is qualitative in nature using Monograms of various accreditation agencies (JCI, NABH). Hospital Policies on various quality standards on patient care, questionnaire to elicit challenges to application of hospital policies and SOPs as the data collection tools within the hospital. A unique contribution of the study is the identification of various challenges in the application of accreditation standards within the hospital due to various reasons and to observe whether the non-compliance of employees to various accreditation standards specific to medical care is statistically significant or not.

Correlation between OOPE and Quality of Care

Colonel Rai Singh Gujar

National Quality Assurance Standards for Urban Primary Health Centres (UPHCs) have been developed to measure the quality of services at Urban Primary Health Centres. NSSO in 71st Round Report compiled data on out of pocket expenditure (OOPE) on outpatient department (OPD). This study attempts to explore whether there is any correlation between quality of care and OOPE on OPD. Objective was to analyze the correlation between Quality of Care and Out Of Pocket Expenditure on health on OPD in selected states of Punjab, Haryana, Gujarat and Karnataka. An analytical study was done on secondary data of four states of Punjab, Haryana, Gujarat and Karnataka during the months of March-May 2017. The three UPHCs from each state were selected randomly. The quality score for the state was obtained by taking the average score of three UPHCs. The OOPE on OPD was extracted from NSSO 71st Round Report. The Pearson correlation was used to find the correlation utilizing IBM SPSS Statistics 22 Package. The analytical study was done on secondary data of four states of Punjab, Haryana, Gujarat and Karnataka of provided by NHSRC, New Delhi. The analysis shows an inverse correlation between the quality of care and OOPE. The quality is moderately negatively related with OOPE with (Pearson correlation value = -.393). This relationship is statistically significant (p value = .602). In other words if the quality of care is improved in the UPHCs, the out of pocket expenditure reduces and vice versa. It was found that there is very a moderate negative correlation between quality of care and OOPE for OPD in selected states.

Baseline Assessment of Quality Assurance in Health Care Services of CGHS Wellness Center (36-A), Dwarka, New Delhi

Col Rajeev Sharma

'Quality' is the core and most important aspect of services being rendered at any health facility. Quality based approach helps in identifying the gaps in service delivery and tracing its roots and linking them to organisational processes. Ensuring quality of the services will result in improved patient / client level outcomes at the facility level. Regular assessment of health facilities by their own staff and state and 'action planning' for traversing the observed gaps is the only way in having a viable Quality Assurance in Public Health. This study is based on a comprehensive study conducted at public health facilities at CGHS Wellness Center Dwarka, New Delhi to carry out Baseline Assessment of Quality Assurance in health care services of CGHS Wellness Center. Study is cross sectional in nature and sampling technique used were census data and purposive sampling. The data has been collected through face to face interview with the help of structured questionnaire, review of documents and existing policies at the study area, CGHS Wellness Center Dwarka(36A), New Delhi. We have utilized NABH Standards for Wellness Centres through self assessment tool kit modified for our organisation to bring out hitherto unknown gaps in the quality of care in achieving Quality Assurance. The standards help to build a quality culture at all level and ensure quality assurance across all the functions of Wellness Centre. Overall impression about the wellness centre is that the management requires to have more vigil in the matter of cleanliness and patient satisfaction, infection control and continual quality improvement which are major quality indicators in Quality assurance. This study will aid in guiding and focus attention towards ensuring the quality of service to achieve the Quality Assurance in health care at wellness center.

Critical analysis of Project Ramp-up Plan for an upcoming 230 bedded multi super speciality hospital in Dwarka, New Delhi

Rashu Rai

Study has been conducted to critically analyse Project Ramp-up Plan for an upcoming 230 bedded Super speciality hospital in Dwarka, New Delhi. This study was conducted at Aakash Healthcare Pvt. Ltd. for a period of 3 months starting from 28th Jan 2017 till 30th April 2017. Project management is a mix of two major components i.e. time and money. This boils down to one common denominator that project management basically is capital management which can be in form of liquid cash or time which can impact the business plans in form of delays. A very high degree of opportunity cost is involved in all major decisions of a project. Hence, all these decisions need to be closely monitored to understand the cause and reasons for deviations in plans and schedule over runs which may happen. Also, for a quarter year over run in project we need to understand it is not only the cost incurred for that amount of time but also the loss of opportunity which we incurred in the business. In order to learn what went wrong and implement measures to control the same in upcoming projects, this study becomes a must. Descriptive Study was conducted and a self-administered unstructured interview was conducted with the key informants of Aakash healthcare to gauge the reasons for gaps recognized in various different phases of the project. A Gantt chart was prepared to analyze the gap b/w the proposed Project Ramp up plan designed by PWC and the on ground achieved date for various different phases. Scrutinizing the Gantt chart showed a gap of 8 month i.e. project took a period of 44 months again projected 36 months. Various different reasons have been recognized for the delay ranging from Improper Planning and assessment of the requirement of the Client, Use of customise Items as again readily available and easy to maintain regular item and Improper planning related to the equipment procurement. Estimating the time to complete a construction job is the key to a successful project management. An overly optimistic project completion schedule only adds to the loss incurred by the organization in terms of cost but also the opportunity lost due to the delay.

Patient Satisfaction and Quality Assurance in OPD Services of CGHS Specialist Wing of Safdarjang Hospital

Lt Col Ravinder Singh Mehta

Patient satisfaction is one of the important goals of any health system which has been largely ignored by health care managers in developing countries. It is difficult to measure the satisfaction and gauge responsiveness of health systems, as not only the clinical, but also the non-clinical outcomes of care do influence the satisfaction. It depends upon many factors such as, Quality of clinical services provided, availability of medicine, behavior of doctors and other health staff, cost of services, hospital infrastructure, physical comfort, emotional support, and respect for patient preferences. Mismatch between patient expectation and the service received is related to decreased satisfaction. Waiting for consultation and getting investigations done in the hospital is one of the main reasons behind patient does not want to avail the OPD services of that particular hospital. Provision of quick and efficient services is only possible with optimum utilization of resources through multitasking in a single window system. This study has been conducted at public health facilities in CGHS Specialist Wing of Safdarjung Hospital to measure patient satisfaction who have availed services at OPD. The study is Cross sectional in nature and random sampling technique. During the study both qualitative data like factors responsible for patients' dissatisfaction in OPD and quantitative data like average waiting time of the patients in OPD, has been collected through face to face interview with the help of semi-structured questionnaire and has been analysed using software SPSS 22 version. Average waiting time of Orthopedics OPD (2:35hr) is highest followed by Pediatrics OPD (2:15hr), Eye OPD (2:10hr), ENT OPD (2:05hr) and Medicine OPD (1:30 hr) respectively. Patient care dissatisfied with waiting time at reception counter and non-availability of other service areas related to OPD like diagnostics, pharmacy and feedback mechanism. In overall care provided at the hospital, Medicine OPD top scores with (3.67) points, followed by ENT with (3.57) points, Eye with (3.53) points, Paediatrics with (3.46) points and Orthopaedics with (2.90) points respectively. Reliability, Assurance, Tangible, Responsibility and Empathy aspects have been calculated to judge patients' satisfaction. Main recommendations are separate counters at main hospital Lab and Pharmacy for the CGHS wing, 24 hrs Online Registration, dedicated Orthopaedics Specialist to improve Orthopaedics Dept, registration strictly on referral basis to reduce waiting time, Soft Skills cadre for Staff, introduce Feedback mechanism, there should be a Nursing Home / Private Ward facility for CGHS beneficiaries on the similar lines of RML Hospital and lastly a Digital Token LED display in waiting area.

Quality based performance evaluation of a health care facility: a perspective study at Bhagat Chandra Hospital, Dwarka, New Delhi

Renu Sharma

Recent major advances in information technology and increasing demands for health system accountability and patient choice have driven rapid advances in health system performance measurement. Health systems, however, are still in the relatively early stages of performance measurement, and major improvements are still needed in data collection, analytical methodologies, and policy development and implementation. Health system performance has a number of aspects – including population health, health outcomes from treatment, clinical quality and the appropriateness of care, responsiveness, equity and productivity – and progress is varied in the development of performance measures and data collection techniques for these different aspects. The first requirement of any performance measurement system is to formulate a robust conceptual framework within which performance measures can be developed. Objectives/Key Research Questions: Hospitals performance indicators will help monitoring, evaluation and decision making and therefore must be selected and ranked accurately. The aim of the present study was to identify and to select key hospitals performance indicators. Four performance indicators were identified by Analytical Hierarchy process (AHP) technique. Qualitative and quantitative data was collected based on these KPIs for 3 months the data were analyzed. Hospital performance indicators were related Quality-Effectiveness, Efficiency and outcome. The Internal Key Performance indicators which were chosen for study are, Patient satisfaction, Average length of stay in the hospital, Hospital acquired infection and Nursing care assessment. The population of this study comprised of IPD patients from ICU & General ward & gynae ward for 3-months w.e.f.- 1/2/17 to 30/4/17 in Bhagat Hospital, Dwarka, New Delhi. The Qualitative and quantitative data was collected based on KPIs for 3 months. Identifying hospitals key performance indicators provides an opportunity for health stakeholders to identify critical and problematic points with lower costs as well as time and to recognize the best corrective action.

Assessment of Patient Satisfaction in the Outpatient Department Of CGHS Maternity & Gynae Hospital, RK Puram, New Delhi

Col Sanjay Rajain

Patient satisfaction is an important means of measuring the effectiveness of health care delivery and quality of medical care. Patient satisfaction surveys assist in obtaining a comprehensive understanding of the patient needs vis-a-vis service received. It is an essential tool for evaluating the quality of healthcare delivery service in hospital. The objective of this study was to assess the level of patient satisfaction with the health care services provided by the Outpatient Department (OPD) of CGHS Maternity & Gynae Hospital, RK Puram, New Delhi. A cross-sectional study was conducted among patients attending OPD of the CGHS Hospital. The period of study was from Feb 2017 to May 2017. A predesigned and pretested questionnaire with closed ended questions was used for data collection. Statements regarding services of physical facilities, registration staff, doctor, nurse, laboratory and waiting time were asked to patients. There was an overall positive response from the respondents with 81.8% preferring to visit this hospital for their treatment. The majority of the respondents were satisfied with the various components of services and professional care; with a 81.4% satisfaction level with their experience in the hospital. However, 27.8% respondents were unsatisfied with toilet facility and 29.5% were unsatisfied with drinking water facility. Waiting time for registration for 37% respondents was 30-60 minutes or more, which resulted in 31% dissatisfaction levels. Digitization of registration process and MRD; token number display system for waiting patients; prior appointment in block slots for repeat ANC cases; soft skill training of staff; provision of additional toilets for ladies is recommended.

Identification of gaps in Nurse's Documentation at Moolchand hospital: A Nursing Audit complying with NABH and JCI standards

Sonika Tripathi

Nursing documentation constitutes an integral part of the nurse's daily work. The delivery of good care and the ability to communicate effectively about patient care depends on the quality of information available to all health care professionals. Nursing audit is a review of the patient record designed to identify, examine, or verify the performance of certain specified aspects of nursing care by using established criteria. The objectives of this study was to identify the gaps in nursing documentation in IPD area of the hospital and to suggest measures to improve timely and accurate documentation by nurses. A total of 254 patient record files were examined and a documentation audit was conducted on the basis of 11 parameters. Some of the key findings elicited were compliance in documentation of vitals, handover signatures, BAR sheet was a maximum of 85%. Initial assessment and nutritional screening was not done within 30 minutes in majority of the cases. Maximum compliance of initial assessment was seen at best as 30%. Nutritional screening had lower compliance as compared to other parameters audited. In some of the cases with high risk medication administration, nurse's counter sign was missing. Suggestions included education and training programs to be organized for nurses for timely and accurate documentation in the patient records. Regular monitoring and auditing to ensure complete documentation by the nurses should be facilitated.

International Patient Safety Goals

Sucharita Pati

The International Patient Safety Goals (IPSGs) are important guidelines at the international level to promote specific improvements in the process of providing safe and high-quality patient care. This study assessed the compliance to JCI standards for IPSG (International Patient Safety Goals) at BL KAPOOR SUPERSPECIALITY HOSPITAL, NEW DELHI. There is a global trend towards the pursuit of healthcare quality, driven forward as countries attempt to engage in the more effective management of resources and services amidst concerns of increasing costs, competing priorities and patient safety. The level of compliance against standards is then evaluated by the external teams of surveyor and on that basis accreditation rating is arrived at for the organization Joint Commission International (JCI) is an international body issuing healthcare standards following the principles of Total Quality Management to improve quality and patient safety. For the purpose of the study and data collection, inpatient ward, intensive care unit, emergency department, ICU, radiology department were visited and observed over the span of three months. The overall compliance rate for IPSG was 87% & out of all the six goals of IPSG best result was seen for the compliance of 2nd goal of IPSG i.e. Improve Effective Communication which was 98%. The lowest performance was seen for the 5th goal i.e. reducing the Risk of Health Care-Associated Infections which was about 75%. It could be inferred from the study that there is overall compliance of IPSG standards of JCI with few variations in some of the elements that could be achieved by training and motivation of the staffs for a more systematic pursue of the policies and procedures laid down for IPSG.

Digital Prescription

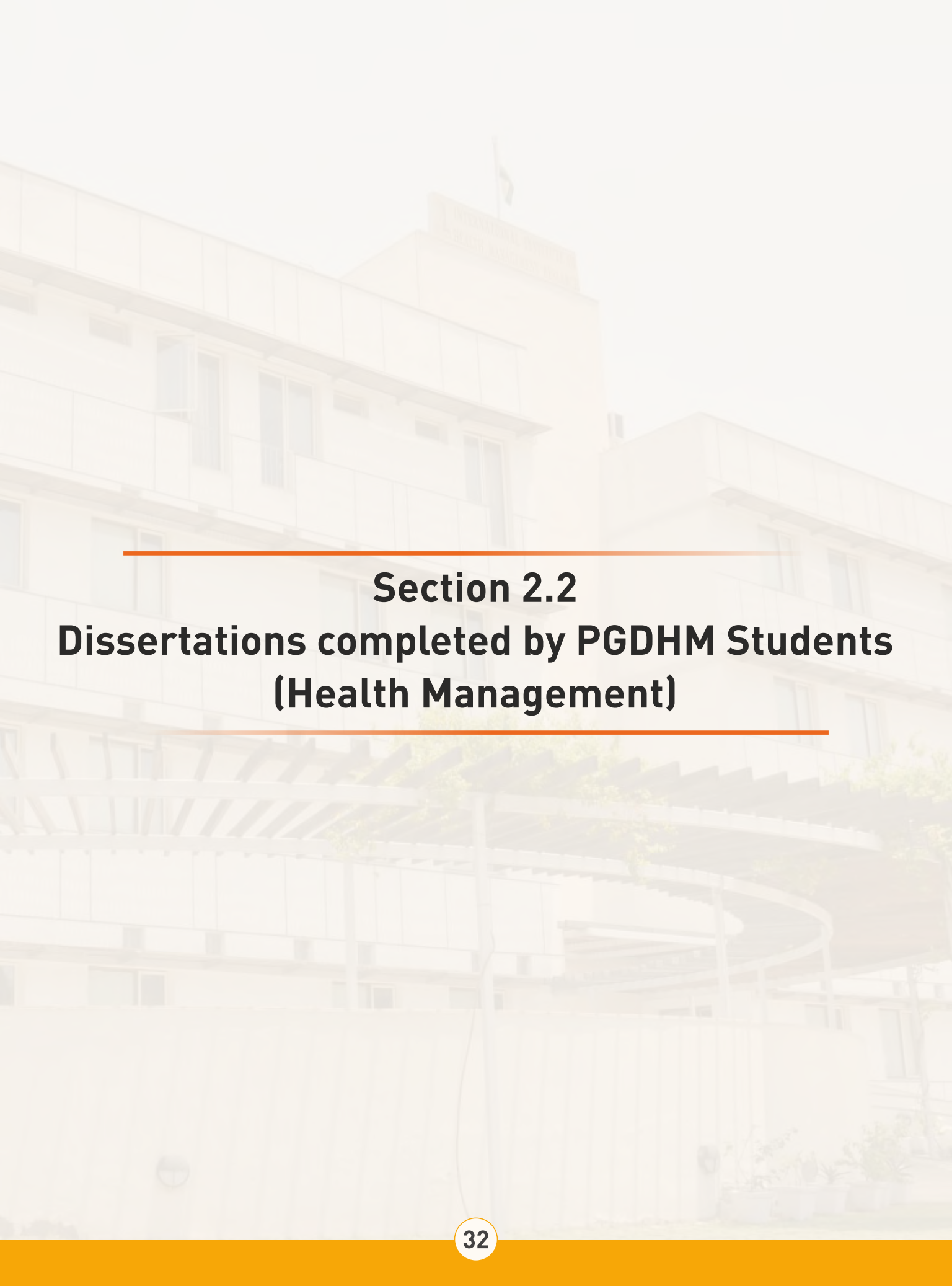
Yashika Sharma

National Medication council defines medication errors as any preventable event, that may cause or lead to inappropriate medication use or patient harm while the medication is in control of the health care professional, patient, or consumer. Medication Errors are common in general practice and in hospitals. Two very common types of medication errors are Prescribing Errors and Erroneous Medical Decisions. Any step in prescribing process can generate errors, for example, a fault in dose selection, omitted transcription, and illegible handwritings. Protecting child's health and providing proper care is most important for parents and doctors. Maintaining baby's record from infancy to adolescence is very crucial and hectic task. The aim of the study is to study the Knowledge, Attitude, & Adoption towards Electronic Prescription amongst Physicians. The study is Qualitative by nature. The research is derived from interviews conducted using questionnaires & focuses on the interpretation of the participants. Key findings are ICHR require lots of typing, Many competitors provide prescription with click buttons. Eg: DOCON, Many physicians are not computer friendly, Prescription is not in proper format and sequence, Parents with children above 1 year of age found no features beneficial for them. To achieve the above mentioned benefits, following recommendations should be taken into consideration like Implementation of clickable E-prescription, Proper sequence of the prescription like chief complaint, symptoms, investigations and diagnosis and Implementation of child development parameters, tooth shedding and eruption pattern and diet advices for parent retention and to increase sales.

A Study on OT Scheduling, Cancellation, and Delays in the Surgeries

Nusrat Ahmad

An OT is the specific facility of the hospital meant for lifesaving or life improving procedures on the body by invasive methods under controlled environment by the personnel with some specific skills to support healing and cure with utmost safety. In the health service sector such as private hospitals, the scheduling of Operating Theatre plays an important role towards achieving their goals. Their main goal is to meet the patient's satisfaction by minimizing his/her total waiting time before undergoing major or minor operations. Poor scheduling of Operating Theatre may cause longer waiting time and can also worsen the patient's disease. In this case, an effective schedule has to be developed in order to improve the reputation and performance of private hospitals. Effective management, good communication, well trained staff, appropriate facilities and equipments, efficient operational layout are key elements to efficient use of operation theatres. The study aims at analyzing the complete process of scheduling of the operation theatre, to observe the number of cancellation and delays in the entire process and to find out the reasons behind all the cancellation and delays. It is an observational cross-sectional study that uses convenience sampling for the data collection and a sample of 302 has been collected by observing patients, nurses, doctors and OT staff. Discussions with the head of departments and with other staff have been done during the observations. Hospital record has been a useful link for data collection during the study. It has been observed during the study that 86 cases were cancelled. Sixty two percent of cancelled cases belong to the patients who have not admitted in spite of the planned surgery booking, 22 percent are medically unfit and 7 percent are those having no financial clearance. The study recommends that day care patients should be counselled adequately to report on time. Computerized scheduling should be utilized to create a realistic elective schedule. OT cleaning should be on time and should be a fast process to avoid delays in the surgeries. Moreover, the patient should be scheduled only after the financial clearance.



Section 2.2

Dissertations completed by PGDHM Students (Health Management)

Knowledge and awareness level assessment of ANM at delivery point regarding RBSK and identification of congenital birth defect of Anuppur District, Madhya Pradesh

Jatin Bhatt

Rashtriya Bal Swasthya Karyakram (RBSK) is an innovative and ambitious initiative, which envisages Child Health Screening and Early Intervention Services, a systemic approach of early identification and link to care, support and treatment. ANM are trained for screening of visual birth defect at delivery point, so that neonate could be treated as early as possible without delaying the process of referring. The specific objectives of study are assess the knowledge and awareness of ANM (Auxiliary Nurse Midwife) about RBSK program and their important features and to determine the level of knowledge of ANM regarding approach used for confirming a child with birth defect at delivery point. This cross-sectional descriptive study was carried out in 25 delivery points of Anuppur district, Madhya Pradesh. In which 25 ANMs of these delivery points were interviewed with the help of semi-structured questionnaire. This study was conducted from 1st April, 2017 to 10th May, 2017. It was found that many of ANMs about 56% don't know about RBSK program. 28% know that this program is for screening of child and about 8% know that this program is for both screening and treatment of child. But no ANM know that this program is for screening and treatment of child with 4D in 0-18 years of age group. According to the data collected 92% of ANM identify the congenital abnormality in neonate by physical examination and rest 8% don't know the approach for identification of congenital anomalies. Strong association is found between training of ANMs and their knowledge awareness level for RBSK program. The average cumulative score found was 5.6 which are below 50% (10.5) of maximum score. Monthly visits of MHTs shall be planned in delivery points and more IEC shall be used at all delivery points in order to increase awareness.

A Study of the Perception on Exclusive Breastfeeding among Postnatal Mothers at a District Hospital

Preeti Manik

This study centered on the knowledge, practice, attitude and beliefs of a cross-section of mothers on exclusive breastfeeding (EBF) in a District Hospital in Chhattisgarh. It also involved the feelings of their supporters and of participants in programmes regarding breast feeding, as well as the problems they have with exclusive breastfeeding. Fifty respondents were sampled for the quantitative study aimed at exploring the perceptions of postnatal mothers on exclusive breast feeding. The result shows that a greater percentage of children are exclusively breastfed and have a greater likelihood of being given complementary breastfeeding after 6 months. This was in line with WHO's expectation of complementary feeding as feeding on breast milk complemented by formula food or solid food. It was found that 90.0% of the respondents were married and had initiated breastfeeding. This positive outlook on breastfeeding is suggestive of the tremendous support of the family, basically the partners, were giving to these mothers. The study supports the literature that the paternal preference for breastfeeding was a principal factor influencing the mothers to breastfeed. Education is positively associated with exclusive breastfeeding, however employment is negatively associated. This supports the earlier literature that employment is associated with cessation of breastfeeding as early as two or three months post-partum. Our assessment of the duration for their practice of exclusive breastfeeding showed different feelings and attitudes. Three-fourth of the respondents said they would breastfeed exclusively for 5 – 6 months and a few mentioned between 1 – 2 months, 3-4 months and 7-12 months. Three-fourth of the mothers adhered strictly to the current breastfeeding recommendations by UNICEF/WHO, i.e. no drinks, foods, pacifier/dummies or artificial teats be given to a baby. The following recommendations are therefore suggested: (a) Baby friendly hospital initiative be reconsidered and extended to more hospitals to enhance EBF promotion in the countries; (b) Continuous refresher presentations and workshops be revived nurses and other health workers as a way of motivating them to get the best out of them to support nursing mothers exclusively breastfeed, and (c) The influential significant others like the grandmothers, grandfathers, etc be given recognition and role to play in the promotion of EBF within the family and the community.

A cross sectional study on functioning and patient satisfaction level at Mohalla clinics, South West Delhi

Lt Col Puneet Sharma

Primary health care is one of the most important components of health care in developing countries. The government of Delhi introduced the concept of Aam Aadmi Mohalla Clinic in Delhi to reduce the burden of secondary & Tertiary level hospitals which are already highly overburdened and to make primary health care more accessible to its citizens. The objective is to study the level of patient satisfaction at Mohalla clinic. This study covers 4 Mohalla clinics in South West Delhi: Pochanpur, Dwarka, Ajay Park, Najafgarh, Sahyog Vihar and Dabri Extn has been cover in this study and 100 patients (25 patients from each of the 4 Mohalla clinics) were interviewed using Convenient sampling technique. The provision of free medicines and tests has reduced the health care expenditure of poor patients. The staffs in the rented clinics are not as per the guidelines. The contracted doctors get Rs. 30 per patient whereas the government staff gets only the salary. Patients are satisfied with the medicines that are available at the clinic. Patients are satisfied with the list of tests available at the clinic. A little more emphasis on selection of location should be given. Addition of basic emergency facilities like dressing, saline would add to the quality of services. A few more tests and medicines should be added to the list. Clinics should be adequately staffed to deliver quality of services.

To assess the knowledge, attitude and practice regarding hand hygiene among children of Government secondary school, Harsaru, Gurgaon

Sristi

Poor hygiene practices and inadequate sanitary conditions play major roles in the increased burden of communicable diseases within developing countries. Hand hygiene has achieved the reputation of being a convenient means of preventing communicable diseases. There is an established causal links between hand hygiene and rates of infectious disease. children if taught hand washing at school will bring that knowledge home to parents and siblings, this can help family members get sick less and miss less work and school. The present study was carried out in Government secondary school of Harsaru, Gurgaon. Quantitative survey of 70 respondents was done by a pre-tested questionnaire. Simple random sampling method was used for data collection. Study was carried out during the period of February to April 2017. On analysis it was found that that majority of respondents' belonged to lower socio-economic strata of the society. Level of literacy of the mothers was equally distributed among primary and middle school. 3% of respondents practiced open defecation. Hygiene practice of both male and female respondents varied on different hygiene parameters. Majority of respondents were aware about the various aspects of hand hygiene. School was the major source of information. Respondents, whose hygiene practice was found to be good, belonged to mothers who were educated up to middle school and above. Those who visited health facility more often tend to have better hygiene practices. Hygiene practices can be encouraged amongst the children by involving them in various school based activities like competitions, Awards for maintain cleanliness, Increasing their knowledge and teaching them through demonstrations, Conducting regular workshops by involving parents and children regarding various aspects of hygiene. Explaining the effects of poor hygiene and open defecation and how it can affect health adversely. Proper follow up should be done for intervention on hand hygiene.

Baseline assessment of Urban Primary Health Centers in Punjab under National Quality Assurance Programme

Prerna

National Quality Assurance Standards for Urban Primary Health Centres have been developed to measure the quality of services at Urban PHCs. National Quality Assurance Standards for UPHCs have 35 Standards under 8 Areas of Concerns with 198 Measurable Elements (ME). The checkpoints of each ME have been arranged into Twelve Checklists. Evidence of compliance to each checkpoint would be gathered either by direct observation by the assessor or interviewing staff of the health facility or interviewing with beneficiaries or review of records available at the UPHC or a combination of all such methodologies. Compliance to each checkpoint would be decided in term of full compliance, partial compliance or no compliance and the checkpoint would be awarded two, one or zero marks respectively. The assessment process generates scores for the UPHC, departments, and against each Area of Concern. These scores can be used as an objective parameter for assessing status and progress of Quality Assurance at the UPHC, as well as comparing two similar health facilities and inter-Block/ Inter-District/Inter-State comparison and Benchmarking. The main objective of the study was to identify the gaps and comparative analysis in the UPHCs according to the 8 areas of concern using National Quality Standards. The study design was Descriptive Cross sectional study, Study Area was Patiala and Bathinda District, Punjab. Duration of study of the study was from 17th March '17 to 10th May '17. Study Population were Patients, Patient attendants, Staff Nurses, Nodal Officers, Medical Officers, Pharmacist, Lab Technician, ANM, ASHA workers, Sample frame for the study was Urban slum population of UPHC Paras Ram Nagar, Janta Nagar, Bathinda, Punjab, UPHC Anand Nagar B, New Yadwindra Colony, Arya Samaj, Patiala, Punjab. Technique used was Convenient Sampling. Checklist was used for Data Collection. Methods used for assessment of UPHCs were Patient Interview, Staff Interview, Observation and Record Review as per the checklist parameters. The analysis for the study is shown by Pareto Graphs which represents those two main areas of concerns i.e. quality and outcome indicators, if improved can automatically improve the score of the UPHCs. The suggestions can be divided into three groups: - One where the gaps will be covered by the support from concerned State level authorities. Secondly gaps will be covered by the interventions at the facility level only. Best practices that can be implemented in other UPHCs for improvement of Quality & services.

Practices that are potential risks to an increase in Zoonotic tuberculosis – a cross-sectional study amongst cattle holders in peri-urban Sonipat, Haryana

Sonam

The main causative agents of bovine TB are *M. bovis* and *M. caprae* and transmission occurs primarily through close contact with infected cattle or consumption of contaminated animal products such as unpasteurized milk. A cross-sectional study titled as has been conducted in a peri urban area to assess the association of practices potentially increasing risk of Zoonotic TB among cattle holders. The study was done on 100 cattle-holders; 1 from each selected household by using snow ball sampling. The cattle holders who are handling cattle at home for the maximum time were included in the study and face to face interviews were conducted by using close ended questions including Modified Kuppuswamy scale of socio-economic status. The mean score was 9.4 on the Risk Scale of 5 – 20. This study reveals that only 4% participants have heard about zTB. The consumption of boiled milk was 15%, mixed by 68% and raw by 9% of the population. The male participants of working age group (20 – 39 years) and respondent belongs to upper middle and lower middle socio-economic class were exposed to maximum risk of zTB.

To evaluate knowledge of ASHAs in relation to provision of HBNC services, District Umaria, Madhya Pradesh

Anil Kumar

India contributes to one-fifth of global live births and more than a quarter of neonatal deaths. About 0.76 million neonates died in 2012, the highest for any country in the world that year; Four states – Uttar Pradesh, Madhya Pradesh, Bihar, and Rajasthan – alone contribute to about 55 percent of total neonatal deaths in India. There is enough evidence from all over the world and from India, that a well trained community health volunteer like ASHA can save a significant part of these lives if she were to be available in these critical hours. This was descriptive cross sectional study. Non probability convenient sampling method was used for sample size. 75 ASHAs from three blocks of Umaria district of Madhya Pradesh participated. Knowledge was assessed using a semi structured questionnaire. This study provide a snapshot that 64% (48) ASHAs have moderate knowledge in provision of HBNC services and only 0.08% i.e., only 6 ASHAs have good knowledge of providing HBNC services and 28% of ASHAs have inadequate knowledge. The number of visits to be provided in institutional delivery was clearly known to 62% of ASHA's, however, the number of visits to be given in home delivery was not as clear. The knowledge of ASHA with regard to criteria for high risk group newborn was adequate as 70 % of them knew signs and symptoms. Knowledge on sepsis medicine and vaccination of newborn was inadequate as only 42.66% and only 61% of ASHAs known what should be done is baby has sepsis and till how many vaccines should be given to newborns respectively. The study clearly shows that although the ASHA's were adequately trained, the level of knowledge of ASHA was found to be optimum. Thus, the HBNC strategy's success in reducing neonatal mortality ultimately depends on ASHAs knowledge on properly identifying, treating, reporting and referring sick infants. Improving ASHAs' ability to correctly assess and classify illness requires strengthening their skills, by segregating ASHAs for different-different programs and by their knowledge assess test in every 6 months.

To identify Distribution System and Hygiene Practices under Small Dairy Farms of Peri-Urban Area of Jaipur

Akshita Singh

Quality care is needed for proper milk distribution system. Every participant in the dairy supply chain must be responsible for developing this quality system. Udder health has a direct link to hygiene practices followed under small dairy farms and Somatic Cell Count (SCC) is related to incidence of mastitis, which is caused by unhygienic practices and it is therefore a good measure of udder health. A high SCC indicates an udder health problem and milk with a high SCC is known to have shorter shelf life due to high activity of enzymes and high SCC also causes other problems for the dairy industry. A cross-sectional and observational Study was conducted using snow ball sampling for evaluation of hygiene practices. Four type of Distribution System identified under Small Dairy Farms i.e., Supplier to consumers, Supplier to government dairies, supplier to Distributor and Supplier to Private dairies. On the basis of supplier response we obtained 12.9 average hygiene score on 0 – 19 scale and on the basis of observer we got 9.16 average score on 0 – 16 scale. California Mastitis Test showed that 63.3% were having SCC in between 500,000 – 10,00,000 and 30% of showed SCC between 1,000,000 – 5,000,000. Awareness programs for farmers regarding hygiene practices under small dairy farms should be devised to improve awareness level of hygiene practices.

Monitoring And Evaluation Of Chetna Mobile App under RBSK Program in two Districts of M.P (Badwani& Gwalior)

Ankita Sharma

According to March of Dimes (2006), out of every 100 babies born in this country annually, 6 to 7 have a birth defect. Early detection and management of diseases including deficiencies; bring added value in preventing these conditions to progress to severe and debilitating form, thereby reducing hospitalization and improving implementation of Right to Education. Rashtriya Bal Swasthya Karyakram (RBSK) is an important initiative aiming at early identification and intervention in case of birth defects in children from birth to 18 years to cover the 4 'D's viz. Defects at birth, Deficiencies, Diseases, Development delays including disability. The objective of this study was to monitor and evaluate the Chetna mobile app that was launched under RBSK program to ensure better performance of mobile health teams (MHT) by keeping a check on attendance of MHT through this app. And also to make sure that the screened and validated SNCU data is been made available to mobile health teams. A Cross-sectional study was conducted during a period of 2 months in Badwani & Gwalior districts of M.P. On the basis of secondary data that was made available by the organization, feedback of 86 participants were taken by telephonic interview. On the basis of questionnaire based telephonic interview it was found out that Badwani district is better performing with better outcome of results in form of treatment and referral as compared to the Gwalior district. The treatment and referral data for Badwani is 2296 & 1906-and for Gwalior is -0 & 2, respectively. Teams available in the Badwani district are more competent in terms of using the Chetna app and it could be evaluated that the objective with which the Chetna app has been introduced i.e the biometric attendance of mobile health team in field and screening of the SNCU CHILD is fulfilled. However a few technical faults remain as the major issues with the app. From the report it could be concluded that although the introduction of the CHETNA APP needs further technical advancements, main objective of monitoring the attendance through biometric mark in and mark out has been met successfully. But the other objective of the Chetna app, of increasing the outcome in the form of referral and treatment still requires improvement.

A study to assess the nutritional status of under five children after two months of first contact with Nutrition Rehabilitation Centres (NRCs) in Bhind District (Madhya Pradesh)

Ankur Jain

The aim of study is to identify the nutritional status of male and female children under five years of age and to identify factors affecting the nutritional status after completion of two months of first contact to NRC. The Objective of the study is to study nutritional status of children less than five years of age after completion of four months with NRC, to assess the various factors affecting the nutritional status of these children, and to assess the gaps in management of malnourished children at home. It is a cross-sectional interview-based study. The tools are predesigned and piloted for use among the mothers of 36 children who have utilized services of NRCs in the past and meet the study inclusion criteria. Permission of concerned authorities has been taken after explaining the nature and utilization of study. A cross-section study for the period of 3 months was conducted. 36 children who were admitted in NRC Bhind and in Bhind district, in the past two months were listed. The tool was administered at the residence of the child to the mother. The beneficiaries have been stratified as 18 males and 18 females. From this list, those were included in the study who had completed four follow ups during four months after release form NRC. Children who had not completed four follow ups and those who are more than five years of age were excluded from this study. The results show significant health improvements among malnourished children, from admission to discharge from NRCs, and from discharge to four follow-up periods, indicating continuous observations and advice by the staff. Since malnourished children lack adequate Vitamin, minerals and micronutrients, appropriate complementary food and supplements and supplements should be introduced in the system.

An Assessment of Spirituality and Its Relationship to Stress with Special Reference to Post Graduation Diploma in Hospital and Health Management Students

Ayushi Bhatnagar

A growing number of researchers and organizations have started considering spirituality to be a critical component of effective management to reduce stress. Spiritual people have reduced stress. Occupation related stress and anxiety is on the rise. Like in other professions, Health care managers suffer from work-related or occupational stress. Health care people need to manage their stress levels so that they can easily provide care to the others who are ill and need treatment. Today's organizations are looking for the better-educated, new generation of managers who are not only intelligent, but also able to efficiently cope to stressful environments. Spirituality can be a process to manage stress in workplaces. The purpose of the current research is to assess the preparedness of management students from spiritual perspective. Furthermore, it also explores the relationship between management students' perception of their own spirituality and stress. Perceived spirituality and perceived stress was measured in health care managers. Perceived spirituality scale contains 28 items and Perceived stress scale contains 14 items as derived from 65 students of IHMR post graduates of health care. More number of women students took up this course and most were Hindus. Spirituality scores of the overall samples can be generalized since the significance value (p) was found to be less than 0.05. Independent sample T test on spirituality based on gender and was found not to be significant but batch wise sample was significant as the value was found to be less than 0.05. Stress scores of the overall samples can be generalized as the significance value (p) was found to be less than 0.05. Independent T test on stress based on gender and batch wise were found not to be significant as the value was not found to be less than 0.05. There is negative relation between perceived spirituality and perceived stress; hence as the level of spirituality increases, stress level goes down. However, it was also noticed that the strength of relationship is very weak ($r = -.029$). The results were also found to be insignificant ($p > 0.05$), which means that the results cannot be generalized. With the changing work demand, it has become essential to have a high level of spiritualism in individuals to perform their best. Therefore, it has become important to focus on the spiritual growth and competence of the management students. It can be inferred from this that an individual who is spiritual can cope up with stress better than the individual who is not spiritual.

Ambulatory EMR Implementation Issues in Ophthalmology Care in US Health Care System

Disha Biala

Health care in the United States is provided by many separate legally authorized entities. Current estimates put US healthcare spending at approximately 15% of GDP, which is the highest in the world. In the United States, around 85% of citizens have health insurance, either through their employer or purchased individually. Under 2009's Health Information Technology for Economic and Clinical Health (HITECH) Act, the Office of the National Coordinator for Health Information Technology (ONC) was given the authority to manage and set standards for the adoption of electronic health records (EHR) and supporting technology in healthcare facilities across the United States. Providers began receiving financial incentives for demonstrating the "meaningful use" of these technologies, which eventually progressed into penalties for those who failed to use the tools effectively. Functionalities of EHR systems vary, as does the use of EHR functionalities by individual physicians within a single practice. EHR implementation studies must consider how changes in practice patterns and professional concerns could hinder full implementation and integration. The use of a fully functional electronic health record (EHR) system is linked to improved quality measures. Electronic Medical Record (EMR) provides clinical charting for ophthalmologist and eliminates paper charts. The major function of a medical record is to document the patient's medical history and treatment, which in turn ensures of better patient safety & care. However, almost half of ambulatory providers with an EHR do not use the full functionality. Attempts to encourage optimal use of EHRs must address barriers associated with the need to change medical practice. The study was aimed towards analyzing the barriers physicians face on both a personal and practice level during the implementation and use of ambulatory EMR. The following results were obtained from the study; 10 fundamental issues that emerged as perceived barriers to physicians' adoption and use of EHR systems of an Ambulatory EMR system in ophthalmology; Implementation Cost, Threat to Professionalism, Training Concerns, Practice Workflow Issues, Interoperability, Privacy Concerns, Revolution in Practice Approach, Administrative Concerns, Interfaces with doctor-patient relationship and Loss of Productivity. The purpose of this study is to summarize the fundamental issues in ambulatory EHR implementation that are important for ophthalmology. We hope that this will help ophthalmologists to identify the important issues that should be addressed when implementing EHR systems and assist federal agencies to develop future guidelines regarding meaningful use of EHRs. More broadly, the American Academy of Ophthalmology (Academy) believes that ambulatory EHR will improve access to relevant information at the point of care between the ophthalmologist and the patient, enhance timely communications between primary care providers and ophthalmologists, mitigate risk, and ultimately improve the ability of physicians to deliver the highest-quality medical care.

An evaluation of clinical practices of nursing staff in relation to maternal health services

Gavish Kumar

Approximately 529,000 women die from pregnancy-related causes annually and almost all (99%) of these maternal deaths occur in developing nations. One of the United Nations' Millennium Development Goals is to reduce the maternal mortality rate by 75% by 2015. Causes of maternal mortality include postpartum hemorrhage, eclampsia, obstructed labor, and sepsis. Many developing nations lack adequate health care and family planning, and pregnant women have minimal access to skilled labor and emergency care. Basic emergency obstetric interventions, such as antibiotics, oxytocin, anticonvulsants, manual removal of placenta, and instrumented vaginal delivery, are vital to improve the chance of survival. The objective of the study is to evaluate the basic set of clinical practices performed by nursing staff in relation to maternal health services. We chose Kasganj as it is one of the high priority districts of Uttar Pradesh, and health facility caters to a population of 14+ lakh, as UP itself is a high priority zone in terms of maternal child health (With a MMR of 292, it stands behind Assam, whose MMR is 328, as per SRS-2012As per) and Kasganj is one of the poor performing districts among high priority districts of Uttar Pradesh. -Staff nurses (were selected randomly from 10 community level hospitals, having similar delivery load to private hospitals and similar basic qualification, i.e. B.Sc. Nursing and almost equal years of experience, i.e. 3+ years of experience and catering to almost equal delivery load per month). Questionnaire used was according to established protocols by WHO and followed by NHM i.e. few protocols regarding maternal child health by NHM also from OSCE(objective structural clinical examination) examination of skilled birth attendant according to maternal child health tool kit and in accordance with RMNCH+A guidelines. The skills were analyzed and the staff were found to have poor knowledge of few basic steps of normal delivery as per WHO guidelines. 70% of the staff didn't had knowledge of normal delivery and basic infection prevention procedures were lacking in 90% of them. ANC and PNC management were also up to satisfactory level in 25% of the staff requiring capacity building interventions.

Assessment of teams composition and resource availability with mobile health teams under Rashtriya Bal Swasthya Karayakram

Ishan Tripathi

Rastriya Bal swasthya Karayakram is a program under National Health Mission, Mobile Health Team are the main pillar of Rastriya Bal Swasthya Karayakram. Mobile Health teams do the screening of 4Ds for Children of 6 weeks to 6 years at anganwadi's centres and 6-18 years children at school. Mobile Health team consists of 4 members i.e. 1 Male Doctor, 1 Female Doctor, 1 ANM and 1 Pharmacist with proficiency in computer for data management. The management of 4d is done at higher centers. All blocks of Katni district were selected and all the functional Mobile Health Team was included in the study. Mapping Tool is prepared according to Guidelines of RBSK was used for assessment of Teams composition and resource availability with mobile health team for their proper functioning in field. The interviews are conducted by the coordination with the mobile health teams and doing the field visits at the sites where the mobile health teams are doing the screening. Interviews were conducted using Paper Assisted Personal Interviewing (PAPI). According to the norms of Rashtriya Bal Swasthya Karyakram 6 out of 9 mobile health teams were not having complete man power And 6 teams does not have complete tool kit essential for screening whereas 2 teams does not have the tool kit. The RBSK vehicles are not available to the Mobile Health Teams on time. Also the doctor of Mobile Health team are being assigned different works like at block level so they are unable to work according to their micro plan. Ensure 2 Mobile Health Teams in all blocks of District Katni. Ensure the complete composition of the teams working in blocks. Provide the tool kits for screening of children to Mobile Health Team every year. Ensure the availability of the RBSK vehicle to the Mobile Health Teams. Do not engage the Mobile Health Teams in any other work other than the screening.

Transfer of Care in Post-operative Cataract Cases in US Healthcare System

Jasmine Pattanayak

United States is witnessing an increase in the population of baby boomers, who are medically complex and contributing towards the sick population. This situation is necessitating greater input from physicians with medical expertise with consistent and rapid availability. With an increasing proportion of the population ageing, chronic eye diseases are expected to increase in numbers, consequently, more Americans will require long term management of eye conditions and access to tertiary services. Changing patterns of vision loss as a result of age-related eye diseases will dictate the course of change in eye health service delivery. The proportion of optometrist and ophthalmologist varies greatly within the geographical distribution. This variation in the proportion of both the health care providers sometimes compromise the health seeking behavior of the patients. Collaborative care and task sharing presents an opportunity to utilize the existing skills of the current workforce to meet future demands. A review study was conducted to understand the existing framework of co-management for ocular diseases in US Healthcare system and the integrated approach of ophthalmologists and optometrists in the management of post-operative cataract cases, to review the quality of service required by an individual in this cycle of shared care and to determine the role of Healthcare IT in providing an electronic platform for co-management. This research demonstrates that integrated care between optometry and ophthalmology is a safe and effective approach to deliver quality eye care and efficient management of any post-operative complications after cataract surgery. This research also demonstrates that there are opportunities for task sharing to meet the future demands on the eye care setting to manage patients who require long-term monitoring. This research can be utilized to further develop electronic platform for efficient management and even out the disease cases through clinical and other referral pathways.

Is small scale dairy farming dying out? - An exploratory study

Mansi Jatwani

Dairy is a top-ranking commodity in India. The lives and livelihoods of small farmers are becoming increasingly vulnerable. Hence, an in-depth study was designed to identify reasons of a decreasing small scale dairy farming and challenges faced by small dairy farmers and; to understand the influence of animal health on small scale dairy farms. A qualitative exploratory study was carried out in Peri-urban area of Hodal, Haryana and purposive and snowball sampling were employed. The participants of the study were current small scale dairy farmer, ex small scale dairy farmer, household member and other stakeholders. In-depth Interview was conducted for the investigation. This study revealed that small scale dairy farming is still present in peri urban area but there is decrease in number of small scale dairy farmers. The major reasons are shrinking fringes, access to cattle provender, tepid interest of future generation, increased cost of cattle and cattle health. The study recommends that support (in form of subsidy) should be provided to small scale dairy farmer for accessing land and provender and awareness about the importance and scope of small scale dairy farming as a stable career opportunity should be spread among young generation.

Design & Development of Non-Communicable Disease Tracking System For MSF Lebanon

Monika

MSF Médecins Sans Frontières (Doctors without borders) provides assistance to populations in distress, to victims of natural or man-made disasters and to victims of armed conflict. The presence of over 1.4 million Syrian refugees is putting considerable strain on public services, including health, and MSF is providing healthcare assistance in the country. The MSF Team includes doctors, nurses, midwives, surgeons, anaesthetists, epidemiologists, psychiatrists, psychologists, pharmacists, laboratory technicians, logistics experts, water and sanitation engineers, administrators and other support staff. In order to track Non-Communicable Disease (NCD) cases, such as Hypertension, Diabetes, Cardiovascular diseases, the MSF has a pre-existing program on MS-Excel, which had some limitation. Therefore, under the present study, a tracking system was designed and developed using DHIS 2 for the MSF. The standard software development methodology was adopted and consisted of five stages, namely, initiation, format analysis, designing, building, and implementation. The new tracking system designed and developed in DHIS2 Tracker Capture Module was successfully implemented in Shatila NCD Tracking Program running in Shatila PHC in Lebanon. The users are able collect, manage, visualize (in the form of charts and pivot tables) and explore data through the different options available on the Dashboard of the software. The user, through the Dashboard can do what they were doing in earlier software based on excel like registering patient at the point of care, follow-up at each re-visit, referral to a tertiary care facility, case assessment, care plan, and status of the patient in a more user-friendly and beautiful manner. Further, its potential to connect with any type of device and work offline feature comes very handy for the user.

Potential Risk Factors Attributed to Occurrence of Brucellosis in Dairy Farmers of Peri-Urban Area of South-West Delhi

Navita Yadav

Brucellosis is one of the most common Zoonotic diseases globally. Hence a study was designed to identify the exposure to potential risk factors of brucellosis among the dairy farmers of South West Delhi. A cross sectional study was carried out in village Jhuljhuli of Najafgarh division of South-West Delhi. The study was done on 100 individuals through snowball sampling method. The participants were those who do maximum work involving livestock. A semi structured questionnaire was used for data collection through interview. Risk score was measured through 0-14 scale, where 0 means no risk and 14 meant at higher side of risk. Risk scoring came out with maximum score of 12 out of 14 and minimum 3. Whereas mean score was 8.08 with standard deviation 1.835. Only 36% responded that they got their animals vaccinated regularly. Regarding treatment of their animals, 70% of individuals treat the animal on their own, 100% respondents said that they assist their animals during reproduction without using protective gloves. The study concludes that animal husbandry practices such as keeping animals in close proximity of humans during nights, irregular vaccination of cattle, contact of animals with other animals during grazing or watering, treating animals on their own when they were sick and assistance during reproduction without wearing protective gloves contribute to risk of Brucellosis among the community.

Baseline study of knowledge, attitude and practices amongst the Trucker and allied population regarding Tuberculosis

Prachi Pal

The aim of the study is to assess the knowledge, attitude and practices of truck drivers, cleaners, dhabawalas, mechanics, helpers and others towards Tuberculosis (TB). The target sample was 250, chosen randomly; consisting of 200 truck drivers and cleaners and; 50 allied population. Sanjay Gandhi Transport Nagar in Delhi is the study area which consists of more than 8,000 workers and a daily inflow of 3,500 trucks. The questionnaire was divided into four segments. The first segment consisted of questions related to their general details e.g. name, age, monthly income which gives the socio-economic insight. The second segment consisted of questions reflecting awareness regarding TB and its signs and symptoms. The third segment incorporates their behavior towards TB and fourth reflects their health seeking behavior. On interviewing them, it was observed that majority of them had heard about TB as a serious disease, but did not know the exact signs and symptoms related to it. A majority of respondents said they wanted to help people suffering from TB but, in general, people tend to stay away from those suffering from TB, because of fear of getting infected. They preferred visiting government health facilities, because most of the respondents maintained that private health facilities are expensive, although they believe that the level of treatment was better at private facilities. Most of the respondents (36%) said they would seek medical help during illness only, which reflects there is lack of awareness about preventive health. Also as their nature of job required them to travel continuously and stay away from home they are unable to take care of themselves. They could not adhere to strict medicine regimes because of lack of follow-ups. Also lack of money and basic facilities, were the reasons for ignoring their health even if they were willing to seek medical services. There is a need to increase awareness amongst the target population regarding preventive health and causes, symptoms, precaution, management and treatment of TB. This would lead to decrease in disease burden and increase in positive health. Apart from medical aspect of TB, there is a need to work upon social and behavioral aspects as well. It includes extending support to families with members suffering from TB; by guiding them about management and treatment and spreading awareness among communities to burst myths and misnomers about TB, thereby curbing the stigma attached to it.

To Assess the Availability & Quality of ANC services provided at village health and nutrition day in Budaun District of Uttar Pradesh

Pardeep Kumar

VHND were introduced by the National Rural Health Mission to improve access to essential maternal, new-born, child health and nutrition services at village level. Aim of the study was to assess quality and availability of ANC services on VHND session in Budaun District of U.P for rural pregnant women and to estimate utilization of the services in beneficiaries and any gaps thereof. A descriptive cross-sectional study with convenient sampling design was undertaken in rural areas of Budaun District from February 2017 to April 2017 with sample size of 64 pregnant women from 16 VHND session in 8 Block. 86% of the respondents were aware of services provided in VHND. 22% of pregnant women observed, who didn't get any TT dose by ANM and 75% of the VHND session observed where privacy during examination was not maintained due to this no abdominal examination was done by ANM. Moreover, 32% of the VHND session observed where digital B.P apparatus was not functional and 30% of pregnant women who was not counselled about danger signs during pregnancy. This clearly showed that lack of ANC services given by ANM, either due to lack of knowledge or improper logistics supply of medicines and equipment. Services in VHND were not utilized to the optimal extent by beneficiary pregnant women. Gaps in utilization of services were found mainly in relation to antenatal care. Monitoring and supervision need to be regularized for effective organization of VHND by VHNSC. Skill building training of the frontline health workers with emphasis on quality of care in service delivery can be useful to optimize the utilization of the available services as presence of ASHA, ANM and AWW are critical for provision of the intended package of services in VHND.

An assessment of knowledge regarding the risk of Zoonoses and hygiene practices among women with livestock in South-West Delhi, India: A cross – sectional study

Priya Chinchwadkar

Zoonoses are diseases that are transmissible between animals and people. Knowing about the perception, culture and general habits of the farmers regarding the cause of Zoonoses is important for their understanding about its prevention. Awareness and practices to be followed act as an important tool in improving the control measures for Zoonoses. Women account for 93 per cent of total employment in dairy production in India, which makes them vulnerable. This study was conducted to assess the knowledge level regarding the risk of Zoonoses and hygiene practices among female population with livestock in South-West Delhi. A sample of 60 households with women handling livestock had been taken for this study and data was collected by a questionnaire and a checklist. It was found that the knowledge level of the majority respondents (75%) regarding Zoonotic disease was low. Nearly half of the respondents 32(53.3%) disagreed that a few diseases can be transferred from man to animal or vice-versa, while none of the respondent had knowledge of specific Zoonotic diseases. A knowledge score was calculated for knowledge regarding the hygiene practices related to Zoonoses, out of total score (28) the respondents got a mean score of 11 only. On observing the way of actual handling of livestock gap was observed in their knowledge level and practicing. Greater awareness generation and managing practices are warranted.

A cross sectional study on community acceptance of available milk and assessment of its quality in the Peri urban area of South West Delhi

Purnima Rai

Milk is considered to be a balanced food rich in fats, proteins, vitamins and minerals as it provides complete nutrition in a balanced proportion, but almost 70% of the milk sold in India is adulterated as it does not match the standards laid down by FSSAI. Adulterants are the contaminants that degrade the quality of milk and are may be harmful to the human health. This cross sectional descriptive study was conducted to understand the perception and preference of the community regarding the acceptance of packaged and unpackaged milk, to assess the quality of milk with respect to the adulterants in packaged and unpackaged milk and to assess the difference in the quality of milk (packaged and unpackaged) at the level of Vendor/ Hawker and end user. We involved women of 100 household and collected data with semi structured questionnaire. Rapid milk testing strips were used to test the milk; which can detect an adulteration level at not less than 0.5%. It furnishes results within 5 minutes and any change in the colour of the strip/milk implies presence of adulterants. This study revealed that community prefers packaged milk (57%) over unpackaged milk (43%). Community perceives good taste (58%) followed by thick consistency (30%), good smell (28%), easily digestible (20%), pearly white colour (11%) and economically cheap (1%) as best quality milk. Only 8% of the samples of packaged milk were found to have no added adulterants and no samples of unpackaged milk were found to have “no added adulterants”. There was presence of Neutralizer (82%) followed by Detergent (29%) and Urea (14%) in packaged milk and presence of Urea (71%) followed by Detergent (29%) and Neutralizer (64%) in unpackaged milk. A greater awareness is required in the general public regarding norms set by FSSAI. Packaged milk should be tested by vendors and package should clearly mention percentage of adulterants if any.

The Fate and Management of Sick and Dying Cattle and its Consequences on Small Scale Dairy Farmers in Peri-Urban Areas

Shruti Pahwa

Livestock plays an important role in the economy of farmers. Livestock is a source of subsidiary income for many families in India. The mismanagement of sick and dying cattle leads to an increase in sanitation cost of municipalities, incidences of diseases by exposed carcasses and hence more expenditure on avoidable health catastrophes. The main objective of the study was to study the fate of sick and failing cattle and their detailed management regarding disposal of dead cattle. The study was conducted among small holder dairy farmers, scientists, officials of Haryana Dairy Research Institutes, Municipality officials, Veterinarians in peri-urban areas of Karnal. Dual strategies of purposive sampling and snowballing were employed to identify potential respondents. 15 in depth interviews were conducted for the purpose of data collection. The result is presented in three core themes: Impact of low literacy and awareness levels, Role of informal forms of disposal and preference of informal channels over Municipality. The study gives an understanding how economic factors affect the small dairy farm holders and treatment meted out to the dairy farm animals which will help policy makers to improve their welfare. Providing small holder farmers with incentives and better services for care of sick and dying cattle will greatly improve the quality of treatment given to the animals. The prevalent practice of large meat buyers has already brought about some drastic changes among the seller. This study emphasized the need to have more synergy between the farmers and government animal husbandry departments for proper management of sick and dying cattle and to improve cattle's continual care. Development of educational programs for the dairy farmers to enhance their skill and knowledge pertaining to the zoonotic diseases must be incorporated.

Knowledge, attitude and practice about hygiene among livestock keepers in per-urban area of Vadodara

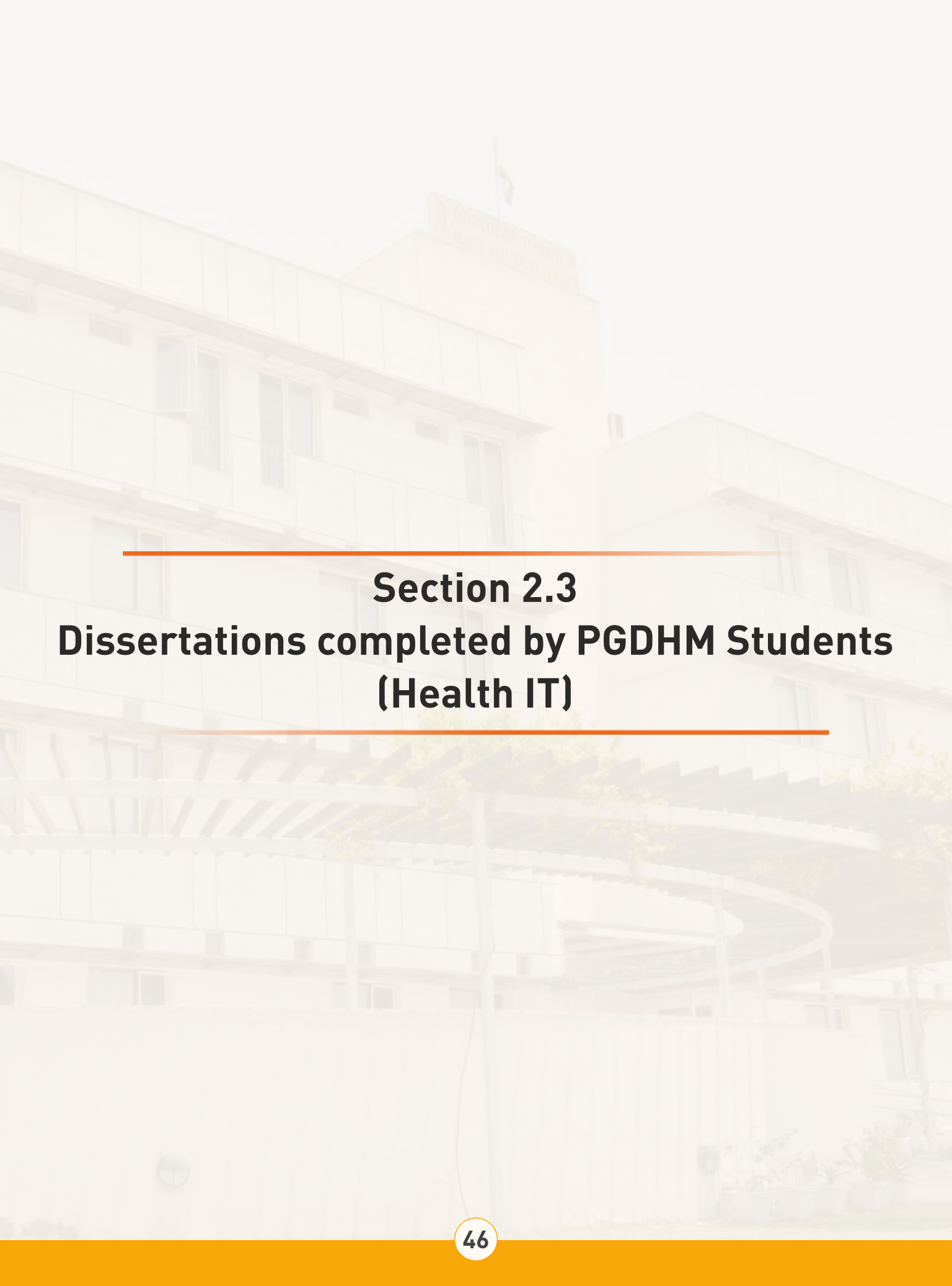
Vaibhavi Khadayata

This study has been conducted in peri-urban area of Vadodara district, Gujarat to assess the knowledge, attitude and practices (KAP) about hygiene among livestock keepers in peri-urban area. Study design was cross sectional descriptive in nature. 100 livestock keepers were selected by stratified sampling; 25 live stock keepers selected from each area i.e Eastern, Western, Northern and Southern. This study revealed that 49% of participants were of 30-49 years age group indicates that majority of population in this profession were young. 41% of respondents had average level of knowledge, 55% included low knowledge & only 4% had high knowledge. While population had knowledge about Animal to Animal, only 28% of keepers had knowledge that Zoonotic disease could transmit from Animal to Human; 72% did not know about Animal – Human transmission. This study shows positive relationship between hand washing and socioeconomic status of respondents. Livestock keepers were aware of disease transmission from animal to animal, but there is very poor knowledge about disease transmission from animal to human.

Assessment of Human Resource and other resources available with the Mobile Health Team working under Rashtriya Bal Swasthya Karyakaram in Ashoknagar district of Madhya Pradesh, India

Ujjwal Kumar

Under the National Health Mission, the Rashtriya Bal Swasthya Karyakram (RBSK) was launched in 2013 across the country. As a part of this program, the children of 6 months to 18 years are screened by a Mobile Health Team (MHT) at the ground level to find out 4D's (Disease, Deficiency, Defect at Birth, Developmental Delay) positive children and refer them to a higher centre for proper treatment. The Mobile Health Team consists of a Male AYUSH Doctor, a Female Doctor, an ANM and a Pharmacist (with proficiency in computer and data management). Since the MHTs are responsible to carry out the key activities of the program, they form the backbone of the program. Accordingly, it is important that the MHTs are equipped with essential manpower, equipments and resources to carry out its functions. Under the present study, the MHTs were assessed for the same. The study was conducted in all the four blocks of the Ashoknagar district of Madhya Pradesh between March – April 2017. All the seven functional MHTs (out of a total of eight MHTs) were taken into consideration. Assessment tools were developed using the RBSK guidelines to assess the staffing pattern and equipment availability with each MHT. Most of Mobile Health Teams did not have recommended manpower and were functioning with limited manpower. Only one MHT had all the manpower. Female AYUSH Doctors were not there in 43% of MHTs whereas male AYUSH Doctors were not there in 29% of MHTs. Pharmacists cum data entry operator was lacking in 57% of the MHTs under study. Vehicle and drivers were available with all the MHTs. All the MHTs were equipped with all the recommended drugs, but the screening tool kit was found to be inadequate thereby affecting the quality of screening in field. Vacant position should be filled in and drop outs should be replaced immediately. Availability of tool kit should be ensured and a fund provision should be made with each MHT to replace damaged or unavailable tools. Involvement of the AYUSH doctors in other health camps or other work should be avoided as it impacts their work and find it difficult to achieve the monthly targets.



Section 2.3

Dissertations completed by PGDHM Students (Health IT)

Perception of Healthcare Providers towards Clinical Decision Support System in Indian Health Care

Dalbeer Sahni

Clinical Decision Support Systems (CDSS) are regarded as a key element to enhance decision-making in a healthcare environment for improving the quality of medical care delivery. The concern of having a new unused CDSS is still one of the biggest issues in developing countries for the developers and implementers of clinical IT systems. The Indian market holds a large potential for future growth in CDSS. In order to provide quality and errorless care to patients, primary research was conducted to understand the knowledge, perception, awareness and acceptability regarding CDSS amongst Indian healthcare providers. This included doctors, nurses, IT support staff as well as administrative and managerial staff. A questionnaire-based survey was conducted between February 2017 and April 2017. The study was conducted in seven public and private hospitals in Delhi NCR regions. The sampling method used was convenient sampling. The key findings of the study indicated that computer literacy and usability was good amongst both medical and non-medical staff. Most of them (90% of the respondents) were aware of Hospital Information Systems (HIS) and have used it till date. Regarding CDSS, less than half of the respondents were aware of CDSS and very few had used it in their day to day work. While medical respondents considered CDSS useful for assisting in patient care and providing alerts as well as suggestions, non-medical staff mainly perceived it for use in relation to electronic data entry. The results suggest that there is a need to create much more awareness regarding CDSS amongst the healthcare providers and also to create more role clarity about CDSS, how it works and what are its uses. Also to increase reliability of CDSS and its acceptability there is a need for a creation of an enhanced evidence based knowledge repository which should be frequently updated.

Case Study: A Perspective Study on Examining the Benefits of Hospital Information System (HIS) and its Influence on Performance of Healthcare Professionals

Col Avtar Manhas

Hospital Information System (HIS) is a comprehensive, integrated information system designed to manage the administrative, financial and clinical aspects of a hospital. Users' awareness, knowledge, acceptance are important for successful implementation of HIS. Hence, the study aims at a comprehensive understanding of clinical and non-clinical staff perception's of all the departments of the Cantonment General Hospital (CGH). their understanding of the factors that affect a successful implementation of HIS and its utilization. . It also comprises of an analysis of the facilities present by means of a preformed questionnaire. A descriptive study was conducted to explore health care professionals' perceptions of the staff towards proposed implementation of HIS. 70 clinical and non-clinical staff members of CGH participated in the study. Based on the key findings it could be ascertained that the staff are positive towards implementation of HIS. They agree it will improve their productivity, quality of care, ability to coordinate the continuity of care, sharing of patient information amongst providers, quality of decision-making and reduce risk to patient safety. They also agree that there will be a few barriers in implementation process of HIS, for example, lack of help desk support, resources for HIS, lack of knowledge/confidence to use HIS and the like. They also perceive that using HIS may bring on further complications due to its complexity and an increase in workload. Based on the findings it is proposed that the management should capitalize on the positive attitude of the employees for a successful implementation by identifying a competent leader for conducting change, and motivating the employees. Further they should have training workshops to capacitate the employees in using HIS when implemented. Since there might be a change in the workflow processes due to implementation, the main stakeholders among users can be identified to be part of process mapping. Also it is imperative that a full-fledged IT department be available before implementation for providing training. Later on this is important for trouble shooting, hand-holding and infrastructure maintenance. The employees, both medical and non medical staff also expressed that a phased approach for implementation of various modules will be highly successful.

EMRs in Dialysis: A Perspective Study

Col Sanjiv Kumar Sharma

Keeping in view the annual growth of Chronic Kidney Disease / End Stage Renal Disease (CKD/ESRD) in India, the rate of requirement of dialysis treatment for ESRD patient is increasing at 10%. This would generate lot of data which needs to be captured diligently for providing quality care to the dialysis patients. Keeping in view the increasing use of EMR and digitization in healthcare services, understanding the benefits of implementing EMR dialysis perspective becomes pressing and pertinent, which makes it the genesis of this study. The current study was carried out in the Dialysis Center of Jaypee Hospital, Noida. The methodology adopted was a mixed method which involved a desk review of the EMR currently in use, review of documents and data collected during dialysis as well as capturing the physical and functional aspects of dialysis procedure through interviews. As a result, the workflows were mapped and use case scenarios were developed to indicate various events. These were further translated into data flow diagrams and gap analysis carried out based on fishbone diagram. Additionally, secondary data of one year for dialysis patients was collected. Based on the number of monthly protocols undertaken by the patient, they were classified into patients adhering to regular and irregular treatment protocols. Biomarkers used for assessing the health outcome of patients were selected. In the case of healthy patients their values were designated as standard for indicating the trends in these two groups of patients. These biomarkers were grouped into two sets of variables, one set depicting adequacy of dialysis and the second set depicting the effect of nutritional uptake on dialysis. Based on this, the three parameters i.e. URR (Urea Reduction Ratio), Blood Urea (Post Dialysis) and Serum Bicarbonate were considered to effect the adequacy of dialysis. Serum Albumin, Serum Phosphorus, Serum Calcium and Haemoglobin and Blood Urea (Pre Dialysis) were considered to be affected by the nutrition. The standard value of the two sets of variables, were used for profiling the performance of the patients and provided as typical dashboards to the clinician for informed decision making. The findings have brought forth following key points: Existing EMR is not comprehensive and there exists a mismatch between the data capture and the workflow. Also it could be seen that documents in use need to be standardized and manual data capture points should be digitalized. Moreover, the EMR should be able to dynamically generate dashboards that can be used for monitoring the patients and providing suitable interventions.

Customization and Designing of Integrated HMIS

Dhruvika Koli

The HMIS, developed by HISP India, a not-for-profit NGO, on Free & Open Source Software (FOSS) in accordance with the State IT Policy, now links almost health facilities in the State including all PHCs, CHCs, District Hospitals, Government Hospitals, General Hospital, Women & Child Hospitals, Medical Colleges, Taluk Hospitals and Specialty Hospitals to collect and process data from all institutions up to peripheral Sub Centers and even Private Health Facilities. DHIS 2 is the preferred health management information system in up (Uttar Pradesh). UPHMIS is designed on DHIS 2 instance as a data repository on a state level web server which has functional capabilities to pull data from different sources (e.g.: GOI portal and other program data), from different formats and time period to central location. UPHMIS is developed on DHIS version 2.20 so as to use new features such as map and dashboard item on GIS. The current study involved customizing the UPHMIS according to DHIS2 format, creating meta data elements and mapping the same to data entry screens. The 5 formats of UPHMIS were DH (District Health), CHC (Community Health Center), PHC (Public Health Centre), SC (Sub Center) and DHQ (CMO Office). These were customized so as to enable the sharing of the data between DHIS2 server and UPHMIS. The study brought forth best practices and barriers that may arise while customizing the software for end user. The best practices were to involve the end users and gather their requirements before customizing the application and keep them involved during the process. The main problems or barriers one may foresee under such activities are wrong entries or duplicate entries if the requirements are not properly documented, coding standards are not followed and if the templates with design elements are not standardized.

Assessment of Innovation Uploaded on National Health Innovation Portal (NHINP)

Kesari Tukaran

The Ministry of Health and Family Welfare, Government of India has set up the National Health Portal in pursuance to the decisions of the National Knowledge Commission, to provide healthcare related information to the citizens of India and to serve as a single point of access for consolidated health information. The National Institute of Health and Family Welfare (NIHFW) has established the Centre for Health Informatics to be the secretariat for managing the activities of the National Health Portal. This portal will help in networking. People will be able to share ideas, experiences, problems faced and their solutions. It is expected to create a national index on innovations and information related to it. Also this portal will work as a single source of information about inclusive innovation with sectors such as health, education, food and agriculture, environment and natural resources, science and technology etc. The current study is involved in evaluating the health programs uploaded in the website. The products are evaluated based on the following criteria: evidences of clinical effectiveness (pilot study /randomized control trial study/comparative study with the existing technologies), evidences on cost/cost effectiveness, assessment of report (independent evaluation/health technology assessment (HTA)/meta-analysis/systematic review), product validation reports, other documents supporting innovation, scope of scalability in Indian Health System. The process adopted is the HTA method (HTA). Out of all the products uploaded in the website, nearly 34 m-health apps were found to satisfy the criteria of HTA.

Future towards smart hospitals: perception and acceptance of using technology to assist healthcare in the hospitals of Bangalore

Diksha Sharma

It is the era where the cities are transforming themselves as Smart Cities. In past few decades, IT based renovation is taking place in the Healthcare industries. Healthcare providers use information technology to boost the operations efficacy and to ease the workload. The implementation of Information Technology in the healthcare industries can help to reach out to remote areas of the countries. The main objective of the Smart Hospital vision is to create a facility that unambiguously balances 3 key aspects – brilliance in clinical results, potency within the supply-chain and improvement of the patient expertise. In a country like India, it is important to understand the perception and acceptance of Smart Hospitals for the implementation of latest technologies in the hospitals. The study is a descriptive cross-sectional study for three months. The data is collected from primary and secondary sources from various multispecialty hospitals of Bangalore. 384 (192 Healthcare Providers and 192 patients) were selected for the study. Survey method (Questionnaire) was used to collect data using 6 point Likert scale for healthcare providers (ranging from strongly agree-6 to not aware-1) and 5 point Likert scale for the patients (ranging from strongly agree-5 to strongly disagree-1). The factors of technology acceptance model i.e. perceived usefulness, perceived ease of use, behavioral intention and facilitating conditions were found to influence healthcare providers and patient's acceptance towards Smart Hospitals. The result of this study indicates that healthcare providers and the patients exhibited a strong acceptance of Smart Hospitals with the average score of 5.43 out of 6 for healthcare providers and 4.34 for the patients out of 5.

Design and Development of Patient Centric System for Primary Health Center

Deepika Singh

Primary health centers (PHC) plays a major role in healthcare sector in providing initial point of contact to healthcare services. Services provided in PHC are for minor services related to preventive care and treatment for minor illness. PHC in States of India is a very important aspect in health industry as it is providing a initial platform for a patient to reach the service. Many PHCs are running without using the technologies for providing patient care. Patient records are being maintained manually without using any technical system. This is the major area of concern. Patient centric system is required for the process to be converted into electronic process. This would increase the quality of care. This study covers all the aspect of what is needed for patient centric system at the PHC as well as how the system is being designed and developed. This study has been carried out in HISP India for a Public Health Dispensary (PHD) at Chandigarh Sector 25. For this process, DHIS2 is being used and customized according to the requirement of the PHD. DHIS 2 is the preferred health management information system at the PHC. DHIS 2 helps governments and health organizations to manage their operations more effectively, monitor processes and improve communication. DHIS 2 is typically used as national health information systems for data management and analysis purposes, for health program monitoring and evaluation, as facility registries and service availability mapping, for logistics management and for mobile tracking of pregnant mothers in rural communities. With DHIS 2 data can be captured in any type of device, including desktops, laptops, tablets, smart phones and feature phones. Most solutions work-offline, making them ideal to improve reach in locations with poor connectivity. The study involved in developing use case documents based on the requirements provided, mapping the work flows and designing data elements to suits the DHIS2. The key findings were that by adapting to digitization and using DHIS2 unnecessary data elements can be reduced. Also more options can be provided for data elements.

Big Data Analytics in Healthcare

Maninder Singh

Big data is itself a vast concept. In today's scenario big data plays a very important role in different fields and business. By using different tools and techniques analysts show the different trends and results for business benefits. In addition it analyzes the future trends of markets. Big data analytics has two distinct suppositions – one is big data and second is analytics. Within the healthcare, big data provides shareholders and collaborators with new insights that have the potential to advance personalized care, improve patient outcomes and avoid unnecessary costs. This report defines the big data analytics, its potential, architecture, characteristics and frames challenges and benefits in the healthcare as well as it's economic value. To describe the potential of big data analytics in healthcare, to analyze the challenges with big data analytics in healthcare and to find out the various benefits associated with big data analytics in health care. This study is based on a systematic literature review of Big Data and Big Data Analytics and their relation to improvement of healthcare in patient health. Biomed, Google Scholar, Scopus and Wikipedia and Google Search were searched in March and April 2017, and Pub Med, Biomed and Google search engine were searched for articles that discussed the Big Data analytics in Healthcare as well as Tools and Techniques used in Healthcare. Big data analytics has offered a brand new way to develop actionable insight, organize future vision, maximize outcome and scale back time to worth. This approach is additionally useful to predict perceptive information to the healthcare enterprise regarding their management, planning and the measurement. The result of the current study can help the top management to come up with better decisions regarding utilization of their data.

Personal Health Records: A comparative study between India and USA

Neelam Soni

Whenever a patient visits a physician, they have to carry the hardcopy of the documents along with them. If they have more records, then they have to maintain them in a proper order. Patient can hold Personal Health Records (PHR)s so that it can be shared across organizational boundaries for their seamless care, centralizes all the medical information, and ensures against the data loss and medical errors. To identify values and benefits of PHR, to analyze the benefits of integrating PHR with EMR/EHR/Wearable Devices and to do a comparative contrast between different PHR Companies present in India and USA. A literature review was carried out using the articles and journals available online in order to identify the values and benefits of PHR. Few PHR companies (each of India and USA) websites were found in order to do the comparative contrast between both the countries PHR products. PHRs have a very high value for consumers as well as providers. There are several advantages of keeping the personal health records in the electronic format. We can control our health matters and save time & money. Although it takes a lot of time to upload the health records into a PHR software system, but it is well worth the time taken. The establishment of the concept of "Meaningful Use" has created a need for robust interoperability of health records. Integrating the data from all the relevant sources allows the utilization of big data analysis. This improves the personalized care as well as help in better decision making that can improve the quality of care of the patients. Researchers of Johns Hopkins University and The Ohio State University College of Medicine have forecasted that adoption of PHRs will increase to the point where 75% of adults will use a PHR by 2020, even without additional incentives, exceeding the adoption targets of the Meaningful Stage 2 and 3 guidelines. After the comparison of different PHR products present in India and USA it was found out that most of the features are same for all the products. Environmental and individual barriers have however created barriers to PHR adoption.

Evaluation of Smart IT-enablement at multi specialty hospital

Nikita Arora

It is a common practice in hospitals and clinics to use computers for billing, accounts and to maintain patient medical records. Almost all multi-specialty hospitals have a computerized reception / information centre. The reception center uses a computer for simple tasks like tokening, record keeping and notes. But it is common to find patients being asked to fill clinical and demographic information on paper forms. A basic version of EMR applications focused to improve patient safety and reduce or eliminate medical errors, is composed of the Clinical Data Repository (CDR), Computerized Physician Order Entry (CPOE), pharmacy management system, and the electronic medication administration record (eMAR) modules. These functionalities are normally found in the electronic clinical documentation systems of most vendors. But doctors hesitate to use Electronic Medical Records since they feel they cannot access the records that they create from outside the hospital premises. Doctors want medical records accessible from anywhere at any time on demand for various purposes. Doctors are not comfortable typing on keyboards during busy times. And they are resistant to changing from the conventional practice of relying on anything but written records. There is lack of clarity with respect to data ownership, data access rights and data creation. It is largely unclear who generates data, inputs data into the system and consumes the data and how they are consumed. This work proposes the scoping benefits that is beyond electronic medical records in place and suggests an innovative and informative approach while implementing IT solutions and estimates the effectiveness of Smart IT enabling in hospitals at a Multispecialty hospital, Hyderabad.

Functionality & User Satisfaction Evaluation: Smart OPD Software

Preeti Yadav

Smart OPD is an integrated mobile health platform that helps streamline the end-to-end patient lifecycle during his/her visit to the OPD. It is a tool to connect doctors and patients over mobile devices. Although Smart OPD will allow the real quality care as well as avoid repeat prescription and repeat visits of the patient, it is unclear what software functionalities and user satisfaction contributes to acceptance of Smart OPD. The core objective of the present study was to evaluate the functionalities and user satisfaction of Smart OPD software. A cross-sectional research design was used to attain the aim of the study. Sample consisted of '18' doctors from Gangaram Hospital in Delhi. Functionalities and user satisfaction were assessed using one sample t-test. Smart OPD software is helpful in the information management, patient management, accessing Electronic Health Records (HER) and Electronic Medical Records (EMR), clinical management, communication, consulting and clinical decision making. Moreover software is easy to learn and is relatively easy to work with. It also increases the effectiveness of the doctors in their job and increases their productivity by enabling them to see more patients in less time. Although medical devices and apps arguably provide the HCP with many advantages but rigorous evaluation, validation, and the development of best-practice standards for medical apps are urgently needed. This will ensure a fundamental level of quality and safety when these tools are used.

Analyzing the impact of wellness programs on employees

Shalini Yadav

In India, wellness is a concept which has been in vogue since ancient times. Traditional medicinal and health practices like Ayurveda and Yoga have propounded the concept of mental and bodily wellness. Most of the ancient wellness concepts have largely focused on the basic needs of an individual within the need hierarchy, namely a focus on health, nutrition and relaxation. With the progress of time, wellness as a concept has taken up a multi-dimensional definition, encompassing the individual's desire for social acceptance, exclusivity and collective welfare. Chiefly influenced by changes in society and in the lifestyles of individuals, this change has also been accelerated by extraneous factors like globalization and a greater awareness of the need for wellness among individuals. This study is conducted on employees from the different organizations served by Vipul Med Corp to know how wellness activities impacted these employees. It is a cross-sectional study conducted in the area of Gurugram. The sample technique used is convenience sample technique with a sample size of 180. The results from the study shows that more than 80% employees felt relaxed, motivated, stress free. They felt an increase in concentration level after participating in wellness activities. In addition, a majority of the employees were satisfied with the program they were provided. There are requirements of providing newer sport activities and some advanced health activities. Organizations should encourage their employees to participate in wellness activities.

Design and Development of Monitoring & Evaluation for Nutrition in Nepal

Yogesh chand

Design and development of District Health Information system (DHIS2) for monitoring and evaluation of the Suaahara program running in Nepal. The key data sources are from Commcare app used by the field supervisor for reporting data for respective checklists. Data is also reported for activities carried out by The Helen Keller International (HKI) and its partners at different levels in the hierarchy. The data for this is captured in DHIS2 whereas the data for the checklist will be pulled from Commcare into DHIS2. During the first phase, the methodology for the project will involve gathering the requirements. This will involve getting to know what is needed for the project and what is the workflow. In the second phase, designing and development of the system is involved where we create data elements, data sets and validation rule for the system. The third phase is capacity building. This component will be focused on end users. End user training of the identified users staff will be carried out to support roll out of the systems at field level. The fourth phase will involve the field testing and implementation of the system with full functionalities (data input and output) in the sites proposed by HKI. The overall goal of the program is to reduce the prevalence of nutrition related anomalies such as being underweight, or suffering from stunting and wasting amongst the child population of less than 5 years of age. In addition, the prevalence of anemia is also monitored in mothers as well as children. The Helen Keller International (HKI) is the lead partner of Suaahara. Other partners includes CARE, Equal Access, Environment, and Public Health Organization (ENPHO), FHI360, Vijaya Development Resource Centre (VDRC), and Nutrition Technical Assistance Group (NTAG).

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