

# PRADANYA-2016

## SMART Healthcare for India

- o Sustainable healthcare : SDGs
- o Managing healthcare
- o Accessibility and Accountability in healthcare
- o Resources in healthcare
- o Technological Advancements in healthcare

## Conference Schedule

### Pre Conference Workshop

28<sup>th</sup> September, 2016 (Wednesday)

Time	Topic	Speaker
10:00 am - 01:00 pm	Road Fatalities and Injuries	<b>Dr. Patanjali Dev Nayar</b> Regional Adviser, Disability, Injury Prevention and Rehabilitation Department of Noncommunicable Diseases and Environmental Health (NDE) WHO
10:00 am - 01:00 pm	Fitness and Return to Work (Healthy Workplace)	<b>Dr. Raj Govind Sharma</b> Prof. and Head Division of Surgical Oncology, SMS Medical College, Jaipur
10:00 am - 01:00 pm	Emerging Pharma Growth Opportunities in NCDs	<b>Mr. Sarthak Ranade</b> Vice President, Johnson & Johnson Private Limited
10:00 am - 01:00 pm	Startups in Healthcare	<b>Dr. Gaurav Thukral</b> Senior VP & Business Unit Director, Health Care at Home India

# Conference Programme

Day: 1

29th September, 2016 (Thursday)

- 09:00 am-09:30 am: **Registration:**
- 09:30 am-11:00 am: **Welcome Address:** Col. (Dr.) Ashok Kaushik (Retd.)  
(Dean Academic and Student Affair)
- Inaugural & Theme Address:** Dr. Vivek Bhandari  
(President, IIHMR University)
- Address by Chief Guest:** Dr. S.D. Gupta  
(Chairman, IIHMR University)
- Vote of Thanks:** Dr. Sandesh Kumar Sharma

Tea Break 11:00 am-11:30 am

Technical Session-1 (11:30 am - 12:00 pm)

## GLOBAL PERSPECTIVE ON SDGs

- 11:30 am-12:00 pm: **Dr. Rajesh Narwal** (Technical Officer-Health Systems Stewardship, WHO)
- Chair: Dr. S. D. Gupta** (Chairman, IIHMR University, Jaipur)

Technical Session-2 (12:00 pm-01:30 pm)

## SUSTAINABLE HEALTHCARE: SDGs

- 12:00 pm-12:20 pm: **Dr. S. S. Agarwal** (President, IMA)
- 12:20 pm-12:40 pm: **Dr. Sanjeev Kumar** (Director, NHSRC)
- 12:40 pm-01:00 pm: **Mr. Sarthak Ranade** (Vice President, Johnson & Johnson Private Limited)
- 01:00 pm-01:30 pm: **Question & Answer**
- Chair: Brig (Dr.) S. K. Puri (Retd.)** (Advisor, IIHMR University, Jaipur)

Lunch Break 01:30 pm-02:30 pm

Technical Session-3 (02:30 pm-04:30 pm)

## MANAGING HEALTHCARE

- 02:30 pm-02:50 pm: **Dr. M.R. Surwade** (Humatrix Health)
- 02:50 pm-03:10 pm: **Mr. Ashok Kumar Bhattacharya**  
(Country Director, Takeda Pharmaceuticals)
- 03:10 pm-03:30 pm: **Mr. Sunil Kapoor** (CEO, EHCC Jaipur)
- 03:30 pm-04:00 pm: **Question & Answer**
- Chair: Dr. Daya Krishan Mangal**  
(Dean, Research IIHMR University Jaipur)

Tea Break 04:00 pm-04:30 pm

# Conference Programme

Day : 2

30th September, 2016 (Friday)

Technical Session-4 (09:30 am-11:20 am)

## ACCESSIBILITY AND ACCOUNTABILITY IN HEALTHCARE

- 09:30 am-09:50 am: Dr. K. Suresh (Public Health Consultant)  
09:50 am-10:10 am: Mr. Vivek Padgaonkar (Director, OPPI)  
10:10 am-10:30 am: Dr. (Maj Gen) S.C. Pareek (Medical Director, BMCHRC Jaipur)  
10:30 am-10:50 am: Dr. Rajesh Narwal (Technical Officer, World Health Organization)  
10:50 am-11:20 am: Question & Answer  
Chair: Dr. M.L. Jain (Director, SIHFW)

Tea Break 11:20 am-11:50 am

Technical Session-5 (11:50 am-01:30 pm)

## RESOURCES IN HEALTHCARE

- 11:50 am-12:10 pm: Mr. Saumitra Ghosh (Wish Foundation)  
12:10 pm-12:40 pm: Ms. Sadhana Mogre (Director External Manufacturing, Sanofi India Ltd)  
12:40 pm-01:00 pm: Mr. Prateem Tamboli (Facility Director, Fortis Jaipur)  
01:00 pm-01:30 pm: Question & Answer  
Chair: Dr. Nirmal Kumar Gurbani (Professor, IIHMR University Jaipur)

Lunch Break 01:30 pm-02:30 pm

Technical Session-6 (02:30 pm-04:00 pm)

## TECHNOLOGICAL ADVANCEMENTS IN HEALTHCARE

- 02:30 pm-02:50 pm: Mr. Vivek Dhariwal (Executive Director, Technical Operations Pfizer Ltd)  
02:50 pm-03:10 pm: Mr. Arunesh Punetha (Zonal Director, Narayana Hospital Jaipur)  
03:10 pm-03:30 pm: Col. (Dr.) R.K. Chaturvedi (Retd.) (DRISHTI)  
03:30 pm-04:00 pm: Question & Answer  
Chair: Prof. (Dr) Ashok K Agarwal  
(Professor & Dean Academics IIHMR Delhi)

Tea Break - 04:00 pm-04:30 pm

- 04:30 pm-5:30 pm: Closing Ceremony/Valedictory  
Summarization of Conference:  
Dr. Anoop Khanna (Professor, IIHMR University Jaipur)  
Guest of Honor  
Address: Dr. Vivek Bhandari (President, IIHMR University)  
Vote of Thanks: Dr. Sandesh Kumar Sharma

# Pre-conference Workshop Sessions

## 1. Road Fatalities and Injuries

Road traffic accidents, besides the non-communicable diseases are also the leading cause of death globally. Nearly 3,400 people die on the world's roads every day. Tens of Millions of people are injured or disabled every year. India, along with other countries tops the global list of fatalities from road crashes. Rapid urbanization, motorization, lack of appropriate road engineering, poor awareness levels, non-existent injury prevention programs, and poor enforcement of traffic laws has exacerbated the situation. Young people under the age of 25 are the main victims of road traffic crashes worldwide. More young people aged between 15-29 die from road crashes than from HIV/AIDs, Malaria, Tuberculosis or homicide. This means that road crashes are a serious threat to youth no matter where they are. 46% of road traffic deaths are pedestrians, cyclists and motorcyclists. 90% of road traffic deaths and injuries occur in low-income and middle-income countries which have only 48% of the registered vehicles. This raises the need for comprehensive road safety measures. The present situation needs to have a point of contact between the healthcare system and the aims and goals of road safety. The requisite for development of innovative and protective plans to improve the road safety and preparedness for its implementation are needs to be discussed. This will involve sharing of ideas and knowledge among various experts. Raising some of the issues pertaining to Road Safety and the ways to tackle them will be addressed by the prominent speaker in the Pre-conference workshop.

## 2. Fitness and Return to Work (Healthy Workplace)

Work is one of the most important roles for many of us. When a worker sustains an injury and have difficulties returning to work, this could affect his health and well-being. At the same time, manpower and productivity may be compromised at the workplace. Facilitating early return to work of injured workers is beneficial at an individual, organisational and societal level. Fitness to work theory is based on the fundamental principles of occupational medicine and is taught from that perspective, to all levels of medical practitioners. On one hand, the theoretical fundamentals are robust but often, the interpretation and application is naive and overly simplistic. On the other end of the spectrum, certain common practices lag behind the textbook. This pre conference workshop looks at some of the real world issues, challenges and evolution of the practical implementation of Fitness to Work theory.

## 3. Emerging Pharma Growth Opportunities in NCD

Non-Communicable diseases (NCDs), such as cancer, cardiovascular diseases, diabetes and chronic respiratory diseases are usually thought to be "rich worlds" problems. However, the fact is that over 80 percent of NCDs occur in low or middle income countries. The pharmaceutical industry recognizes its role in combating NCDs worldwide with appropriate interventions. Research and development have made interventions available to address chronic diseases through innovative medicines that effectively and safely treat chronic diseases. The World Bank recognizes that in addition to prevention, effective use of pharmaceuticals is the most cost-effective means to control symptoms of chronic diseases. Adherence to pharmaceuticals has shown to dramatically lower costs spent on other healthcare services.

#### **4. Start Ups in Healthcare**

The start-up revolution has touched all sectors in India, the healthcare sector being impacted the most. Healthcare start-ups have ushered in a change to the status quo, especially with digital solutions. Innovations have helped aggregating and making access to healthcare information and service a lot easier. There are many healthcare start-ups in India, which are scattered and provide a range of services and goods. A steady rise in the number of deals and amount of funding has been witnessed by the sector. Investors seem confident with the sector's performance despite the regulatory challenges, which could be a reason that could ward off potential investors. Both in terms of employment and revenue, healthcare is one of the fastest growing sectors in India. Opportunities and issues related to such start-ups will be raised and answered in this session by the eminent speaker.

# Conference Sessions

## **Global Perspective on SDGs:**

In September 2015, Heads of State and Government agreed to set the world on a path towards sustainable development through the adoption of the 2030 Agenda for Sustainable Development. This agenda includes 17 Sustainable Development Goals, or SDGs, which set out quantitative objectives across the social, economic, and environmental dimensions of sustainable development all to be achieved by 2030. The goals provide a framework for shared action "for people, planet and prosperity," to be implemented by "all countries and all stakeholders, acting in collaborative partnership." These targets are global in nature and universally applicable. Keeping in view the above agenda, our eminent speakers will throw light on the global perspective of SDGs.

## **Sustainable Healthcare, SDGs :**

A sustainable healthcare is a widely-discussed and crucial issue for developing countries. Sustainable healthcare ranges from primary healthcare to super specialty care, thereby engendering comprehensive health. India is seeing a significant improvement in public healthcare, but has to address a multitude of problems. Governments and other stakeholders should come together to develop a framework which is feasible and attainable within available resources.

## **Managing Healthcare :**

Well managed health care setups have a profound effect on the quality of care. As competition intensifies, patient experience, service quality, and efficient resource management provides the evidentiary basis for measuring patient, clinician, and organizational outcomes. With emphasis on "quality outcomes," it is becoming increasingly critical for health care organizations to develop and implement a sound management strategy for providing result oriented effective care. The future success of the organization will largely depend on judiciously managing the healthcare institutions while delivering consistently effective and efficient care.

## **Accessibility and Accountability in Healthcare :**

Access to healthcare is fundamental in the performance of health care systems around the world. However, access to health care remains a complex notion as exemplified by the varying interpretations of the different agencies. A conceptual framework and accountable, health care system is the need of the hour to meet the national and organizational level healthcare goals, with data for decision making being the key strategy.

## **Resources in Healthcare :**

Rising cost of healthcare is a challenge world over. Delivery of good quality affordable healthcare remains an enormous challenge to the health system. Although, there have been many improvements and innovations in the healthcare delivery system, the effective management of resources, lack of funding and dismal scenario of health insurance remains an unsolved issue. There is a need to harmonize the different stakeholders involved in this process to address these challenges.

## **Technological Advancements in Healthcare :**

The technology shift has cast itself over the field of healthcare, bringing with it a digital transformation in the way doctors and patients interact. Due to the increasing convergence of technology and healthcare, there is a huge opportunity for providers to improve the patient experience and operate more efficiently due to augmented association and information sharing among providers.

## List of Abstracts for Poster Presentation

S.No.	Topic	Code	Institute
1.	Accessing Human Resources at First Referral Unit in Public Health Delivery System	POP-203	IIHMR University, Jaipur
2.	Cloud Computing – A Game Changer in Healthcare	POP-205	IIHMR University, Jaipur
3.	Medical Tourism: Issues, Opportunities and a Strategic Location for Medical Tourism in India	POP-207	IIHMR, Bangalore
4.	A Study on EHR Exchange Process in Between Two Organizations	POP-213	IIHMR, Bangalore
5.	Technology Advancement for Engaging Insomnia Patients in Managing Individual Health	POP-214	IIHMR, Bangalore
6.	MH2 (mHealth for Mental Health)	POP-216	IIHMR University, Jaipur
7.	Technological Advancements in Dentistry	POP-218	IIHMR University, Jaipur
8.	Online Medical Consultations - The Constraints	POP-222	IIHMR University, Jaipur
9.	Sustainable Healthcare: Green Dialysis	POP-224	IIHMR University, Jaipur
10.	Menstrual Cup: A Cost Effective Technology and Sustainable Solution	POP-226	IIHMR University, Jaipur
11.	Robotic Pharmacy Technological Advancements in Health Care Segment	POP-228	IIHMR University, Jaipur
12.	Qualitative Analysis of Generic Medication to Determine Out of Pocket Expenditure in Health Care Sector	POP-230	IIHMR University, Jaipur
13.	“SAMBHAV” An App – A Smart Move in Sustaining Healthcare	POP-232	IIHMR University, Jaipur
14.	Medication Turnaround Time of Hospital Pharmacy and Medication Error Management.	POP-238	IIHMR University, Jaipur
15.	Responses of a Self-administered Questionnaire on Patient Satisfaction Towards Paramedical Services in a Secondary Care Referral Hospital in India	POP-240	Raghavendra Institute of Pharmaceutical Education and Research (RIPER), Anantapuramu, Andhra Pradesh
16.	Why HR Audit is Important in the Organization	POP-249	IIHMR University, Jaipur
17.	Grass Root Strategies for Women Empowerment: A Way Forward in Reproductive Health	POP-253	IIHMR University, Jaipur
18.	An investment in Education is an Investment in Health	POP-257	IIHMR University, Jaipur

S.No.	Topic	Code	Institute
19.	Patient Compliance: Advancement in Convenient Medication Technique in India	POP-258	IIHMR University, Jaipur
20.	Wearable Wireless Devices in Healthcare	POP-260	IIHMR University, Jaipur
21.	"m" Revolution: Health in Hand	POP-262	IIHMR, Delhi
22.	Impact of Medical Information and Technology in Healthcare Management System	POP-264	IIHMR University, Jaipur
23.	Global Action Plan to Combat the "Slow Killer" for the Prevention and Control of Non Communicable Diseases	POP-266	IIHMR University, Jaipur
24.	Urban Migration and Healthcare Exclusion: A Study on Brick Kiln Slums of Indore	POP-269	IIHMR University, Jaipur
25.	Healthcare Information Portal: A Web Technology for the Healthcare Management	POP-271	IIHMR University, Jaipur
26.	Hypertension- "A Silent Killer"	POP-275	IIHMR University, Jaipur
27.	The Antibiotic Paradox	POP-280	IIHMR University, Jaipur
28.	Symptom Checker: Health In Hands	POP-282	IIHMR University, Jaipur
29.	M Health System in Healthcare	POP-288	IIHMR University, Jaipur
30.	Telemedicine-Technological Advancements in Healthcare	POP-290	IIHMR University, Jaipur
31.	Managing Healthcare: By Managing Vaccine Logistics System through eVIN Model: A Study Carried Out in Three Major States of India.	POP-292	IIHMR, Delhi
32.	Cost of Post Exposure Prophylaxis of Medical Occupational Sharp Injuries in a Tertiary Care Hospital	POP-294	IIHMR University, Jaipur
33.	Women Handloom Weavers Unable to Weave their Health	POP-296	IIHMR University, Jaipur
34.	Digital Prevention of HIV/STD: Behavioral Interventions	POP-298	IIHMR University, Jaipur
35.	Is India Ready for E-Health	POP-300	IIHMR University, Jaipur
36.	Assessment of Interpersonal Communication Skills of Frontline Functionaries on Key Maternal, Newborn and Child Survival Interventions Delivered With the Aid of an Android Based Application Called E-Janswasthya in Ahore Block of Jalore District (Rajasthan)	POP-302	IIHMR University, Jaipur



<b>S.No.</b>	<b>Topic</b>	<b>Code</b>	<b>Institute</b>
37.	Saving Lives Through Intelligent Ambulance Rescue System: Every Minute Counts	POP-304	IIHMR University, Jaipur
38.	Future Hospitals With Artificial Intelligence System	POP- 305	IIHMR University, Jaipur
39.	An Advanced Wireless Sensor Network for Health Monitoring in Smart Homes/Hospitals	POP-308	IIHMR University, Jaipur
40.	Does Better Health Information Means Better Health Care?	POP-310	IIHMR University, Jaipur
41.	Implementation of MIS into Epidemiological Surveillance System for Smart, Rapid and Effective Response to Global Health Problems	POP-311	IIHMR University, Jaipur
42.	A Strategic Plan to Improve Organ and Tissue Donation in India	POP-315	IIHMR University, Jaipur
43.	A Study on Workforce Challenge in Healthcare Industry – An Imperative Factor	POP-317	IIHMR University, Jaipur
44.	Root Cause of Medication Errors - Error Prone Abbreviations	POP-319	IIHMR University, Jaipur
45.	Sensor-Cloud: An Integration of Wireless Body Area Network and Cloud Computing for Improved Healthcare	POP-321	IIHMR University, Jaipur
46.	Role of Mobile and Personal Accessory in Spreading Infection Causing Bacteria	POP-323	IIHMR University, Jaipur
47.	Big Data Healthcare Model for Urban Indian Population	POP-327	IIHMR University, Jaipur
48.	Employer Branding: New Practices to Attract and Retain Talent	POP-329	IIHMR University, Jaipur
49.	Home Healthcare – The Next Big Thing in Healthcare Space in India	POP-331	IIHMR University, Jaipur
50.	Electronic Medical Records System: Revolutionizing the Health Care Industry	POP-333	IIHMR University, Jaipur
51.	Investigation on Unmet WASH Needs in Urban Schools	POP-338	IIHMR University, Jaipur
52.	Older Adult Perceptions of Smart Home Technologies	POP-340	IIHMR University, Jaipur
53.	Reengineering Indian Health Care: Discharge Process	POP-342	IIHMR University, Jaipur

<b>S.No.</b>	<b>Topic</b>	<b>Code</b>	<b>Institute</b>
54.	Managing Healthcare Services: Using Bar Coding Technology as Track and Trace System for Meeting the Challenges Faced in Drug Distribution System	POP-344	IIHMR University, Jaipur
55.	Technological Advancements in Jaipur Foot: From Being Dependent to Independent	POP-349	IIHMR University, Jaipur
56.	Flying Drones: A Technological Initiative for Organ Transportation	POP-351	IIHMR University, Jaipur
57.	Innovating Sustainable Care for Smart Hospitals Through Lean Management	POP-353	IIHMR University, Jaipur
58.	Up-gradation of Geriatric Home Care Patient Experience with Advance Clinical Technology	POP-355	IIHMR University, Jaipur
59.	Role of PPP in Indian Healthcare: Lessons from Successful Initiatives	POP-357	IIHMR University, Jaipur
60.	Study on Trend of Resources Allocation in Healthcare: Post NRHM	POP-358	IIHMR University, Jaipur

## Lists of Abstracts for Paper Presentations

S.No.	Topic	Code	Institute
1.	Vulnerability of Female Migrant Domestic Workers to HIV/AIDS	PAP-101	Tata Institute of Social Sciences, Mumbai
2.	AAROGYA BHARAT: An Analysis of India's Roadmap for Achieving Sustainable Healthcare in the Country	PAP-102	IIHMR, Jaipur & Delhi Alumni
3.	Assessment of Preventive Health Care Initiatives Promoted by Corporate Companies to Their Employees" -Bangalore	PAP-105	IIHMR, Bangalore
4.	A Study on Disinfection Process of Various Elements Involved in Dialysis Unit of a Tertiary Care Hospital	PAP-107	Symbiosis Institute of Health Sciences, Pune
5.	Disease Profile and Habits Related to Health Among Residents Staying in Catchment Area of a Tertiary Care Hospital: A Study on Annual Health Check-ups	PAP-110	IIHMR, Bangalore
6.	Study on Utilization of Cardiac Catheterization Laboratory Through Time Motion Studies at Narayana Institute of Cardiac Sciences, Bangalore	PAP-111	IIHMR, Bangalore
7.	Cost Effectiveness Analysis of Environmental Cleaning Materials Used for House Keeping Practices at a Tertiary Care Institute in New Delhi	PAP-112	IIHMR University, Jaipur
8.	Managing the Patient Healthcare Delivery in the Diagnostic Centers	PAP-113	IIHMR University, Jaipur
9.	Discourse on Availability, Accessibility and Quality of AYUSH Healthcare Services in Maharashtra	PAP-116	Tata Institute of Social Sciences, Mumbai
10.	Technology in Healthcare – "SMART" Approach	PAP-119	IIHMR University, Jaipur
11.	Improving Patient Safety and Supply Chain Management Using RFID Technology and Cost-Benefit Assessment in Healthcare: A Literature Review	PAP-120	IIHMR University, Jaipur
12.	Barriers to Access Reproductive Health Care Among Economically Disadvantage Migrant Workers	PAP-121	Tata Institute of Social Sciences, Goa Institute of Management
13.	Technological Advancement in Healthcare	PAP-122	IIHMR Delhi
14.	Patient Safety Practices at SGPGI, Lucknow: A Critical Analysis	PAP-124	IIHMR, Delhi

S.No.	Topic	Code	Institute
15.	Self-Medication Practices	PAP-125	IIHMR University, Jaipur
16.	Assessing the Knowledge, Practice and Attitude Regarding Menstrual Hygiene in Females of Urban Slum	PAP-130	IIHMR, Delhi
17.	Rising Non Communicable Diseases Burden in India and Current Status of National Health Programmes for NCDs, 2016	PAP-131	IIHMR University, Jaipur
18.	Assessment of In Patients Department (IPD) Service Quality by Evaluating Satisfaction of Patients	PAP-132	Sumandeep Vidyapeeth, Piparia, Vadodara, Gujarat
19.	Systems Approach in Tobacco Dependence Treatment Through Hospitals	PAP-133	Rajasthan Cancer Foundation, Jaipur
20.	Insulin Therapies: Future Trends at Dawn	PAP-134	IIHMR University, Jaipur
21.	"Artificial Intelligence in Pharmaceutical Industry".	PAP-135	IIHMR University, Jaipur
22.	Comparative Study on Knowledge, Attitude and Practice of Spinal Cord Injuries Amongst General Healthcare Professionals and Spinal Cord Injury Patients	PAP-136	IIHMR University, Jaipur
23.	"Government Expenditure on Healthcare: A Comparative Study of Different Asian Countries and Lessons for India	PAP-137	IIHMR, Delhi
24.	CCC Solver: A Technological Reformation in Operation Theatre	PAP-138	IIHMR University, Jaipur
25.	Designing Strategies for Growth and Development of Medical Tourism in India	PAP-146	IIHMR University, Jaipur
26.	A Study on Queue Management in a Multiple Server Queuing Model at Front Desk of a Tertiary Care Hospital	PAP-148	IIHMR University, Jaipur
27.	Managing Hospital Acquired Infection	PAP-149	IIHMR University, Jaipur
28.	Study of Newborn Care Practices in Slums of Tuglakabad, South-Delhi, India.	PAP-150	IIHMR University, Jaipur
29.	E-Prescripton – A Tool to Smarten Healthcare.	PAP-151	IIHMR University, Jaipur
30.	DATA TRIANGULATION: Comparison of HMIS, NFHS, AHS and MCTS Data on RMNCH Indicators in Madhya Pradesh.	PAP-152	IIHMR University, Jaipur

<b>S.No.</b>	<b>Topic</b>	<b>Code</b>	<b>Institute</b>
31.	Online Health Information Seeking Behavior Among the Young Adults: A Study in Urban India	PAP-153	IIHMR University, Jaipur
32.	Nursing Fatigue	PAP-154	IIHMR University, Jaipur
33.	Technology- the Only Way Forward for Indian Healthcare in the Current Scenario?	PAP-155	IIHMR University, Jaipur
34.	Gap Analysis of Perspectives of Different Stakeholders in Access to Primary Healthcare	PAP-156	IIHMR University, Jaipur
35.	A Pilot Study to Investigate Regular Health Checkups Among Educated Urban Women- A Study Done in Nagpur District	PAP-157	IIHMR University, Jaipur
36.	Prevalence of Tobacco Habits Among Health Care Students in Jaipur - Need for Tobacco Cessation Clinics (TCC).	PAP-162	IIHMR University, Jaipur
37.	Healthcare Shifting into "Palms of Patients"	PAP-165	IIHMR University, Jaipur
38.	Corporate Social Responsibility - The Way of Sustainable Development Goals	PAP-166	IIHMR University, Jaipur
39.	Unfurling of Digital Marketing Era: A New Manoeuvre Being Embossed to Hike Healthcare Organizations Revenue	PAP-167	IIHMR University, Jaipur
40.	Lacunae Between the Supply and Demand Side of Insurance Companies	PAP-168	IIHMR University, Jaipur

# Abstracts for Papers

Code: PAP-101

## **Vulnerability of Female Migrant Domestic Workers to HIV/AIDS (A study in Delhi)**

*Dr Surbhi Seth and Dr Vikas Madaan, Tata Institute of Social Sciences, Mumbai*

### **Background**

Movement of people in search for better livelihood is an age old phenomenon but for a long time female migration had remained invisible in studies of migration. Recent years have witnessed increased feminization of migration. Along with this increase, world has also witnessed feminization of HIV epidemic. Migrant women domestic workers form a significant section of migrant women who belong to low paid informal sector. Delhi is one of the major migration destinations for female migrant domesticworkers

With amount of exploitation inflicted upon these women migrant workers in Delhi, these female migrants may be left with little or no bargaining power to prevent unwanted and unsafe sex during travel and at destination. Therefore, this study was designed to examine the vulnerability of female migrant domestic workers to HIV/AIDS.

### **Methods**

A Mixed method approach was chosen. A sample of 150 female migrant domestic workers were chosen in Delhi partly by random and partly by snowball sampling. A structured interview schedule was used to collect quantitative data from 138 respondents and in-depth interviews were conducted using interview guideline with 12 respondents. Bivariate and Multivariate analysis using Chi Square Test and Binary Logistic Regression was carried out on quantitative data. In-depth interviews were analyzed manually. This helped to determine the factors influencing vulnerability to HIV/AIDS.

### **Results**

Majority of respondents were tribal. Jharkhand and Uttar Pradesh were the major sending states. Migration was majorly driven by economic factors. Relatives and employment agencies are the major facilitators of migration. Two types of employment agencies were illustrated in the study. One is being placement agency and other being Christian Convents. Several incidents of sexual abuse by men both at facilitator level as well as at workplace were clearly from both qualitative and quantitative data. Thirty seven percent of sexually active respondents engaged in sex outside a stable relationship and had casual partners. Bivariate and multivariate analysis indicated that full time workers, unmarried respondents and respondents who stayed at transit places were more likely to have casual sex. Unmarried respondents and fulltime workers were also more likely to be unaware of condoms and unmarried respondents and highly mobile respondents were less likely to use condoms. Uneducated and full time workers tend to be unaware of HIV/AIDS. Knowledge regarding HIV/AIDS was majorly low among respondents. In 98 percent cases engaged in casual sex, the risk perception to HIV was moderate or low. A negative attitude towards PLWHA and HIV testing was found.

### **Conclusion**

Age, education, marital status, place of origin, frequency of mobility, type of domestic worker, high risk sexual activity, awareness and use of condoms, knowledge about HIV and risk perception were found to be the major determinants of vulnerability of female migrant domestic workers to HIV/AIDS. Moreover, the cases tend to undergo sexual exploitation at various stages of migration. These female migrants were also found to be engaged in casual sex with a low knowledge of HIV and a low risk perception, thus leading to high vulnerability to HIV.

## **Aarogya Bharat : An Analysis of India's Roadmap for Achieving Sustainable Healthcare in the Country**

*Nidhi Mittal, Swati Sharan, IIHMR, Jaipur Alumni, IIHMR New Delhi Alumni*

### **Rationale:**

According to World Health Report, 2000 India's healthcare system ranks 112th out of 190 countries. Compared to its neighbors, India lags behind in terms of healthcare indicators such as Under 5 mortality, life expectancy, mortality among women between 15-49 years. The key question here arises- what needs to be done in order to transform India's healthcare system? What are the gaps in terms of current policies or infrastructure requirements that need to be bridged to change the status quo of Indian healthcare? Furthermore, given limited health resources, there is a need to look beyond the Indian subcontinent for strategies that can be adapted successfully in the Indian context to bring about a positive change in the system. This paper attempts to evaluate the gaps in the Indian healthcare and the robustness of Indian policies for achievement of sustainable healthcare goal. In addition the paper tries to suggest what more can be done in this direction by taking cues from healthcare strategies of other countries.

### **Objective:**

1. To list out current challenges/gaps confronting Indian healthcare and bring forth possible reasons for it.
2. To examine Indian government initiatives (which have a direct or indirect impact on healthcare) namely National Health Mission, Swachh Bharat, Rashtriya Swasthya Bima Yojna, Padhe Bharat Badhe Bharat, Digital India, Environment Policy, Mahatma Gandhi National Rural Employment Guarantee Act in terms of their shortcomings and foreseeable gains on healthcare.
3. To suggest other possible solutions for realization of sustainable healthcare in India.

### **Methodology:**

A thorough review of literature was done to identify the current gaps in Indian healthcare and also factors responsible for them. An in-depth study of the government's healthcare policies was then carried out to assess the shortcomings and benefits of these policies. Further research was conducted to figure out other possible solutions for achieving sustainable healthcare in India by reviewing global strategies for SDGs.

### **Result:**

Research has shown that there are four key issues confronting Indian healthcare: low expenditure on public health by the government, rising out of pocket expenses for patients, lack of skilled medical graduates in rural India, and poor sanitation. On analysis of the government policies we found that most of the health insurance policies cover only inpatient services and do not cover preventive health packages. Furthermore, policies of other departments do not have a component of health in them.

### **Conclusion:**

Thus, achieving sustainable healthcare requires revamping existing healthcare policies which in turn needs a high level of political commitment and long term collective efforts from all the Ministries, not just Ministry of Health. Focus of healthcare should be more on prevention, early diagnosis rather than mere treatment of diseases. A stronger system for monitoring, evaluation and accountability for various programs needs to be developed.

Code: PAP-105

## **“Assessment of Preventive Health Care Initiatives Promoted by Corporate Companies to their Employees” - Bangalore**

*Dr. Lavya Bharath, Ms. Shilpa Rajendran, IIHMR, Bangalore.*

### **Rationale:**

Healthcare industry is growing at a tremendous pace owing to its strengthening coverage, services and increasing expenditure by public as well private players. During 2008-20, the market is expected to record a CAGR of 16.5 percent. The socio-economic structure of Indian urban population is passing through a transition, where changes in diet, physical activity and thus emergence of non-communicable diseases are strongly evident. Since, with the growth of service sector industries, especially in metro cities like Bangalore (Silicon Valley of India), the population engaged with corporate sectors comprise of a large section of the population. The healthcare scenario in the corporate world has now become a point of discussion for the researchers. Preventive health care holds enormous promise for the competitiveness of Indian companies.

### **Objective:**

To assess the preventive healthcare initiatives promoted by corporate companies to their employees.

### **Methodology:**

A descriptive cross sectional study was conducted in Bangalore, Karnataka with a sample size of 220 organizations. Data was collected using a questionnaire consisting of 10 questions which captured information on healthcare initiatives promoted by respective organizations for their employees.

### **Key Findings:**

The results show that 91% of corporate companies provide health insurance to their employees, while 87.5% of our selected corporate companies conduct annual health check ups for their employees. Around three-fourth of the sampled organizations encouraged organizing of specific health camps on issues like Diabetes and Nutrition in their premises. Nearly one-third of corporate companies have medical clinics/implants or wellness centres within the company, and slightly more than half of the sample organizations conduct ergonomic sessions to avoid risk of spondylosis and other problems.

### **Conclusion:**

Our results depict that a considerable proportion of the corporate companies are taking initiation for providing preventive health care services, which helps to reduce the burden of non-communicable diseases in the country. The employees need to be sensitized more on the importance of preventive health care which gives dual benefit of early detection and thus prevention of any illness which helps in reducing burden of non-communicable diseases. It is increasingly being recognized that the healthier the employees of an organization and finally the workforce of a country, the greater is its economic growth.

### **Keywords:**

Non communicable disease, health check-up, preventive health care, corporate companies



Code: PAP-107

## **A Study on Disinfection Process of Various Elements Involved in Dialysis Unit of a Tertiary Care Hospital.**

*Ms. Meenal Kulkarni, Dr. (Brig.) Anil Pandit, Symbiosis Institute of Health Sciences, Pune.*

### **Rationale & Objective:**

Dialysis and Renal transplantation have become effective in prolonging the lives of patients with renal insufficiency. Conservative medical management of the patient and dialysis are the mainstay of therapy to chronic renal patient. The incidence of chronic renal disease is growing fuelled largely by diseases associated with an aging population, hypertension and increasing rates of diabetes largely related to obesity. About 20% of patients with chronic renal failure are totally rehabilitated by dialysis. The number of patients on maintenance Haemodialysis (HD) is increasing rapidly in India. HD facility is very conducive for transmission of infection since multiple patients receive dialysis concurrently. Transmission can occur directly or indirectly via contaminated devices, equipment and supplies, environmental surfaces, or hands of personnel. Thus, with this background, a study in tertiary care hospital was conducted to assess the disinfection process in the dialysis unit of a multispecialty hospital.

### **Methodology:**

The research approach adopted in the study is cross-sectional and observational method which was carried out for a period of one month at a tertiary care hospital in tier-II city of Maharashtra. The department was divided into four parts for convenience of assessment. Checklist was prepared by reference of guidelines issued by the Government and review of literature and was subsequently used as a tool for process observation. Direct observations were made for adherence/non-adherence, which was recorded on data sheet. Observations were analyzed by means of calculating the percentage.

### **Key Findings:**

The study has identified gaps with respect to the disinfection at the site of HD catheter- compliance to hand hygiene (46.6%), joint wrap connector and antibiotic cannula lock was (0%) and no touch technique for hub or connectors was not done in many instances. In case of AV-fistula the patient was not made aware to wash hands before the prick at the site (0%), gross negligence towards the handling of sterile equipment's (73%) and non-use of Personal Protective Equipment (PPE). Additionally, the study revealed carelessness towards reprocessing of dialyzers. The touch surface disinfection lacked in frequency and was found not satisfactory. In case of disinfectant levels of machine expired disinfectant solutions were found with minimal levels.

### **Conclusion:**

The study concluded that the disinfection process carried out in the dialysis unit revealed shortfalls. The study also concludes that proper attention is needed to be paid towards the process and frequency of surface disinfection in the dialysis unit and separate area for reprocessing of Dialyser with proper reprocessing technique is needed. A standard guideline for disinfectant level should be brought in place. Efforts should be taken in improving the compliance rate and strongly adhering to the guidelines for maintenance of hygiene.

### **Keywords:**

Dialysis, haemodialysis, disinfection, process, hospital.

Code: PAP-110

## **Disease Profile and Habits Related to Health Among Residents Staying in Catchment Area of a Tertiary Care Hospital: A Study on Annual Health Checkups**

*Devi Prasad Yadav Saddikuti, IIHMR, Bangalore*

### **Rationale:**

In medical practice an annual evaluation of the person's health status is very important to prevent diseases, which includes physical examination and routine screening tests to ensure continued health, to identify early stages of disease. Regular health examinations and tests can help in finding problems before they start. As all the corporate hospitals make an analysis of their annual health checkups footfall to frame their marketing strategies, this study was done to analyze the potential patients from catchment areas under the backdrop of rising non-communicable diseases.

### **Objectives:**

- To assess the habits and health awareness levels of the people living in the surrounding areas of the hospital within its 5 km range.
- To learn about the prevalent diseases within the specified locality.

### **Methodology:**

An observational study which is carried out during a period of 40 days (01/04/2016-10/05/2016), was carried in the department of Annual Health Checkup.

### **Findings:**

Major proportion of the clients who came for health check were from IT sector as the hospital has collaborations with such organizations. The most prevalent disease within 5 km range of the hospital is dyslipidemia. Most of the screened individuals demonstrated dyslipidemia and were associated with habits of non-veg diet and mild physical activity, alcohol and tobacco consumption along with hypertension and diabetes mellitus.

### **Conclusion:**

The study helped in knowing the most prevailing diseases surrounding the hospital. By which the strategic management for marketing is done for the known prevailing diseases in 5 km range of the hospital. This makes the hospital to increase the patient inflow for AHCS and to achieve large share in AHCS as compared to the other competitors in the market.

### **Keywords:**

Non communicable diseases, marketing, dyslipidemia, annual health check up's.

Code:PAP-111

## **“Study on Utilisation of Cardiac Catheterisation Laboratory Through Time Motion Studies at Narayana Institute of Cardiac Sciences, Bangalore”**

*Manisha Raturi, IIMR, Bangalore.*

### **Introduction:**

In modern days India is adopting highly developed and innovative healthcare. But still Non Communicable diseases are increasing in high proportion which is acting as black spot to the country's health status. Especially cardiac cases are increasing dramatically as the lifestyle of Indians is changing with other health risk factors. So the cardiac care either medical or surgical care is of high need. The study was conducted to swot up the Cath lab utilization where the cardiac surgeries are performed, by identifying the bottlenecks and recommend measure for its optimum utilization in NICS Bangalore. Among the laboratories which were utilised during the Cath lab process, the most optimally utilised laboratory is LAB-4 in comparable to other laboratories i.e. LAB-1, LAB-2, LAB-3. Therefore the overall utilisation of all the above mentioned laboratories was 74.28%.

### **Methods:**

The retrospective study was carried out in association with in-depth analysis of the records of the cath lab related to work load, process flow, and policies was done and the time motion analysis was done in cath lab for the study period (Cath Lab Utilization Study).

### **Results:**

It was observed that the consent (35%) was not signed and there was lack of TLD badges for the technicians and students who were there for training.

Under scheduling, decreased number of cases, late starts and delays between cases were the main factors that account for inefficient utilization of Cath Lab.

### **Conclusion:**

Accurate records, weekly analysis of recorded data, better financial counselling before procedure, and strict adherence to and enforcement of approved policies and procedures are essential ingredients for an efficient operation of Cath Lab.

### **Recommendation:**

The following were recommended for the optimum utilisation of cath lab: Scheduling of Cases, single channel for flow of information, early counselling of patient and relatives, a centralized area to prepare sterile tables, Regular audit by quality and infection control department.

Code:PAP-112

## **Cost Effectiveness Analysis of Environmental Cleaning Materials Used for House Keeping Practices at a Tertiary Care Institute in New Delhi**

*Dr. Apurva Kashyap, IIHMR University, Jaipur*

### **Introduction:**

Cleaning and maintaining cleanliness is a constant process in any health care institute. It becomes more critical in a tertiary care hospital. Such a setup has to face significant expenses for cleaning and maintaining cleanliness round the clock. The study institute had 3 towers (buildings) with inpatient wards, double occupancy rooms as well as single occupancy rooms of various categories like private, semi-private; deluxe and suite rooms. Unlike Tower I and Tower II, Tower III had its cleaning chemicals and supplies outsourced. In this particular study, the operating expenses were estimated according to the funds consumed by each inpatient area as claimed by housekeeping persons for cleaning each category of room.

### **Aims and Objectives:**

To do a Cost Effectiveness Analysis which can give a better insight of the money spent on cleaning products and materials. Further, to compare monthly fluctuation of expenditure on cleaning materials in different floors of same building, in addition to comparison of two towers of the institute one of which was contracted out.

### **Method:**

Prices of all the cleaning materials and equipment used in each inpatient areas during 5 weeks of study were calculated. Average cost for one week was approximated. Then the total area of entire floor was calculated. For calculating cost of cleaning of each room, the area of each room was measured. Cost of cleaning entire floor was divided by area of the floor to measure cost of cleaning per unit area. Cost for cleaning per unit area was multiplied by the area of room.

### **Results:**

6th floor Tower I takes Rs.8.15 to clean 1 square feet area per day whereas the same floor i.e. 6th floor on Tower II costs Rs.4.32 per square feet area each day which is approximately half the cost. 5th floor on Tower I and II and 4th Floor on Tower I cost between Rs.4-5 to clean 1 square feet area per day. Tower III, Platinum Ward demands Rs.10-11 for cleaning per square feet of area per day.

### **Conclusion:**

The cost information which was gathered from this study presents the approximate cost of cleaning from the service provider perspective, albeit man power costs were not included. Noteworthy finding of this study were the cost variations which existed as per room category and sub categorization. Also, the consumption pattern differs for single, multi bed and other categories owing to more man power intensity. It is a very obvious fact that hospital policy planners invariably make efforts to provide the services in as minimal rates as possible. Following this idea, they generally try to cut off the costs as a whole. This study provided us with a different way of solving the same problem by checking varying consumption and prices at different areas of the hospital.

### **Keywords:**

Cost effectiveness analysis, tertiary care institute, housekeeping, operating expenses

Code:PAP-113

## Managing the Patient Healthcare Delivery in the Diagnostic Centres

*Neha Bala, Naresh Mali, IIHMR University, Jaipur.*

### **Background:**

Patient satisfaction is an important mean of measuring the effectiveness of health care delivery and quality of medical care. The current study has been undertaken specifically for understanding the satisfaction level amongst patients of a leading private diagnostic centre located in Mumbai to get feedback from patients regarding services provided, analysis of which can guide for necessary actions for improvement of the service as per people's need.

### **Objective:**

The study was done with an objective to study satisfaction level of patients in diagnostic center and formulate strategies for improving effective healthcare delivery through diagnostic centers.

### **Method:**

Descriptive study done in a diagnostic centre with structured questionnaire conducted from September to December, 2015. From 30 Diagnostic centres, 70 patients were questioned. Statistical analysis was done with the help of MS-EXCEL.

### **Results:**

At diagnostic centers, 80% patients got immediate attention from reception. 48% patients were satisfied with quality of service provided. Only 41% patients were overall satisfied with service of diagnostic centers, and only 14% patients were satisfied with last test experience. At diagnostic centers there were no patients were secured with medical insurance. 40% of diagnostic centers do not provide home visit facilities to patients, 70% centers do not consider the patient history prior to test being conducted, and 83% centers do not have facilities which provide online test reports to patients.

### **Conclusion:**

Efforts should be made to improve the lacune, so as to manage the healthcare delivery system effectively in order to facilitate customer retention.

### **Keywords:**

Satisfaction, patient, diagnostic center, perception

## Discourse on Availability, Accessibility and Quality of AYUSH Healthcare Services in Maharashtra

*Milind Bansode, Nilam Khare , Tata Institute of Social Sciences, Mumbai.*

Globally there is rising recognition of efficacy and demand of indigenous and traditional systems of medicines. In Indian context all these systems are generally referred by acronym 'AYUSH' (Ayurveda, Yoga, Unani, Siddha and Homoeopathy). Over last six decades of independence healthcare infrastructure, market share, educational infrastructure, and huge human resource for health in the form of ayush professionals have continuously augmented. Maharashtra state has been on forefront in establishing educational institutions of ayush, recruiting ayush professionals in public health department and even in allowing mixed practices to them by amending legislations. Furthermore, popularity of these systems has also risen which is witnessed through persistent medical pluralism in the state. Ironically the state policies have failed to make sure availability of ayush healthcare services for masses. It is in this context it is vital to analyse availability, accessibility and quality of ayush healthcare services in the state.

### **Objective:**

The primary objective of this paper is to analyse availability, accessibility and quality of Ayush health care services in Maharashtra.

### **Methodology:**

Review based information was collected from various resources, government documents, reports and prior research studies. Using interview method data was collected about availability and accessibility of ayush healthcare services through district health services system. Further, relevant documents and first hand information of Ayush dispensaries were carried out to triangulate the information available from the documents.

### **Key findings:**

Alongwith 45 Medical colleges of Allopathy, there are 65 Ayurveda, 48 Homeopathic and six Unani colleges imparting undergraduate level medical education in Maharashtra contributing to huge educational infrastructure and capacity of producing quality human resource for health.

Under Directorate of AYUSH at present there are only 466 Ayurveda and 25 Unani dispensaries in the state, working under Zila Parishads (ZP) or forest department, technically for providing treatment facilities of Ayurveda and Unani respectively. Furthermore, there is no channel for providing healthcare services of Homoeopathy or Siddha for that matter.

### **Conclusion:**

State of Maharashtra in reality doesn't have an exclusive Ayurvedic or Homoeopathic health care delivery mechanism other than those attached with their AYUSH medical colleges and so called co located ayush clinics under NRHM. Thus though few AYUSH (only Ayurveda and Unani) dispensaries are existing under Zila parishad and ayush professionals are expected to practice their own systems but in reality they practice Allopathic system. This is unlike the situation with other southern states like Kerala and Tamil Nadu where the government health care delivery for AYUSH systems do have a primary, secondary and tertiary level system, wherein the medical colleges by default becomes the tertiary level hospitals.

On this ground there is greater scope of taking advantage for making quality ayush healthcare services available and accessible to masses rather than utilising ayush professionals like second grade citizens for clerical and administrative work of general health system.

### **Keywords:**

Healthcare services, AYUSH professionals, human resources for health.

## Technology in Healthcare – “SMART” Approach

*Isharjot Kaur, Rajat Sehgal, IIHMR University, Jaipur*

### **Introduction:**

Medicine in the 21st century is increasingly dependent on technology. The term medical technology covers a wide range of items that are used in the modern medical world. Now, a day's hospitals, clinics, physicians, nurses and patients rely heavily on medical technology to diagnose, treat and cure disease. Medical technologies are produced across the world for the improvement in the well-being of human beings. Technology enabled care (TEC) should be capable of providing affordable and accessible solutions at the time when the demands on health care services continue to increase due to growing and ageing population. The technologies that can provide such care includes-

1. Telemedicine – It is one of effective fusion of information and communication technologies (ICT) with medical science having enormous potential in meeting the challenges of healthcare delivery to rural and remote areas.
2. m-Health (Mobile health) – It is a term used for the practice of medicine and public supported by mobile devices. With the use of m-health applications, sensors and medical devices healthcare delivery has been improved to a large extent.
3. Electronic health records – Electronic medical record is a depository of information regarding the health of a subject of care in computer processable form that is able to be stored and transmitted securely and is accessible to multiple authorized users.

### **Rationale:**

Indian healthcare system is ripe for innovation and technology advancement but on the other hand healthcare access, affordability and quality are major problems in India which has large population living in rural or remote areas. This paper presents the technologies that can serve the healthcare by increasing access, improving quality and lowering costs of all of its market segments.

### **Methodology:**

The data was collected from secondary sources such as research papers and reports from renowned health organizations.

Tool – Review of literature

### **Key Findings:**

On the basis of secondary data analysis, the major challenges for the healthcare in India are constrained budgets, rising cost of advanced medical treatments and increasing patient expectations and demand for better quality. The further study was done regarding the existing technologies that can help to overcome these problems. These technologies are accessible, affordable, sustainable and can be managed with less number of resources. According to the studies the maximum population in India lives in rural areas or remote areas and because of less access to healthcare they face lot of problems. Therefore, instead of working on technologies that are raising the cost and are not accessible to the people, we should give much stress on the management and supply of such technologies that have a SMART approach towards healthcare.

### **Conclusion:**

Hospitals, clinics, physicians, nurses and patients rely heavily on medical technology to diagnose, treat and end disease. But looking at the problems in Indian healthcare there is the urgent need to address this situation through development and use of appropriate technology according to the needs and priorities of the society.

# Improving Patient Safety and Supply Chain Management Using RFID Technology and Cost-Benefit Assessment in Healthcare: A Literature Review

*Dr. Sheenam Nijhawan, Dr. Shovika Negi, IIMR University, Jaipur*

## **Introduction:**

Radio Frequency Identification (RFID) is one of the most promising and anticipated technologies. It is a wireless technology that uses radio waves to transfer data from an electronic tag, called RFID tag attached to an object, through a reader for the purpose of identifying and tracking object. This technology has been successful applied in logistic and retail industry, where its use is now common. In healthcare many applications are being tested in logistic to improve operational management efficiency for healthcare delivery and patient safety.

## **Rationale:**

Analyzing medical death rate data over an eight-year period, Johns Hopkins patient safety experts have calculated that more than 250,000 deaths per year are due to medical error in the U.S. Medical errors are the third leading cause of death behind heart disease and cancer, according to Centers for Disease Control and Prevention Statistics. Thus, introducing information and communication technology can improve quality of services and enhance patient safety by reducing medical errors. RFID is considered as one of the emerging tool to assist in meeting the challenges of the present situation and if implemented properly, RFID can save the firm money now—and make the healthcare industry more competitive for years to come.

## **Objectives:**

- To identify the extent of contribution of RFID in improving patient safety by reducing medication and medical errors.
- To identify the extent of contribution of RFID in supply chain management.
- To identify significant benefit and cost attribute of a RFID system for assets tracking.

## **Methodology:**

An extensive review of literature was conducted with the help of library books, Pub Med databases, Elsevier, Medline, IEEE Explore, Springer and other search engines available at Google, Google Scholar which published between 2004 and 2016. More than 30 papers were reviewed. After identifying all relevant studies, only good quality papers and articles were selected to ensure accurate information and data. Analysis and implications of the literature was done to understand the benefits of RFID in healthcare industry.

## **Findings:**

The study shows the use of RFID technology for 3 purposes, i.e. tracking, inventory management and validation. Each of these characteristics provide tangible benefits that can lead to cost savings, improved productivity and reduced human resources. RFID can facilitate to access patients and staff and shorten wait time of care processes. In addition there are intangible benefits such as increasing accuracy tasks, refining business processes and reduce human error, which will ultimately improve safety and patient satisfaction. Numerous challenges are also being faced while evaluating planning and implementing RFID technology in the hospital. Major challenges include technology



maturity, privacy issues, government regulation, insufficient budget and interference of radio waves with some medical devices.

This study also shows that RFID increases utilization rate, decreases annual spending and allows withdrawal of funds for underutilized assets. These benefits provide improved staff productivity, quicker patient turnover, higher quality of care, patient safety and more cost savings.

**Conclusion:**

Medical technology is indispensable to people's health that improves quality of life and contributes billions of dollars to the economy. The transition from pay-for-service to pay-for-performance is taking place in an industry hampered by rising cost and limited available resources. Thus understanding benefits of new technology used like RFID is critical for improvement and efficiency in healthcare. The sole usage of RFID will not be able to meet expectation of healthcare organizations. If it is used alone healthcare organization will be faced with numerous challenges, thus integrating it with Hospital Information System (HIS), Electronic Health Records (EHR) and supporting it by Clinical Decision Support System (CDSS) will facilitate processes and reduced medical, medication errors and reducing cost.

Code: PAP-121

## Barriers to Access Reproductive Health Care Among Economically Disadvantage Migrant Workers

*Parthsarathi Dehury, Tata Institute of Social Sciences, Mumbai, Ranjit Kumar Dehury, Goa Institute of Management, Goa.*

### Background:

In the current decade, there is an increase in the seasonal, circular and permanent migration from rural areas to the more prosperous urban area has been seen. The migrant workers lack all forms of social and legal protection. Employees are not covered by any medical insurance or assistance which can be useful to the migrant workers. Migrant workers lead a subhuman life in their place of destination without any local identity and lack of access to public health services. Maximizing use of reproductive health services helps in reduction of reproductive morbidity and mortality. The main objective of the study is to know the barriers of access to reproductive health care among migrant workers in the place of destination.

### Methods:

Survey method was employed to collect data using a semi-structured interview schedule. The interview schedule explores the access to reproductive health services such as antenatal, natal and postnatal care of migrant workers. Primary data from 280 male migrant workers in Jindal Steel Power and Limited (JSPL), Angul, Odisha has been collected by using purposive sampling technique. Percentages, frequency distribution and graphical presentation and chi square techniques have been used to analyze the data by using SPSS software.

### Findings:

There are 56 respondents who don't receive any government services during ANC, 32 respondents were mentioned there were no health facilities nearby place of destination and 13 respondents inform that ANC services are too much costly and health workers (AWW, ASHA and ANM) are not visited to their doorstep. Almost 170 workers' spouses had gone through USG checkup, 201 received Tetanus toxoid (TT) as per the schedule and 225 respondents' wives had taken iron and folic acid tablets during the pregnancy. There were 25 respondents' wives who go to their parent's house for ANC services. More than half (51.7 percent) of the respondents' spouses went to government hospital and nearly 12 percent respondent's spouse went to private hospitals and 15 percent went to their parent's home for their last delivery. 166 respondents reported doctor and nurse; one tenth reported Dai and 79 respondents informed that their family members and neighbours played the roles of birth assistance. 41.4 percent took their wives to government hospital, 27 percent community service provides, 12 percent private hospital during postpartum difficulties. Nearly one tenth (9.3 percent) of respondents replied that services of postnatal care are too much expensive in place of destination. Education, occupation and household income, number of children are strongly associated with access to reproductive health care. Long waiting, staffs unfriendly nature, distance from health institution, absence of health workers visit in door step and identity crises are force to lack of access services during antenatal, natal and postnatal care in place of destination.

### Conclusion:

Migration creates a multidimensional problem to access reproductive health services to the mobile population. Community health workers, medical social workers, ANM, ASHA, and Dais need to provide services to the migrant workers at the place of destination. Incentives are given by various schemes to promote antenatal care and institutional delivery. However, due to displacement from one place to another place migrant workers are away from all the services. Integrative approach in reproductive health care can mean barriers of access to health care.

Code: PAP-122

## **Hospital Management Information System and Its Usage: A Study of Nurses' Attitude Perception and Challenges Faced**

*Preeti Yadav, Vanishree M.R., IIHMR Delhi.*

### **Abstract:**

Hospital Management Information Systems (HMIS) provide a common source of information about a patient's health history and secures data by controlling who can reach the data in certain circumstances. Although HMIS is becoming a vital part of nursing care, it is unclear what system characteristics contribute to nursing acceptance. The aim of the present study was to explore the attitude, perception and challenges faced by the nursing staff towards usage of HMIS. A cross-sectional research design was applied to collect data from nurses in the sample. Sample consists of 70 nursing staff. Attitude, perception and challenges faced were assessed using one sample t-Test. The result highlights that attitude of nursing staff towards HMIS was found to be positive, Perception towards HMIS usage was found to be pessimistic, and Challenges faced by nursing staff towards HMIS usage was found to be high. The gaps in the current HMIS were linked to lack of training, inactive supervision, staff workload pressure and the lengthy and laborious nature of the system.

### **Keywords:**

Hospital management information system, nurse perception and attitude, challenges.

Code: PAP-124

## Patient Safety Practices at SGPGI, Lucknow: A Critical Analysis

*Antra Anand, IIMR, Delhi*

### **Objective:**

Patient safety is the most neglected part seen in recent years, but mostly with a focus on the epidemiology of errors and adverse events rather than on practices that reduce such events. This study is carried out to assimilate the information regarding the practices performed by health care providers and the events which could harm the patient, thereby contributing in improving patient safety.

### **Research Approach:**

A Cross sectional observational study was designed. A total of 54 questionnaires were distributed to doctors (EMOs & SRs) and nurses of Emergency receiving station, SGPGIMS out of which 14 doctors and 26 nursing personnel actually responded. Sampling was purposive and the participants were recruited through personal communications. The tool used for data collection was based on HSOPSC questionnaire of AHRQ; some modifications were made in the tool differently for doctors and nursing personnel. The assessment tool included several parameters that asked respondents to provide an overall grade on patient safety for their work area and to indicate the number of events they reported. Descriptive statistics was use to analyze the data.

### **Findings:**

The awareness parameter of positive response for adverse incidence reporting and patient fall was found to be very low. Half of the respondents were not aware of any patient safety reporting system. Many of them were not aware of any such process which evaluates the issue, such as proactive risk assessment. Followed by Patient safety culture and medication reconciliation which needs urgent attention. Subsequently elements related to the built environment safety factors of emergency receiving station were of low safety. This shows most of the elements are either of medium or of low level.

### **Conclusion:**

The conclusion focuses that training should be an embedded part of their medical education. There was a need that a patient safety event reporting system for the ease of reporting errors throughout the organization. Under observation parameters of Built environment Safety, there was no provision for geriatric patients and for disabled patients. Most of the components of hospital safety index either of medium or low safety level.

### **Keywords:**

Patient safety, built environment safety, medication reconciliation

Code: PAP-125

## Self-Medication Practices

*Inderpreet Kaur, Manpreet Kaur, IIHMR University, Jaipur.*

### Introduction

The drugs have helped in increasing the quality of health and health promotion and reduce the mortality and morbidity rate. These benefits have also lead to exploitation or abuse of medication, thus leading to anticipated and unanticipated problems and decreased health sustainability. To achieve a sustainable health state more focus has to be made on judicious use of medicines. Self-medication is "medication that is taken on patient's own initiative or on advice of a pharmacist or a lay person". Self-medication or non-prescription drug or over the counter drugs is common in developing countries. Various studies have shown that self-medication of Non-steroidal anti-inflammatory drugs, antibiotics, anti-histamines and even sometimes steroids are most common self-medicated drugs.

### Objective

To study the self-medication practices in developing countries.

### Methodology

The research approach adopted in the study is by review of literature. The data is collected from various studies done on self-medications.

### Key Findings

Various studies have shown self-medication practices ranging between 15% to 80%. Most common conditions/symptoms for self-medication were fever (72.6%), pain (64.3%) and respiratory symptoms (57.1%), followed by infections, headache and diarrhea, etc. The most commonly used drugs for self-medication were paracetamol (56.5%), drugs for gastrointestinal problems (40.5%), nonsteroidal anti-inflammatory drugs (NSAIDs) (39.9%) followed by cold remedies antimicrobials, etc. Major reasons for practicing self-medication were economic, non-availability of health care facility and easy availability of drugs.

### Conclusion

Self-medication is an alarming sign for the society and need to be controlled to have a sustainable health state. Self-medication practices can be improved by adopting IEC method (Information, Education and Control).

### Keyword

Self-medication, over the counter drugs (OTC).

Code: PAP-130

## **Assessing the Knowledge, Practice and Attitude Regarding Menstrual Hygiene in Females of Urban Slum**

*Sristi, Mansi, IIHMR Delhi.*

### **Background:**

Menstruation is a phenomenon unique to all females. It is still considered as something unclean or dirty in Indian society. Although menstruation is a natural process, it is linked with several perceptions and practices, which sometimes result in adverse health outcomes. Females having a better knowledge regarding menstrual hygiene and safe menstrual practices are less vulnerable to reproductive tract infections and its consequences. So the present study was undertaken to assess knowledge, status of hygienic practices and attitude (KPA) regarding menstrual hygiene so that a comprehensive approach can improve the KPA of adolescent girls, parents and community towards a healthy and sustainable solution and also to ensure universal access to sexual and reproductive health-care services (Sustainable Development Goal 3).

### **Objective:**

To study the knowledge, practice and attitude regarding menstrual hygiene in females of age group 15-40 years in an urban slum of South East Delhi.

### **Methodology:**

The current study was carried out in urban slum of South East Delhi. A semi-structured questionnaire has been developed for the study purpose. The tool was pre-tested and currently being used for collection of the data. The questionnaire included topics related to awareness about menstruation; source of information regarding menstruation, hygiene practiced and restricted activities practiced during menstruation. Sample size of 50 females has been covered under the study. The current study is a community based cross-sectional study.

### **Statistical Analysis:**

The data was analyzed statically and graphically by using Microsoft excel 2010 and IBM SPSS statistics 22.

### **Conclusion:**

According to the secondary data analysis, among females of the urban slum, the knowledge on menstruation is poor and the practices are often not optimal for proper hygiene. Menstrual hygiene is an issue which needs to be addressed at all levels. A variety of factors are known to affect menstrual behaviors, the most influential ones being Economic, Social and Residential status (slum). The study is still going on and therefore no concrete conclusion can be provided at this stage. The complete result will be shared in full paper.

### **Keywords:**

Menstrual hygiene; Knowledge, Practice, Attitude (KPA); reproductive health

Code: PAP-131

## **Rising Non Communicable Diseases Burden in India and Current Status of National Health Programmes for NCDs, 2016**

*Dr. Kshemaa Garg*

### **Introduction:**

Health of a nation is an indispensable component of development, pivotal to a nation's economic growth and internal stability. India presently bears the dual burden of communicable diseases and chronic non-communicable diseases (NCDs) such as cardiovascular disease (CVD), diabetes, cancer and chronic respiratory diseases. Constant rising burden of NCDs not only has health consequences but also economic and developmental implications, attributed to multiple health transitions such as demographic, epidemiological and nutritional. The intensity of all these factors coupled together make response to an issue as complex as NCD an onerous task. As a result, the current scenario in India is such that NCDs account for 53 percent of the total deaths and 44 percent of disability adjusted life years (DALYs) lost. Figures indicate a further rise to 67 percent of total deaths by 2030. CVD is the major contributor to this burden, responsible for 52 percent of NCD associated deaths and 29 percent of total deaths. Speaking of National Health Programmes, the requisites for a national programme are optimally fulfilled by the NCD burden, yet there is a lopsided development of these programmes, with 9 national programmes for communicable diseases and only 2 national programmes for the 4 major NCDs i.e. CVD, Cancer, Diabetes and Chronic Respiratory Diseases. In the 12th five year plan, NPCDCS was implemented in the 35 States / UTs from 2013-14, under the umbrella of NHM in PIP mode. Interventions up to district level and below had been integrated and funds provided through NCD flexi pool. Although NCDs are a part of the 12th five year plan, however realizing the multi sectoral effect of NCDs, sadly they are not an explicit part of any other sector's five year plans.

### **Methodology Research design:**

Cross sectional descriptive study

### **Data collection:**

Secondary Data Study (research article review done for same)

### **Conclusion:**

Based on experiences in the past, need of the hour is to focus on health promotion and preventive measures to reduce exposure to risk factors. Capacity building for screening, early diagnosis and effective management is required within the public health care system. Public awareness program, integrated management and strong monitoring system is must for effective implementation of the program and rendering services universally accessible. The joint mission of UN interagency task force on Prevention and Control of NCDs held in December, 2014 also recommended for a multi sectoral National Action Plan for NCDs and a coordinated response between centre and states for scaling up the financial and human resources for prevention and control of NCDs. However the implementation of the same still needs to see the light of the day.

### **Keywords:**

NCDs, NCD policy and programme, disease burden, lifestyle, risk factors

Code: PAP-132

## **Assessment of In Patients Department (IPD) Service Quality by Evaluating Satisfaction of Patients**

*Dr. Pinkal Shah, Sumandeep Vidyapeeth (Deemed University), Piparia, Vadodara, Gujarat.*

### **Rationale:**

Hospital is an indivisible unit in healthcare sector plays vital role in boosting socio-economic inclusive growth of country. In the present era, with increasing level of education and healthcare awareness, quality of healthcare service become very critical issues for profit making as well non-profit making hospitals.

### **Objective:**

The present study has been designed to analyze the major factors that affect satisfaction of the patients and there by quality services and effect on demographic factors on the same.

### **Methodology:**

The study adopted descriptive cross sectional survey design. 44 different parameters spread over eight different dimensions that contributing to the quality of hospital service in IPD was identified by reviewing the literatures and considering the expert opinion. The sample of 390 is chosen from four different wards of selected teaching hospital. Their responses were collected on 5 point likert scale through structure questionnaire. Discriptive statistics for ordinal data and various non-parametric tests were applied to statistical analysis of data to derive meaningful findings.

### **Findings & Conclusion:**

The finding of data analysis reflected the status of satisfaction level on different dimensions in different wards and amongst different demographic factors viz. Age, gender, education and tenure of stay. It highlights the factors contributing to the dissatisfaction and recommendations to overcome as well as factors that contribute to high level of satisfaction and recommendations to capitalize the same. Thus, it assists hospital managers/administrators to design and/or deliver the different clinical, supporting and utility services in IPDs in such a way that maximum satisfaction can be delivered to patients.

### **Keywords:**

Patients satisfaction, hospital service quality, IPD services



Code: PAP-133

## Systems Approach in Tobacco Dependence Treatment Through Hospitals

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1. Rajasthan Cancer Foundation, Jaipur, Rajasthan, India, 2. Healix Sekhsaria Institute of Public Health, Navi Mumbai, Maharashtra, India, 3. Soni Hospital, JLN Marg, Jaipur

### Rationale:

Systems approach in tobacco dependence treatment is missing in India despite low quit rates. The health system does not categorize patients as recommended by WHO ICD-10. While majority of tobacco using patients do not specifically seek quitting, healthcare professionals too do not treat them out of ignorance, indifference and lack of incentives.

### Objectives:

The objectives of this study on systems approach in tobacco dependence treatment adopting a protocol of "screen, treat and follow-up" were to determine whether: (1) tobacco dependence treatment can be delivered in a hospital setting; and, (2) its results will provide higher quit rate vs. no treatment.

### Methodology:

This one year study (2013) was undertaken at a tertiary-care multi-specialty hospital at Jaipur, Rajasthan. The doctors and nurses were empowered to deliver tobacco dependence treatment comprehensively. Amongst the new and follow-up patients enrolling at the hospital reception, those identified using tobacco currently were motivated to quit. Towards its reinforcement, the hospital was made tobacco-free by adopting the hospital-specific policy and rotational use of displays throughout the premises. Those willing were assisted to quit in either out-patient or in-patient through a doctor and/or nurse through brief intervention (BI). Those desirous or referred for intensive treatment (II) were treated in Tobacco Cessation Clinic (TCC). All enrolled patients were followed up telephonically after 1 week, 1 month, 6 months and in April 2014. The responders were categorized as Successful quit, Failed to quit and Relapsed. The data management was done on a regular basis along with weekly- and monthly- reviews plus quarterly reports to the stakeholders.

### Key findings:

This study to deliver tobacco dependence treatment through the systems approach enrolled 1264 patients out of 19657 (6.43%) during the year 2013 who were using tobacco currently. In 43.4% patients (549/1264) who consented for the treatment, while overall quit rate was 26.1% (CI: 23.8-28.6), in the BI group it was 54.2% (CI: 49.7- 59.0), in the II group it was 84.9% (CI: 78.4- 92.0) vs. zero quit rate in untreated. The use of pharmacotherapy improved overall quit rate by 14.6% (71.1[63.0, 78.1] in those treated with pharmacotherapy vs. 56.5[51.7, 61.2] who were counselled only); the quit rate was significantly higher in smokers and dual users vs. users of smokeless tobacco (SLT users). The quit rates did not differ for the type of tobacco user except in SLT users in first six months of follow-up.

### Conclusions:

The study achieved both its objectives of being able to deliver tobacco dependence treatment in a hospital setting; and, achieving higher quit rates in both- the current smokers and the current SLT users than the currently prevailing quit rates in Rajasthan and nationally too. Hence, this model in the systems approach in the delivery of tobacco dependence treatment can empower the hospital systems within the state of Rajasthan and countrywide too to achieve a higher quit rate among treated vs. untreated. Its replication is recommended to establish the envisioned utility in the country as well as other low- and middle- income countries.

### Keywords:

Tobacco dependence, treatment, systems approach, hospital, quit rate India.

## Insulin Therapies : Future Trends at Dawn

*Varun Reddy Thummala, Shivin Sultan, IIHMR University, Jaipur.*

### Background:

Insulin therapy is effective at lowering blood glucose in patients with Diabetes Mellitus (Diabetes). Insulin is a key player in the control of hyperglycemia for type-1 diabetes patients and selective individuals in the patients of type-2 diabetes. The traditional and most predictable method for the administration of insulin is by subcutaneous injections. In type-1 diabetes, effective glycemic control usually requires at least three or more daily insulin injections, so as to decrease the suffering and improve the adherence in insulin regimens, the use supersonic injectors, infusion pumps and pens has been adopted for the management of diabetes mellitus.

### Rationale:

The major drawback of current forms of insulin therapy is their invasive nature, so the search for more acceptable methods for administering insulin continues and as a result of it several non-invasive approaches for insulin delivery are being pursued.

### Objectives:

To review the focuses on the new concepts those are being explored for use in future.

### Methodology:

The literature survey was conducted by extracting secondary data and relevant information from different review and research articles related to Insulin therapies and advancements in it.

### Key Findings:

The future trends in Insulin therapy is that,

- **Newer Injectable Insulins:** Insulin degludec and VIAject™ - These are recombinant human insulins that are long acting with ultra fast onset of action respectively.
- **Artificial Pancreas:** Closed-loop insulin delivery, also referred to as the artificial pancreas, is an emerging therapeutic approach for people with type 1 DM. In this closed-loop, blood glucose control is achieved using an algorithm, wireless communication of a continuous glucose monitor linked to insulin infusion pump that facilitates automated data transfer and delivers insulin, without the need for human intervention.
- **Buccal Delivery of Insulin:** Transmucosal delivery is a suitable route for insulin non-injection administration. Insulin delivered by buccal delivery system is through an aerosol spray into the oral cavity and hence, differs from inhalers. Nanoparticle technology is been employed in the delivery system.
- **Oral Insulin:** Oral insulin has benefits in terms of fostering compliance and adherence among patients, as well as physiologic advantages due to the fact that oral insulin can mimic the physiological fate of insulin through the portal vein and target the liver directly and inhibit the hepatic glucose production. Nanoparticle technology is been employed in the delivery system.
- **Inhaled Insulin:** Insulin inhalers would work much like asthma inhalers. The products fall into two main groups: the dry powder formulations and solution, which are delivered through different patented inhaler systems. Microsphere particle technology is been employed in the

delivery system.

- **Transdermal Insulin:** Transdermal insulin delivery is an attractive needle-free alternative of the invasive parenteral route of administration and other alternative routes such as the pulmonary and nasal routes.

**Conclusion:**

Recent developments in insulin therapy have potential for reducing most of the negative aspects of current methods. Long-acting insulin, such as insulin degludec, may require less frequent injections. Fast-acting insulin, such as VIAject™, has been shown to improve postprandial glycemic control and reduce hypoglycemia. The artificial pancreas (closed-loop systems with insulin pumps that deliver insulin in response to sensors) may prove to be a valuable therapy for type-1 diabetes patients, particularly if the lag period can be shortened through improved glucose sensors and the use of ultra-fast acting insulin and of the alternative methods of administration, the oral route is the most promising, especially with nanotechnology allowing for several types of encapsulations to bypass the gastric acidic environment. Oral delivery offers the benefits of ease of administration, improved absorption rates, and mimicry of the normal route of insulin through the liver.

**Keywords:**

Diabetes, insulin therapy, oral insulin, transdermal insulin, inhaled insulin, buccal delivery of insulin.

Code: PAP-135

## Artificial Intelligence in Pharmaceutical Industry

*Vikas Sharma, Hemanth Koduri, IIHMR University, Jaipur*

### **Introduction:**

Artificial intelligence (AI) is intelligence exhibited by machines. In computer science, an ideal "intelligent" machine is a flexible rational agent that perceives its environment and takes actions that maximize its chance of success at some goal. Because of the intelligence of this system, it is becoming more and more important in addressing issues of the pharmaceutical industry.

### **Objective:**

To study the current and future perspective of artificial intelligence in the pharmaceutical industry.

### **Methodology:**

The type of research used in this study is secondary research. Various scientific articles and papers were studied for this purpose.

### **Key Findings:**

It was found that artificial intelligence has application in various aspects of pharmaceutical industry. Due to the ability to quickly read vast amounts of scientific data, research published in journals, as well as patient records and tissue/blood samples, artificial intelligence can be used in faster and better drug discovery. It can also be used in clinical trials design and analysis of data emerged from these clinical trials. Other applications of artificial intelligence involve predicting drug resistance, demand forecasting of pharmaceuticals products and monitoring pharmaceutical product formulations using neural networks, genetic algorithms, and fuzzy logic.

### **Conclusion:**

The application of AI in the pharmaceutical industry is in its infancy, and it could take two decades to reach its full potential. However, the beginnings of a technical revolution that could change the way in which drugs are brought to market appear to have begun, which is good news for pharmaceutical companies and patients alike. Where there is data to be analysed or a business decision to be made, the betting is that the AIs of the future will challenge any current pharmaceutical executive to do it better and faster.

### **Keywords:**

Artificial Intelligence (AI), demand forecasting, clinical trials, artificial neural networks, pharmaceutical formulation.

Code: PAP-136

## **Comparative Study on Knowledge, Attitude and Practice of Spinal Cord Injuries Amongst General Healthcare Professionals and Spinal Cord Injury Patients**

*Brijmohan Munjal, Eshna Srigyan, IIHMR University, Jaipur*

### **Introduction:**

Spinal cord injury (SCI) is a devastating condition which is associated with permanent disability and decreased life expectancy. Individuals with SCI have a high lifetime risk for medical complications and other health conditions secondary to their injury, including pain, spasticity, shoulder pain, urinary tract infections, respiratory complications, pressure ulcers, cognitive impairments, and major depressive disorder. Secondary conditions contribute to significant morbidity, higher medical costs, and a high rate of re-hospitalization in the first year after injury. In addition, the presence of secondary conditions has been associated with poorer quality of life. Since there is no curative treatment for SCI, prevention of SCI is paramount.

### **Rationale of study:**

Spinal cord injury being a life altering injury, its prevention is of utmost importance. Singh R et al (2003) in their study on "Traumatic spinal cord injuries in Haryana : An epidemiological study" concluded that there is a strong need to identify the risk factors and to take steps to control them by disseminating information to masses, to train paramedical staff in rural areas about initial handling and transportation of patients having spinal cord injuries.

### **Objectives:**

To compare the knowledge, attitude and practice of spinal cord injuries amongst healthcare professionals and spinal cord injury patients.

### **Methodology:**

The Study Design is Cross-sectional Quantitative study, the sample size is collected from 100 spinal cord injury patients and 100 general healthcare professional (medical, nursing paramedical and dental), duration of study is one month and primary data is collected through Questionnaire.

### **Key Findings:**

Data collection is under process and the final results shall be available by the time the paper would be due for submission.

### **Conclusion:**

Since the study is still under process, giving final inferences would not be possible. However, the analysis of data collected so far indicates gap between knowledge attitude and practice between the healthcare professional and spinal cord injury patients. Secondly the steps should be taken in order to prevent SCI, strengthen the pre-hospital care transportation network and need of peer counsellor and basic rehabilitation unit in all the hospital where the case of spinal surgery is undertaken to avoid loss of young active manpower.

Requirement of some basic aid to help injured person at accident site. Some program should be initiate at school level for better understanding of SCI. Focus on some advertising and media coverage to help common people to understand first aid after an accident. Finally, recommendation is on the awareness section for the proper utilization of spinal stature and need of paramedical staff in ambulance who is well trained in lifting and shifting technique at accident site in order to prevent further damage to spinal cord.

Code: PAP-137

## **Government Expenditure on Healthcare: A Comparative Study of Different Asian Countries and Lessons for India**

*Dr. Gavish Kumar, Jatin Bhatt, IIMR, Delhi.*

Healthcare system is the organization of people, institutions, and resources which deliver health care services to meet the health needs of target population. There are significant effects on households due to financial burden of health care in a developing country like India. Low public spending on health care services and high out of pocket expenditure by households characterize Indian health care system. Total health expenditure is defined as all the expenditure whose primary purpose is to restore, improve and maintain health for nation and for individuals during a defined time period (WHO, World Bank and USAID 2003). As per this definition, health expenditure comprises expenditure incurred towards curative health care services, disease prevention, reproductive and child health programmes, health promotion, administration of health services, medical education, training and research, and capital investment for health purpose.

India's per capita health spending is 35 percent and about one-third of China and Thailand respectively. India's per capita government spending is one of the lowest in the world. It is less than one fifth of China and about 15 percent of Thailand (WHO 2014). In this context, unprotected financial risk of health care poses serious concern which the health care system must address. So there is a need to comparatively assess the health status of India in terms of government expenditure and policies and the areas which need to be addressed regarding improvement of healthcare services.

An extensive review of secondary data available on different sources will be done in order to analyse or compare different Asian countries with India as far as government health expenditure is considered.

## CCC Solver: A Technological Reformation in Operation Theatre

*Dr. Nitin Kumar Nagar, Dr. Akanksha Mamgain, IIHMR University, Jaipur*

### **Introduction:**

Real time scheduling is a central task in OT complex due to higher number of cancellation and rescheduling of surgeries. It further leads to create a sense of ambiguity within the OT. The traditional system of scheduling causes various problems among the staff. A huge crowding, chaos and conflict (CCC) around the nursing station is an evident complication that further leads to a lot of wastage in productive time. A need for comprehensive information system that solves the CCC and its associated issues is the need of the hour. Here the Information technology (IT) applications play a major role generating a real-time connection between the OT and their staff and subsequently with the hospital medical record archives. A suggestion of a digitalized display in the OT complex that shows which surgery is going to perform in which of the OT with proper information using following indicators like the patient's calling time, clearance status (HHH, 2Decho, NBM), TPA status, consents status, delay, cancellation, rescheduling in case of cancellation/postpone/ addition/ emergency cases, staff in duty etc with addition of many more technological advancements like timer for OT running time and turnover time should replace the ongoing system to enhance the overall productivity of OT.

### **Objectives:**

- Introducing a comprehensive technology based system for the effective management of OT Scheduling system.
- Providing more transparency in the process of real time scheduling.
- Introducing an advance medium for effective management of data.

### **Methodology:**

There were two prospective studies conducted in two of the most famous corporate hospitals of India (Mumbai and Delhi) comprising of a two months period. A sample of 500 was taken from these studies. The studies were observational descriptive. The setting was in the main OT complex of the respective hospitals.

### **Results:**

On collecting and analyzing the data a need for a system like CCC solver became prominent in the real time scheduling process.

### **Suggestion:**

The traditional way of real time scheduling in the operation theatres needs a technological reformation in order to bring a transparent, well organized, haphazard free and harmonious environment within the OT. With CCC solver we are positive to bring some good changes in terms of saving OT's precious time thereby eliminating the hours of wastage and also to make the data collection process more user friendly and convenient for hospitals.

## Designing Strategies for Growth and Development of Medical Tourism in India

*Priyanka Malhotra & Dr. Ashima, IIHMR University, Jaipur*

### **Preamble:**

Medical Tourism is the recent jargon in developing countries like India, Malaysia, Thailand, etc. combining two of the fastest growing industries in the world: healthcare and tourism. Medical tourism, more broadly, health and wellness tourism is an industry in which people from across the globe travel to other countries to get medical, dental and surgical care, and at the same time, visit the local attractions of the country. Over the decade, India has emerged to be a pioneer in the medical tourism industry because of its various competitive advantages including low treatment costs, cutting edge technological advancements, strong reputation in healthcare market segment (cardiovascular surgery, cosmetic surgery, orthopaedics and many more) and diversity of tourist attractions available in the country. Furthermore, growing insurance market, strong pharmaceutical industry, cheap international travel and quality of healthcare is increasingly making India a hub for medical treatment amongst people from all over the world.

Medical or Healthcare tourism is the fastest multi-billion dollar industry in the world. India hosts about 1.47 million tourists from countries such as UK, US and Canada in addition to countries like Bangladesh, Sri Lanka and China. The government estimates the growth to be more than 5% in the coming 10 years and to be valued at 4 billion dollars. Based on government statistics of foreign tourists for 2010, more than 55% of visitors went to medical centers in Maharashtra, Tamil Nadu and Delhi because of quality hotels, added tourism opportunities and high quality hospital care.

The paper identifies the strengths of medical tourism service providers and focuses on problems that may reduce growth opportunities of India. It analyses the reasons for attraction of foreign tourists in India and finally concludes the strategies for growth and development of the industry.

### **Methodology:**

Research Methodology is descriptive in nature. Secondary research has been the primary source of the study. The data have been collected from Books, Magazines, Research articles, Journal papers, E-Journals and health tourism website of India.

### **Objective:**

The objective of this study is to analyze the issues and opportunities of medical tourism in India and thereafter designing strategies for growth and development of the industry.

**Key concerns** of medical tourism in India are:

- Lack of government initiatives,
- Absence of coordinated effort to promote the industry,
- Low number of accredited hospitals and
- Lack of uniform pricing policies across the hospitals.

### **Conclusion:**

From the study, it can be concluded that India is in an advantageous position to tap the global opportunities in the medical tourism sector. The government plays a crucial role in the development by acting as a promoter and facilitator of private investment in healthcare. Tax incentives to the service providers, import duty reduction on medical equipment, committees to promote and foster medical tourism are some of the initiatives that can be undertaken. Finally, the paper recommends the strategies for growth and development of medical tourism in India.



Code: PAP-148

## **A Study on Queue Management in a Multiple Server Queuing Model at Front Desk of a Tertiary Care Hospital**

*Dr. Garima Kalra, IIHMR University, Jaipur*

### **Introduction:**

The Front office or reception is an area where patients arrive and first encounter a staff at hospital. A common problem that occurs is that of waiting in line. Queues form when the demand for service exceeds its supply. The danger of keeping customers waiting could become a cost to them. Queuing theory is the mathematical approach to the analysis of waiting lines in any setting where arrival rate of subjects is faster than the system can handle. Queuing time depends on the arrival rate of customers, the number of servers, and the amount of service time for each individual customer.

### **Aims & Objectives:**

This study was mainly based on reducing the waiting time of patients in the queues. To analyze the gaps in waiting process at front desk and thus improve the satisfaction among patients. Identification of the factors responsible for increased waiting time to reduce the resulting long waiting time in queues by recommending appropriate suggestions.

### **Methodology:**

The study involved primary data collection prospectively from the front desk of the hospital. Study population consisted of 250 patients during a four week period. Numbers of servers observed were four. Parameters measured were queuing time during a particular time slot and Service time. According to arrival pattern time slots were decided and Arrival rate was calculated. Then the observed results were compared with the expected results obtained as per software POM-QM for windows and gaps were analyzed.

### **Key Findings:**

The hospital had an average footfall of 270 patients per day at front desk with maximum arrival on Saturdays followed by Mondays. It took 20-25 minutes for a new patient who has never visited before, to get registered and being forwarded to the specific OPD area. Time spent by patients/relatives at front desk varied depending upon the arrival pattern of patients and status of registration. With registration average service time was 6 minutes and without registration average service time was 2.49 minutes. Maximum arrival rate was found between 10am-1pm, following maximum waiting time in queues during that period. New registration takes more time. Registration form should be get filled before entering in queue to decrease the service time in these cases. Convert one more system into server counter on Mondays and Saturdays. Patients should be encouraged for online registrations and appointments.

### **Conclusion:**

Having an efficient hospital queue management system at health care institution is of utmost importance, especially when the patients visiting the facility are either in pain or frail health. The study throws light into finding out the factors responsible for increase in waiting time for the patients and ways to meet the expectations and needs of patients and helps the hospital management to gain insight into how the services should be designed and delivered to satisfy and retain them.

### **Keywords:**

Queuing theory, multiple servers, queuing time, service time, arrival rate

## Managing Hospital Acquired Infection

*Priyanka Mehta, Priya Gokhale Koshta, IIHMR University, Jaipur.*

### Abstract:

Nosocomial infections are a major worldwide cause of death and disability, infection control programs are effective in limiting these infections, especially those acquired in the intensive care unit. This prevalence of hospital acquired infections (HAI), commonly called as nosocomial infection in medical terms still exists in major well developed hospitals in many countries. The aim is to check for the level of hospital acquired infection and their level, steps taken to control and effective management of the same.

### Rationale:

- **“Hospital is the place for cure”** this comes to our mind when we think about the hospital. Treating the patients under same roof was considered as a revolutionary idea, and was expected that it will ease the job of healing.
- ✓ Hospital acquired infections also called nosocomial infections are defined as infections developing in the patients within 48 hours of hospital admission, 3 days of discharge or 30 days of an operation which were neither present nor in incubation at the time of hospitalization.
- ✓ Such infections may manifest during their stay in hospital or, sometimes, after the patient is discharged. Patient in hospital are likely to get sick due to a new variety of microorganisms responsible for wide spectrum of hospital infection. So, hospital has increasingly become unsafe place for patient during their stay. Infection is a health hazard of great expense and significance affecting the final outcome of treatment.

### Objectives:

- To review the current status of nosocomial infection.
- To examine the preventive measures for nosocomial infection.
- To provide suggestions to keep HAI under control.

### Methodology:

- ✓ Research Design: the research designs are used in this study is descriptive in nature.
- ✓ Sampling Design: popular internet search engines, including Google, Yahoo and AltaVista, were used.

### Key Finding:

- ✓ Although standard operating procedures are followed by Hospitals but the cases of nosocomial infection are still there.
- ✓ Mostly occur in immunocompromised patients, hepatitis B and C patients.

### Conclusion:

If the measures followed are continuously updated and upgraded the infection level can be further reduced. This can be done by giving training awareness, training programme, and guidance on implementation of infection control programmes. The awareness about infection control should also be developed among visitors. The awareness about the infection has to be created that will help in decrease of infections and control of the same.

### Keywords:

Hospital Acquired Infection, nosocomial infection.

Code: PAP-150

## Study of Newborn Care Practices in Slums of Tuglakabad, South-Delhi, India

*Dr. Usha Kiran, IIHMR University, Jaipur.*

### Background & Rationale:

Plateaued rate of decline in neonatal mortality rate is one of the major hurdles in achieving Millennium Development Goal 4 particularly in developing countries. The highest risk of death for both newborns and mothers occurs around the time of childbirth and the immediate neonatal period becomes extremely critical both for mother and baby. More than two-thirds of newborn deaths occur by the end of the first week after birth, with up to one-half of all deaths occurring in the first 24 hours of birth. India is no exception to this: 39% of neonatal deaths in India occur on first day of life, and 57% during the first three days. We sought to describe the coverage of essential newborn care practices for births in institutions, at home with a skilled birth attendant, and at home without a skilled birth attendant (SBA) in slum areas of tuglakabad region, Delhi, India.

### Objectives:

General Objective:

1. To assess the status of Newborn care of children (below 7 months of age) in slum areas of Tuglakabad, Delhi.

Specific Objectives:

1. To monitor the mothers and their children (below 7 months of age) and analyze the awareness they have regarding Newborn care.
2. To identify the factors that affects the mother's decision in utilization of Newborn care.
3. To assess whether continuum care of the child is being taken at the family level or not.

### Methodology:

Cross sectional, descriptive study has been done in three slum areas of Tuglakabad region namely Nardan basti, Prem nagar, Notified/Denotified tribes , where mothers with their children below 7 months of age were included in the study and data was collected using the schedule on breastfeeding and newborn practices. Time period of the study was 5th April '2016- 4th May'2016.

### Key Findings:

1. Families of Nardan Basti and Prem Nagar are found to be much more aware about Newborn care and children were healthy as compared to NT/DNT area where none of the 14 children (within 6 months of age) were healthy. Also Follow-ups in context to Newborn care were missing.
2. ASHA Workers have been active in their work and regular visits and have been following "six-clean methods" in cases of home deliveries
3. Few people still believe in non-institutional deliveries in Prem Nagar and Nardan Basti while in NT/DNT area there were mostly non-institutional deliveries been observed (except one). Most of the Children were not vaccinated in NT/DNT families

### Conclusion:

Results from the survey indicated that only 35% of the newborns received any Newborn care check-up within 24 hours of birth. Around 40% of the babies did, however eventually receive two or more check-ups within the first 10 days after birth. Mothers do not have adequate knowledge on areas like early and exclusive breast feeding, colostrum feeding, they have not much satisfactory knowledge in areas like hand washing, danger signs etc in NT/DNT area as compared to Nardan basti and Prem Nagar.

Code: PAP-151

## E-Prescription – A Tool to Smarten Healthcare

*Dr. Shashank Sharma & Ms. Bhavya Arora, IIHMR University, Jaipur.*

### **Rationale:**

In today's hyper-partisan political arena, it is rare to find an issue that offers such a compelling and vital opportunity for cooperation as does modernizing our healthcare system through information technology. The paper describes Doctor's view on use of E-prescription in India and how this tool can help in improving patient care. There is a consensus that we must replace our old paper-based system which kills too many and costs too much, with a robust, interconnected Electronic Prescription system. E-prescribing refers to the exchange of both prescription and medication history information among prescribers, pharmacies, insurance & pharmacy benefit managers. Electronic health records can improve care by enabling functions that paper medical records cannot deliver.

### **Objectives:**

1. To analyse & promote the need for electronic prescription in India
2. To find out the advantages & barriers of e-prescription among the healthcare professionals

### **Methodology:**

Data was collected by getting the unstructured questionnaire filled in by ten doctors practicing in various fields regarding their view on use of e-prescription. Also extensive review of literature was done from established sources like the E-prescription models of USA & UK and various leading Healthcare Journals.

### **Findings:**

After analysing both primary and secondary data it was found that E-prescribers used the system to differing extents; 30% of those surveyed reported use of e-prescribing for nearly all prescriptions whereas 70% didn't use it. The most commonly cited barriers were Disruption in clinical care during implementation (48%), lack of adequate expertise in information technology (35%), lack of knowledge about e-prescription (9%) & concerns about maintenance costs (8%). Cost and workflow change are the primary challenges. A recent survey of physicians found that while the vast majority (80+ percent) knows the value of e-prescribing, only seven percent actually use the technology, and 63 percent said that implementing it was not a priority. In 2013, Ministry of Health and Family Welfare notified Electronic Health Records (EHR) Standards for India & also provides incentives to the physicians using e-prescription. One of the biggest obstacles to getting e-prescribing into the hands of physicians and providers is the lack of awareness & advantages of e-prescription. A study by MGMA's Group Practice Research Network estimated that the time spent managing unnecessary administrative complications related to prescriptions is estimated at approximately \$15,700 annually for each full time physician.

### **Conclusion:**

The time is now to push this technology ahead. Raising the awareness about e-prescription & replacing handwritten prescriptions with automated, expert systems will undoubtedly reduce medication errors, save lives and money. It will help in increasing the patient awareness about the disease/s and medications. By having more comprehensive and accurate information at the time of prescribing, the practice can expand the quality of care and decrease the number of call-backs from the pharmacist to clarify prescription information. In healthcare we get what we pay for, so let's start paying for the right things. We should pay higher bonuses & reimbursements for those who use e-prescribing to improve healthcare system India.

Code: PAP-152

## Data Triangulation: Comparison of HMIS, NFHS, AHS and MCTS Data on RMNCH Indicators in Madhya Pradesh

Dr Rupal Shrivastava, Dr Arpit Datey, IIHMR University, Jaipur.

### Background:

Data Triangulation is a powerful technique that facilitates validation of data through cross verification from two or more sources. It refers to the application and combination of several research methods in the study of the same phenomenon.

### Rationale:

In the current health scenario, success of various health programmes is hindered due to lack of monitoring and evaluation and difficulty in extracting data as well as validation. Health programmes (including immunization) program needs indicators for monitoring and evaluation because obtaining data for such indicators may not be available from a single source or is too expensive to collect and process and time consuming. The second loophole lies in the aspect of synthesis and integration of data from multiple sources for arriving at inferences. Various studies show that decision making is also dependent on results derives from indicators.

### Objectives:

- a) To compare various sources of data for similar indicators.
- b) To highlight districts with maximum discrepancies and do a detailed study till block level and try to drill down till facility level, if possible.

### Methodology:

Descriptive cross sectional studies based on secondary data analysis from HMIS, NFHS, AHS and MCTS data on below mentioned RMNCH indicators in 51 Districts of Madhya Pradesh between 1st April 2016 to 31st May 2016 i.e. :

- i) Total ANC registration
- ii) Mothers who had ANC in first trimester
- iii) Mothers who received ANC >OR= 3
- iv) Institutional delivery
- v) Children who have received BCG
- vi) Children who have received 3 doses of DPT vaccine
- vii) Children who are fully immunized

### Key Findings:

The maximum variation i.e. 37 and 32 points between NFHS-4 and HMIS 2015-16 is seen for two indicators namely:

1. Mothers with 3 or more Anti Natal Check-up's
2. Children who have received full immunization

The **minimum** variation i.e. 37 points between NFHS-4 and HMIS 2015-16 is seen for indicator:

**“Children who have received 3 doses of DPT (Pentavalent also included)”**

**Conclusion:**

Data quality issues have reduced the usefulness of HMIS data. The low quality is evident from three factors: high percentage of missing data, high occurrence of invalid entries and the presence of outliers. It has failed to ensure reporting from all private health facilities. Instances of repeat entries are common at the lower levels of reporting. Over the past few years, the quality of data has improved yet falls short of the requirements of evidence based health policy planning.

On the positive side; HMIS provides new opportunity to link information and communication technology – for data collection, management, creating information products and dissemination to affect policy. It's a gradual process requiring long-term investment. Institutionalization of key indicators, institutional and capacity-building approach helps in reducing costs and provides better monitoring. Field studies, stakeholder consultations and reviews at state level can provide more in-depth information to identify gaps and strengthen the HMIS.

## Online Health Information Seeking Behavior Among the Young Adults: A Study in Urban India

*Dr. Abhinav Maurya, Dr. Mansi Agarwal, IIHMR University, Jaipur*

### **Introduction:**

Before the information era, physicians had a complete control over the entire process of medical treatment and the patient's role was to comply with the physician's advice. With the advent of access to health information on the web, there has been a shift in the role of the patient from passive recipient to an active consumer of health information.

Internet perceived as a dynamically interactive medium has become a popular and convenient source of information on various subjects, especially for young adults. Fast paced and busy life, changing lifestyle patterns and reluctance to share personal health issues has accelerated the use of internet as a medium of gathering health information.

### **Rationale:**

As per IAMA report 2015, India will have the world's second largest internet user base in the coming months, overtaking the US with 402 million users out of which youth have a major share. But when it comes to searches for seeking health information online, the records are more or less inconclusive.

The growing desire for seeking health information is challenging the inequalities in decision-making processes and information asymmetries thereby transforming the age old doctor- patient relationship.

This study describes the role of Internet on health information seeking behavior of its users in the Indian context. The purpose of the study is to understand the importance young adults give to online healthcare information in their daily lives. It also focuses on the changing trends of consumers' willingness to be informed about their health status.

### **Objectives:**

1. To determine the behavior patterns of young adults in seeking online health related information.
2. To understand the implications of online health information seeking behavior in health care service delivery.

### **Methodology:**

A descriptive cross sectional study was conducted among the young adult population (18-35 years) in multiple cities of urban India. Data collection method used was non probabilistic convenience sampling. The study tool used was an online self-administered questionnaire. All the questions were close ended. The respondents were asked to specify the frequency of use, quality and utilization of health information sourced from the Internet, and the perceived trustworthiness of the same, using variety of scales designed to measure dichotomous responses (e.g. yes/no), interval responses (i.e. the Likert scale), or semantic differential responses (e.g. 'never', 'sometimes', or 'always').

### **Exclusion/inclusion criteria:**

The survey concentrated on respondents of ages from 18 to 35 years as this age group is largely responsible for driving the economic growth and is a strong decision making cohort that influence the generations dependent on them.

### **Key findings:**

Data collection is in proceedings.

### **Conclusion**

Health information on the web is increasingly becoming a useful platform between the dichotomous relationship of the doctor and the patient. The young adult population of India is keen to know the pros and cons of the smallest health issue they face; hence the inclination towards internet is on the rise.

Code: PAP-154

## Nursing Fatigue

*Priyanka Baghel, Sowjanya.V.D., IIHMR University, Jaipur.*

### **Introduction:**

According to the World Health Organization's World Health Statistics Report, 2011 there are 19.3 million nurses and midwives across the world. In India there are 1,431,000 numbers of nursing professionals that is 13 per 10,000 populations. Unresolved compassion fatigue often results in physical and emotional exhaustion and can significantly impair job performance. Occupational stress is a recognized problem in health care workers. Nursing has been identified as an occupation that has high levels of stress. Job stress brought about hazardous impacts not only on nurses' health but also on their abilities to cope with job demands.

### **Objectives:**

This study aimed at finding out the degree of work-related stress among the staff nurses and various determinants, which have a impact on it.

### **Materials and Methods:**

Institutional-based cross-sectional study conducted on GNM qualified nurses. Predesigned and pre-tested questionnaire covering their sociodemographic variables in part I and professional life stress scale by David Fontana in part II. Analysis used was Chi-square test and logistic regression for various factors.

### **Results:**

Risk for professional stress due to poor and satisfactory doctor's attitude was found about 3 and 4 times more than with excellent attitude of doctors toward the staff nurses. A statistically significant association ( $P < 0.024$ ) between department of posting and level of stress. Nurses reported that they had no time for rest, of whom 42% were suffering from moderate-to-severe stress. The nurses who felt that the job was not tiring were found to be less stressed as those who perceived job as tiring (OR = 0.43).

### **Conclusion:**

The main nurses' occupational stressors were poor doctor's attitude, posting in busy departments (emergency/ICU), inadequate pay, too much work, and so on. Thus, hospital managers should initiate strategies to reduce the amount of occupational stress and should provide more support to the nurses to deal with the stress.

### **Keywords:**

Professional stress, staff nurse, interpersonal relationship.



## Technology - The Only Way Forward for Indian Healthcare in the Current Scenario?

*Dr. Ruchi, Ms. Nupur Gupta, IIHMR University, Jaipur.*

### **Introduction:**

There is no doubt that healthcare technologies have contributed tremendously to the evolution of Medicine. At the same time the innovation can be accused of being the root cause of increase in healthcare expenditure. Innovation, technology and advancement have been linked to such an extent that one cannot imagine one without the other. But does innovation only mean being technologically advanced? Does advancement only equals to adopting newer technology? Undoubtedly, technology has made our lives easier but is it the solution to every problem?

### **Rationale:**

Healthcare Industry is the fastest growing industry in India. On one hand, with advancement in technology, hospitals have become better equipped to provide immediate and quality patient care. On the other hand, rise in healthcare cost has made financial burden and catastrophic health expenditure an area of great concern. According to recent data by National Sample Survey Organization (NSSO), 63 million people fall below poverty line every year due to health care cost alone. Approximately 70 percent of the population seeks treatment from private facilities, out of which 50 percent seek treatment from private practicing doctors/clinics. The sad part remains that even the highest quintile faces financial hardship in availing these services, leave alone the poor. From providers' point of view, with huge investment in these cutting-edge technologies, it is difficult for them to survive without charging more for better quality. Furthermore, insurance has made it difficult for them to get return on investment. This collectively has led to supplier induced demand of uninsured services resulting in rise in redundant tests and procedures contributing to higher prices. Amount spent on medicines account for 2/3rd of the amount spent on outpatient department resulting to be a major reason of out of pocket expenditure. These reasons are enough to reconsider whether spending on technology ruthlessly is the right call when affordability remains a big issue in spite of improved accessibility.

### **Methodology:**

Through this paper, issues related to rising healthcare costs with respect to technological advancements, along with their impact will be discussed. Attempt will be made to identify areas which need to be worked upon before talking about digitalization. It will be based on secondary data and intensive review of literature from various journals, papers, survey results and articles.

### **Key Findings:**

Many aspects of Indian healthcare require immediate attention before becoming "technologically advanced". Process redesign by strengthening existing infrastructure first, instead of running after technology is necessary. The key for establishing continuity of care in an efficient way is based on the concept of "Anticipation". Before adopting new technologies, Health Technology Assessment (HTA) MUST be done to check healthcare costs and feasibility of that new technology with respect to investment and efficient utilization.

### **Conclusion:**

Well-weighed, frugal investment in technology along with introspection is the need of the hour along with honesty and austerity. It also requires the collaborative efforts of all the players (public as well as private) to make health a fundamental right, including the patients as well. While embracing modern technological improvements in healthcare has the potential to lead the country in bridging its social-economic divide, existing problems at root level and process related flaws need to be addressed first.

Code: PAP-156

## Gap Analysis of Perspectives of Different Stakeholders in Access to Primary Healthcare

*Aadil Refai, Harishankar Sahu, IIMR University, Jaipur.*

### **Background:**

Strategies to improve access to primary health care for people have demonstrated limited success. Whereas previous approaches have been informed by the views of health providers and decision-makers, it is believed that incorporating patient perspectives along with healthcare providers into the design and evaluations of health care programs will lead to improved access to health care services through identifying the Gap between their perspectives of PHC.

### **Objective:**

We aim to map the literature on the perspectives of stakeholders in access to primary health care services, to identify gaps in perspectives and to produce an evidence-informed research action plan to guide the program of running for primary health care implementation research.

### **Methodology:**

This study includes survey of stakeholder's perspectives in primary health care services accessibility to patients. The questionnaire is semi structure identifying the satisfaction level in accessibility and understanding of accessibility among the stakeholders and identifying the Gaps. Random sampling was done for all stakeholders' selection. Sampling Area: Jaipur, Sample size was 20 stakeholders. Data is then collected, summarized, and thematically analyzed.

### **Results:**

There is significant variation in perspective of accessibility to primary healthcare. The Gap analysis shows that Understanding of accessibility differs between stakeholders.

### **Conclusions:**

The study shows that in order to have an accountability of access to health care into place, it is important to bridge the Gap between the perspectives about the PHC among different stakeholders. A literature repository will be developed to assist stakeholders, decision-makers, and PLHIV in developing and implementing patient-oriented health care programs.

### **Keywords:**

Attitude to health, patient satisfaction, perspective, health services accessibility, health services/ utilization, access to health care.

Code: PAP-157

## **A Pilot Study to Investigate Regular Health Checkups Among Educated Urban Women - A Study Done in Nagpur District**

*Dr. Bhavana Methwani, IIHMR University, Jaipur.*

**Background and Rationale:** Non-communicable disease is an important public health problem in India, which is responsible for a major proportion of mortality and morbidity. Demographic changes, lifestyle changes along with increased rates of urbanization are the major reasons responsible for the tilt towards the non-communicable diseases. According to a WHO report, non-communicable diseases are estimated to have accounted for 60 per cent of the death in India in 2014. Cardiovascular diseases and Cancer tops the list. Non communicable diseases in women are on rise and calls for urgent attention. Health checkups, plays a major role in early detection of diseases, thereby increasing the long term health as well as reducing the future health care costs.

### **Objectives:**

The objectives of this study was

1. To analyze the percentage of women doing regular health checkups
2. To investigate factors preventing them from doing periodic health checkups.

### **Methodology:**

This study was based on convenience sampling for which face to face interviews were conducted from April 2015 to June 2015, from 260 women teachers in the age group of 25 to 55 years.

### **Results and Key Findings:**

The study revealed that

- 40% of the women have not visited their doctor in last 12 months.
- 60% have never done their full body health checkup and among them 50% said that they do not have any health related issues so no point of spending money on health checkups.
- 15% of women were not aware about health checkups i.e. which hospital to go, where are these checkups done and what all is done in regular health checkups.
- 20% feel that health checkups are waste of time.
- 45% of women did not know about cervical cancer.

### **Conclusion and Recommendation:**

One of the major reason which prevents women from doing health checkups is Out of Pocket Expenditure. The second major reason found out was that, women living in urban area are not aware about periodic health checkups and its advantages.

These findings indicate a need to actively encourage women to continuously undergo health checkups, and to engage in monitoring to maintain or improve upon current health status.

There is a further need to connect women to technology embedded communication which could enhance the level of awareness and stimulate them for doing periodic health checks. Schemes like vouchers should be introduced to increase the purchasing power in the hands of women.

Code: Code: PAP-162

## **Prevalence of Tobacco Habits Among Health Care Students in Jaipur - Need for Tobacco Cessation Clinics (TCC)**

*Shruti Agarwal, Kanika Arora, IIHMR University, Jaipur.*

### **Introduction:**

Tobacco use is a major modifiable risk factor for health globally. Every eight second someone somewhere in the world dies as a result of tobacco use.

It has been reported that there is an increase trend of tobacco habits among healthcare students pursuing health care institutions. So the study is mainly focused to assess the prevalence of tobacco users in healthcare institutions and how they undergo attitudinal and behavioral changes with respect to their own smoking habits and alcohol consumption.

In 2002, Tobacco cessation clinic was setup in India to provide the first formal tobacco cessation intervention, thirteen clinics were set up which were later expanded to 19. One such clinic was also setup in Jaipur- Bhagwan Mahaveer Cancer Hospital & Research Centre which has been stopped working from last five years resulting in no such place or special clinics in Rajasthan. Therefore the study will also focus on the attitude of the students towards the need of such special clinics.

### **Objectives:**

- ❶ To assess the prevalence of tobacco use among undergraduate healthcare students in five selected colleges in Jaipur.
- ❷ To assess the knowledge, attitude and perception of healthcare students towards the need of tobacco cessation clinics helping them to get control over the tobacco consumption.

### **Methodology:**

It is a cross sectional descriptive questionnaire based study in which the final year students of 5 healthcare institutions are asked to fill the questionnaire. The study will be done in all the students present at the time of survey (4th year students). The institutions that will be covered under the study are:-

- Sawai Mann Singh medical college.
- Mahatma Gandhi medical college and hospital.
- National institute of medical science and research.
- Jaipur dental college.
- Rajasthan dental college.

### **Findings:**

Findings have not been established yet as the study is ongoing and under process.

Code: PAP-165

## Healthcare Shifting into “Palms of Patients”

*Dr. Iha Srivastava, Dr. Hanvitha Khambampati, IIHMR University, Jaipur.*

### **Background:**

Mobile phones greatly influence human connectivity, commerce, media, and finance. Health care accessories and applications in these smart phones is shifting healthcare into palms of patients, setting off an explosion into new industry needs.

### **Objective:**

To study the user satisfaction on the use of mobile health applications, focusing on its potential to disseminate health interventions.

### **Methods:**

A review of literature was performed to identify the published studies related to smart phones and health application use in relevant scientific database. The search was limited to full paper articles published in English. Electronic databases searched include PubMed Central, BioMed Central, Oxford Journals and British Medical Journal, The Lancet Journals, Journal of Medical Internet Research, American Journal of Clinical Pathology, Plos One and various websites.

### **Results:**

The review indicates acceptability of the mobile health apps by the users. As the clinicians are moving towards virtual medicine, expanding services in areas of behavioral health, chronic disease management, health plans are using the same to reduce costs. According to study, mobile health app adoption doubles in two years.

### **Conclusion:**

Analysis of the articles suggest that the mobile health apps are well received by the users and may be considered as a feasible and acceptable means of providing health interventions. Thus, move toward handheld medicine is occurring thanks to advances that have made the tools and their wireless links ubiquitous, reliable and affordable. Still, a limited number of studies signal the requirement of more rigorous research in the area to determine efficacy and establish evidence for best practices.

### **Key words:**

smartphone, app, health behavior, systematic review, interventions

Code: PAP-166

## Corporate Social Responsibility - The Way of Sustainable Development Goals

*Dr. Khushboo, Dr. Vandana Gupta; IIMR University, Jaipur.*

### **Rationale:**

Corporate Social Responsibility (CSR) and Sustainability are so intertwined that the activities of the organizations should be conducted in the environmentally sustainable manner. Indian and international firms have been focusing on developing sustainable business practices and development of the society as well (Companies Act 2013, Section 135), but most of the corporate firms are merely investing just to meet the CSR norms of 2% investment, not in well-defined manner. Many organisations do not have the clear CSR policies and CSR committee as well.

### **Objective:**

- To know about the current trends and patterns of CSR prevailing in India.
- To develop a strategy to ensure that responsibilities of various organizations towards protecting the eco-system and simultaneously following Sustainable Development Goals (SDG's) should be achieved under the shadow of CSR.

### **Methodology:**

The research paper is an attempt of exploratory research of leading corporates and Govt. Organisations, based on the secondary data sourced from company's website & available balance sheets, journals, magazines, articles and media reports.

### **Key Findings:**

Various organizations are contributing towards CSR in their own ways, such as livelihood promotion, community development, environment, making health services more accessible, creating inclusive markets and so on. However, the efforts are not coordinated and a strategic national level policy framework is needed. It would benefit more people and utilize resources more effectively, minimize duplication and create more value and really achieve development goals.

In 2014-15 total 5115 crore rupees were spent on CSR activities (*CSR Journal, March 2016*), A new study estimates that implementing SDGs in India by 2030 will cost around US\$14.4 billion (Business standards, UNDP, Achieving the sustainable development goal in India, 2015).

India is at the threshold of demographic dividend, and there is an urgent need for the creation of human and physical capital to reap its rewards. Investment in education, health, skill development and social infrastructure will enhance capabilities of the youth by improving their nutritional, skill and educational level, which in turn will improve their employment prospects. Traditionally, this has been the responsibility of the government CSR is being seen as an opportunity to governmental provision of merit goods. CSR will increase availability of funds for welfare activities and may lead to delivery of goods and services to the people in a cost-effective manner. Therefore, the clause on CSR is a step towards achieving social and environmental sustainability, which will benefit society in future.

### **Conclusion:**

The most significant problem recognized in Indian CSR scenario is lack of measurability. Companies claim that initiatives are being taken at ground level in the association of NGOs and local bodies. But actually beneficiaries deny the same. Hence there is no methodology being adopted by companies to measure the level of applicability.

The need of the hour is to develop ways by which money generated from CSR should be utilized in a way so that it can be used for the benefit of the nation and its inhabitant.

## Unfurling of Digital Marketing Era: A New Manoeuvre Being Embossed to Hike Healthcare Organizations Revenue

*Dr. Palak Gupta, Dr. Meenakshi Sharma, IIHMR University, Jaipur.*

### **Preamble:**

Digital marketing is defined as a marketing strategy making use of digital channels for brand promotion. Digital marketing being a cardinal part of marketing is gravitating upwards in the healthcare industry. A well-executed marketing campaign comprising of a perfect blend of traditional and digital channels has become quintessentially important for the success of any healthcare provider. Digital marketing helps in grossing revenue, amplifying the brand value, help in raising awareness about the new programs that the hospital has started along with educating the population.

India's base of about 164.81 million internet users is currently the third largest in the world (The Telecom Regulatory Authority of India, March 2012) which gives the healthcare companies a very large rostrum to select their target audience from. Many studies have already been conducted on digital marketing and their growing importance and need in today's ever changing environment. However, this study helps in identifying a digital marketing strategy for Hospitals that will help them to amplify their overall revenue.

### **Objectives:**

- Understanding the conceptualization and implementation of digital channels in Indian market especially the healthcare market.
- To study about the various trending digital channels at present being employed by the companies around the globe to gain as well as retain customers.
- To predict the most efficacious Digital marketing strategy that will assist the Healthcare facilities in acquiring revenue.

### **Methodology:**

An amalgamation of primary and secondary research has been the selected source of data for this study. Various studies dealing with the emphatic manner in which multitudinous digital channels have been employed to attract customers and generate revenue have been reviewed. Additionally, a panel of experts has been consulted to understand the present scenario of digital channels and to be able to project the future digital engagement strategy which will fetch more customers to the healthcare facilities.

### **Conclusion:**

After evaluating the primary and secondary data cumulated by conducting the study, it was observed that in the present scenario inbound digital marketing has become an integral part of the marketing strategy implemented by healthcare facility especially in the corporate hospitals of metropolitan cities. According to the research done it is deduced that it is a flourishing department aimed at creating business by fetching more appointments (40%), converting leads into customers (23%), enhancing brand value (17%), increasing site traffic (17%) and creating awareness among the targeted population (3%).

However, because of the presence of numerous digital channels, it becomes onerous for the healthcare facilities to elect the most productive and economical channels for boosting their business. Singling out the most appropriate and budget friendly channels which can help fetch more customers becomes tedious for healthcare providers. Through this study the digital channels in trend at the present scenario are identified namely, responsive website, social media marketing, affiliates marketing, adoption of e-commerce platforms and m-health, the implementation of which is beneficial to the hospitals.

### **Key words:**

Digital marketing, revenue, healthcare, customers.

Code: PAP-168

## Lacunae between the Supply and Demand Side of Insurance Companies

*Nupur Kapoor, IIHMR University, Jaipur.*

### **Background:**

From its inception, Insurance market has grown significantly in catering to the major population. Today the insurance industry contributes to economic growth and national prosperity in various ways. The measure of insurance penetration and density reflects the level of development of insurance sector in a country. While insurance penetration is measured as the percentage of insurance premium to GDP, insurance density is calculated as the ratio of premium to population (per capita premium). But According to the latest sigma study from global reinsurer Swiss Re, India's insurance penetration fell to 3.3 per cent in Financial Year 15, compared to 3.9 per cent in Financial Year 14.

### **Rationale:**

Low spending on life Insurance from Gross Domestic Product (GDP) raised the Question on Universal health Coverage by 2022.

### **Research Question:**

To study the evolution of Health Insurance Models over a period of five years till date, in bearing the financial Burden of the Insured and the future penetration of new Insurance schemes for the Beneficiaries- to- be in India.

### **Methodology:**

Review of secondary Data through various reports, books and journals .The data is reviewed on the certain indicators which satisfy the comprehensive Healthcare demand of the population. Future projection will be estimated by quantifying the data.

### **Conclusion:**

Insurance Density over the past Five years surged up but in accordance to Density the penetration as in the premiums paid with respect to GDP has seen a Decline. As penetration has dropped since the sector has not been able to grow at the same pace as GDP.



