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॥वसुधैव कुटुम्बकम्॥

# Symbiosis Health Times





**Dr. S. B. Mujumdar**  
Founder & President, Symbiosis  
(Awarded Padma Bhushan & Padma Shri by President of India)



॥वसुधैव कुटुम्बकम्॥

# **SYMHEALTH 2019**

***National Conference  
on  
Interdisciplinary Approach to Healthcare***

**(MMC Accredited)**

**April 19<sup>th</sup> & 20<sup>th</sup>, 2019**

**Symbiosis School of Open and Distance Learning**

**Symbiosis International (Deemed University), Pune**



First Impression: 2019

# **Symbiosis School of Open and Distance Learning**

Symbiosis International (Deemed University), Pune

## ***National Conference on Interdisciplinary Approach to Healthcare***

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# FOREWORD

Dear Readers,

Greetings from Symbiosis...

It gives me immense pleasure to present the commemorative issue of the Symbiosis Health Times. This is one of the platforms of the Symbiosis Centre of Health Care that publishes articles, which are related to the Health Care sector and to the various subsectors like IT, Pharma, Health Insurance, NGO's, Hospital, Fitness, Medico-legal, Medical technology etc.



Healthcare is a complex & multidimensional issue. It is a service provided by a coordinated and committed group of professional people. Healthcare services are being provided as team effort basically aimed at relieving pain and sufferings of the customers so called as 'patient'.

Symbiosis Health Times thus covers a gamut of topics ranging from Management Issues in the Health Care Sector especially Hospitals, Medico Legal Issues, new paradigms in the Healthcare.

An interesting and useful addition is the "Knowledge Bank", wherein we have complied articles on important and current issues.

I believe that this issue will enlighten all of you, and will give you an insight on the topics covered in it.

Happy reading.

**Dr. Rajiv Yeravdekar,**  
**MD. PhD**

Dean, Faculty of Health & Biological sciences,  
Symbiosis International (Deemed University)

## FROM THE EDITOR'S DESK

Dear Readers,

Greetings from Symbiosis!

I am extremely delighted to put before you the Symbiosis Health Times on the occasion of academic festivity of hosting SYMHEALTH 2019 – A National Conference on 'Interdisciplinary Approach to Healthcare' on April 19<sup>th</sup> and 20<sup>th</sup>, 2019 at Symbiosis International (Deemed University), Lavale campus, Pune.



The Faculty of Health and Biological Sciences has made an attempt at addressing an impelling need for the application of interdisciplinary approach to the education and training of healthcare professionals. The conference has provided an opportunity for stakeholders beyond academia and industry, to exchange insights & present emerging opportunities under the various domains of healthcare delivery system. The Govt of India has introduced a novel and ambitious scheme called Ayushman Bharat, to revolutionize the delivery of healthcare to the deprived sections of society. We have therefore invited speakers who can discuss the implementation of this scheme from different stakeholder perspectives.

The interactive panel discussions are divided across all the verticals, each led by doyens of industry & academia. You have noticed that a rich variety in the subjects of the sessions, each as relevant to health care as the other, ranging from Healthcare law, Economics, Healthcare IT and Value tourism. I am sure that the Abstracts of research paper presentations and poster presentations have enabled exchange of ideas and provided impetus to interdisciplinary approach across domains of healthcare. The section on Knowledge Byte showcases recent happenings in the healthcare system.

A brief collection of Wellness Quotes, will guide you to lead & enjoy a healthy life.

I am sure that this collection of pearls of wisdom, with an array of thoughts will firm up our bonding relationship.

I profoundly thank all those who have contributed their rich experience and expertise towards bringing out this issue.

**Dr ASHISH BANERJI,**  
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Editor

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## **Android System for tracking & providing emergency medical services through Near Field Communication (NFC) technology**

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**Introduction:** Mobile devices play a crucial role in providing efficient Healthcare Management in developing countries. Simple touch of Near Field Communication (NFC) enabled mobile devices can benefit both the patient as well as the medical doctors by providing a robust and secure health flow. It can also provide portability of devices and usability for health management in emergency situation, overpopulated hospitals and remote locations.

**Materials & Methods:** Near Field Communication (NFC) Tag such as MIFARE with NFC-A properties (NTAG 215).

**Results/Findings & Interpretation:** The paper proposes a novel architecture for improving healthcare system with the help of Android based mobile devices with NFC and Bluetooth interfaces, smartcard technology on tamper resistant secure element (SE) for storing credentials and securing health data. The main contribution of this paper is proposal of applications for i) Secure Medical Tags for reducing medical errors and ii) Secure Health card for storing Electronic Health Record (EHR) based on Secure NFC Tags.

**Keywords:** Near field communication (NFC), Mobile technology, health record management & hybrid-cloud.



## **Testing preparedness of EMS personnel in identification and decompression of tension pneumothorax using high fidelity simulation – A pilot study**

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**Introduction:** Tension pneumothorax is a life threatening medical emergency that can quickly deteriorate the cardiopulmonary function leading to high chance of mortality. A tension pneumothorax occurs when the patient cannot compensate during respiration leading to air filling in the pleural space. This leads to collapse of lung and the pressure begins to compress the heart. The diagnosis is primarily clinical and hence depends on the judgement of the Emergency Medical Services (EMS) personnel. Hence, the confidence level of the EMS personnel in tackling this dire emergency is of utmost significance. High Fidelity Simulation offers an excellent opportunity to practice diagnosing this emergency as well as honing the skill of needle decompression in a safe environment.

**Objective:** The study aims to test preparedness of EMS personnel in identifying and managing tension pneumothorax by performing needle decompression using high fidelity simulation.

**Methodology:** A high fidelity simulation manikin, was utilized for preparing three simulated clinical experiences of trauma leading to Tension Pneumothorax. The EMS students were already aware of Tension Pneumothorax - diagnosis and management through didactic lectures and practical conducted in low fidelity skill stations. Three groups of six students each performed the simulation and were evaluated using the advance course protocol of patient assessment by International Trauma Life Support (ITLS) organization. The students were also evaluated on the accuracy of diagnosis and the correctness of the technique of needle decompression. The time taken for diagnosis



# ABSTRACTS

and further to successfully achieve decompression. The entire simulation scenario was video recorded with consent and later evaluated by two different trainers to reduce bias.

**Results:** Students from Group 1 could not diagnose tension pneumothorax in the simulated patient. Based on the findings Group 2 and 3 diagnosed tension pneumothorax.

**Discussion:** The participants in the study were already well versed with the subject of Tension pneumothorax by lectures and practical sessions conducted at low fidelity skill stations. Yet when confronted with a realistic simulation scenario on tension pneumothorax Group 1 could not diagnose the condition while Group 3 took too long to arrive at a diagnosis by which time the simulated patient's condition had worsened.

**Conclusion:** The study being a pilot initiative would need data collection with a larger sample size to arrive at more concrete evidence of the utilization of high fidelity simulation in training EMS personnel. Additional simulation workshops could be done to assess other skills and integration of more simulation into EMS training may be useful, especially for rarely performed time critical life-saving skills.

**Keywords:** Tension pneumothorax, needle decompression, high fidelity simulation.





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# ABSTRACTS

## **Study of how efficient the pneumatic transport system is compared to manual methods- innovative methods to improve hospital efficiency**

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**Introduction:** Increasing financial burden on us, on quality of patient care and ever increasing competition has forced hospital administrators across world to focus on innovation in the Management of Hospitals. Internal logistics of materials like Laboratory samples, reports, blood products, drugs from pharmacy is of primary importance and has direct bearing on the provision of good quality care to patient and improving patient satisfaction. The present study was done to find the efficiency of one such method of logistics management, i.e. pneumatic transport system (PTS).

**Methods:** The study was conducted in a large hospital. Data was collected by direct observation and comparing with existing conventional human based transportation.

**Observation:** There was no difference in time taken for drawing of samples, labeling and handling of samples between two methods. But there was a significant reduction in time for arranging manpower and transportation of samples in case of Pneumatic chute system. Total time taken for sample transportation by pneumatic system was 15:20 min while by manual method was 48:20 min from ICU to Laboratory.

**Conclusion:** PTS is a valuable alternative to conventional human dependent transport. The study shows there is a definite saving in manpower and time for transport.

**Key Words:** Transport, system, time.



## **Integrating Flipped Classroom technique with High Fidelity Simulation for teaching Hemorrhagic Shock to EMS Students at Pune, India - A pilot study**

*Dr. Parag Rishipathak, Dr. Shrimathy Vijayraghavan, Dr. Anand Hinduja*

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**Introduction:** Shock is a state of circulatory collapse leading to decreased perfusion of the tissues which in turn leads to lack of oxygen and nutrients to the cells and thereby hampers the cellular function. EMS students are presently taught the concept of shock through traditional lecture and case discussion method. Clinically relevant topics can be alternatively taught via a flipped classroom technique wherein the traditional learning environment is reversed by delivering instructional content outside the classroom. A novel approach to evaluating the effectiveness of flipped classroom could be to integrate it with high fidelity simulation.

**Objective:** To integrate flipped classroom technique with high fidelity simulation for teaching hemorrhagic shock to EMS students and measuring their satisfaction on a pilot basis.

**Methodology:** A comprehensive reading material on the subject Hemorrhagic Shock was circulated amongst 200 EMS students two weeks prior to the planned flipped classroom session. 50 students were randomly chosen to participate in High fidelity simulation scenario based flipped classroom session. Students were divided into batches of seven each. The simulation pre-brief involved a brief synopsis of shock in general with special focus on hemorrhagic shock. Each simulation session lasted for approximately 10 minutes followed by structured de-briefing for 20 minutes. A feedback questionnaire was designed to gauge participant response on the high fidelity simulation session as a flipped classroom exercise .

**Result:** The students gave extremely high rated feedback on the structure, organization and effectiveness in diagnosing and managing a case of hemorrhagic shock. It is seen that the students were satisfied with the pre briefing and overall preparation and understanding of the scenario. **Conclusion:** The study is limited by its sample size and singular event, but offers significant perspective to replicate a long term effectiveness study amongst a larger cohort of EMS student.

**Keywords:** Flipped classroom technique, high fidelity simulation, and hemorrhagic shock.



## Factors Affecting the Demand of Health Insurance in India – A Systematic Review

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**Introduction:** Insurance penetration in India is close to 16% which means that only very less percentage of the population is covered under some form of Insurance which includes Government Insurance Schemes, Employer based insurance, private health insurance and Community based insurance schemes. The condition is pitiful, as a huge part of our population does not use health insurance and pay out of pocket to finance their medical expenditures. Such scenario makes it essential to study factors affecting demand of health insurance in India.

**Aim and Objectives:** The study aims to bring out various factors affecting the demand of health insurance in India. The objectives include understanding the factors influencing health insurance purchase decision of health insurance and identify the supply and demand determinants affecting the scale up of health insurance.

**Methodology:** An exhaustive & comprehensive review of literature was carried out from various studies from all across India & developing countries through online electronic databases. The databases included Google scholar, EBSCO, JStor & website of related nationalized agencies and IRDA.

**Results:** The major factors affecting health insurance were found to be low awareness, income, education, health seeking behavior, availability of healthcare facilities and trust in health insurance companies.

**Conclusion:** To make health insurance spread across all segments of India both supply and demand determinants are important. Demographic factors along with socio economic factors play a major role in health insurance penetration.

**Key Words:** Health Insurance, supply and demand of health insurance.



## Usage intention towards online healthcare in context to consumer

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The application of innovative technologies in area of healthcare services has resulted in improved patient safety, satisfaction, care quality and decreased healthcare costs (Eysenbach, 2001; Pagliari, Sloan, Gregor, Oortwijn, and MacGillivray, 2005). The major advancement in the healthcare IT revolution has been the ability to render various healthcare services to consumers through the world-wide web referred to as the “internet”. The potential of online healthcare is based on allowing patients to access real time information about their treatment and diagnosis for personal decision making without having to visit a healthcare facility (Rohm and Rohm Jr, 2002). Macias et al (2005) accentuated the role played by internet for distributing Word of Mouth (WOM) related to healthcare. WOM has a significant impact on patient satisfaction, selection of treatment option and on the healthcare providers (Haase et al. 2006; Otani et al. 2009). The paper aims to identify the key motivational factors for user intention regarding online healthcare services; and identification of the key consumer acceptances and barriers towards online healthcare. This study is a unique contribution towards identification of usage intention by integrating constructs from two well-established theoretical models, the Technology Acceptance Model and Self Determination Theory. It also highlights the impact of Word of Mouth in creating awareness about usage and adoption of online healthcare.

**Methods :** The method proposed for this study will include exhaustive literature review related to usage intention of online healthcare and an internet based survey to identify the key motivational factors which act as antecedents for online healthcare service usage. The findings of this study and the model developed can be used by healthcare organization while developing business and marketing strategies for their various online initiatives to achieve high consumer acceptance and positive recommendations.

**Keywords:** Online healthcare, adoption intention, technology acceptance model.

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# ABSTRACTS

## **A study on knowledge of preventive practices about vector borne diseases (VBD) in Pune district**

*Prof Dr. Sonopant Joshi*

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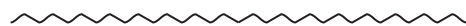
**Background and Objectives:** Pune district is known for endemic of vector borne diseases like malaria, dengue and chikungunya. Assessment of knowledge of preventive practices of rural community about vector borne diseases is important for designing community-based interventions.

**Method:** A community-based cross-sectional study was conducted among 100 adults selected by random sampling method in two villages of Pune district (village1, village2). Data was collected using pre-validated semi-structured questionnaire. Data was analyzed using SPSS version 20.

**Results:** Out of 100 samples 54% samples were taken from village1 whereas 46% samples were from Village2. 36% were male and 64 % were females. 80% were married while 20% were unmarried. Overall knowledge score of the sample was 36.5 (60.83%). 88% of the sample expressed that they do not have closed drainage system. Mosquito breeding sites found more in village2 (54%) than village1, which was statistically significant at  $p=0.01$ . Knowledge of practices about prevention of vector borne diseases was significantly associated with education status of the samples in both the villages. Potential breeding sites were significantly more in village2 (68%), Similarly actual breeding of mosquitoes was found significantly more in houses of village2 ( $n = 55$ , 55%), which was statistically significant ( $P = 0.01$ ).

**Conclusion:** Creating awareness among rural population using diverse methods is required to control and prevent vector borne diseases.

**Keywords:** knowledge, preventive practices, vector borne diseases.



# ABSTRACTS

## **Assessing the Quality and Safety of Home Healthcare Services provided by Tertiary Care Hospital**

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**Introduction:** The present study is based on Home Healthcare service provided by Tertiary Care Hospitals in Mumbai. These tertiary care hospitals provide services like Nursing Care, Physiotherapy Care, Home Sample Collection and providing the reports and X-ray at patient's home environment.

**Objectives:** To determine the quality and safety of the Home Healthcare services.

**Novelty/ Originality:** Limited studies have been conducted as home healthcare is emerging field.

**Materials & Methods:** The questionnaires were prepared by taking under consideration the JCI guidelines for Home Healthcare Patient Safety 2016 for all the four services viz. Nursing Care, Physiotherapy Care, Home Sample Collection and X-ray. The patient's data was collected for the period of five months through telephonic medium which was further compiled and analysed.

**Results & Discussion:** The study revealed satisfaction percentage which were above 95 % for nursing care and home x- ray services, physiotherapy and home sample collection need improvement where percentage was between 80% to 90%. Further gap analysis was done where mean score of service dimensions like reliability, responsiveness, assurance and empathy were calculated. The highest gap observed for empathy dimension (0.24) followed by responsiveness (0.15) and assurance (0.12).

**Application:** Results from such studies will help improve the service delivery.

**Conclusion:** It is an emerging field hence, this research will help the hospitals in understanding the gaps in home healthcare services, which will in turn enhance the quality and safety of health care services at patient's home environment.

**Keywords:** Home Healthcare Service, Quality, Safety, Gaps.







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## **Awareness of virtual reality in surgical training in India**

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The traditional surgical training has constantly changed as it is recurrently resisted by concerns of patient safety, the cost of operating room and complications all over the world. Virtual reality training allows a surgeon to achieve skills in less time before operating on any patient. The development of technology, hardware has significantly improved patient's safety, increased surgical skills and produced expert surgeons. It has been proven in western countries that virtual reality is effective solution for improving surgical skills, but the awareness and use of such kind of surgical skill training is questionable in Indian Scenario. The research explores understanding of surgical training, its awareness and current status in India. Expert & Novice surgeons from different surgical departments were interviewed about the process of surgical training and awareness of virtual reality in India. The data collected by interview method was interpreted through qualitative method. The technology will automatize for the betterment of patient safety and surgeons practice. The purpose of the study is to understand and create awareness of the virtual reality in Indian Surgical training institutes. The approaches of constant innovation and ongoing progress from the experience retrieved from virtual reality training from different fields might provide the strong substructure for next generation to reduce errors in surgical training. Virtual reality in surgical training has progressed technologically to ensure the good quality of life worldwide.

**Key words:** Virtual reality, Surgical training in India, Patient Safety.



## **Evaluation of Fentanyl and Dexmedetomidine as Additive to Ropivacaine for Epidural Anesthesia in Surgeries below T<sub>10</sub> Level**

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**Introduction:** Epidural anesthesia is commonly practiced for providing intra-operative surgical anesthesia. Ropivacaine is increasingly being used as an epidural agent as it has less cardiac toxicity than bupivacaine. Additives are being combined with local anesthetics to improve the quality of blockade and to accelerate the onset of blockade. This study was undertaken to compare the efficacy of fentanyl and dexmedetomidine as additive to ropivacaine for the onset, duration, and quality of epidural anesthesia in surgeries below T<sub>10</sub> level.

**Objectives:** To evaluate the anesthetic effects of ropivacaine, ropivacaine with fentanyl, and ropivacaine with dexmedetomidine for epidural anesthesia in surgeries below T<sub>10</sub> level.

**Novelty/ Originality:** Lower doses of drug fentanyl and dexmedetomidine with ropivacaine have not been evaluated to achieve anesthetic effect.

**Material and methods:** After ethical committee clearance, 75 patients undergoing surgeries below T<sub>10</sub> level under epidural anesthesia, divided randomly into three groups - Group 1: (R,25): received 18ml of 0.5% ropivacaine; Group 2: (RF,25): received 18ml of 0.5% ropivacaine with 20mcg fentanyl; Group 3: (RD,25): received 18ml of 0.5% ropivacaine with 10mcg dexmedetomidine, into epidural space. The appropriate statistical technique will be applied on dataset.

# ABSTRACTS

**Results and Discussion:** The demographics and ASA grade were similar in all groups. The mean time for onset of sensory block in group R was  $18.64 \pm 4.41$ ,  $12.84 \pm 1.84$  minute in RF group and  $10.76 \pm 2.73$  minute in RD group. The mean time of onset of motor block in group R was  $24.55 \pm 5.54$  minute,  $17.8 \pm 2.53$  minute in group RF and  $14.8 \pm 3.32$  minute in RD group. The mean duration of sensory analgesia in R group was  $139.77 \pm 21.41$  minute, in RF group was  $243 \pm 29.69$  minute, while in RD group was  $312.4 \pm 30.21$  minute. State of analgesia was uniform in 84% cases, partial in 4% cases and failed in 12% cases in group R but in RF and RD groups, there was no failed or partial state of analgesia. So, in RF and RD groups, state of analgesia was uniform in all 50 patients.

**Application:** Improved patient safety as ropivacaine is reported to be less cardio toxic.

**Conclusion:** Both Fentanyl and dexmedetomidine as additive to ropivacaine can provide epidural anesthesia. Epidural anesthesia achieved with dexmedetomidine is more effective than fentanyl as an additive to ropivacaine alone and duration and intensity of analgesia is also more than that due to fentanyl.

**Key-words:** Epidural anesthesia, Ropivacaine, Fentanyl, Dexmedetomidine.



## **Relationship Marketing in Healthcare: A Literature Review Analysis of Past, Present & Future in Private hospitals**

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**Purpose** – Although traditional marketing constitutes major portion of promotional strategies formulated by organizations, new paradigms like relationship marketing is increasing its share consistently. This paper aims to delineate the literature work in the area of relationship marketing so that its constructs can be understood in better manner with respect to the healthcare sector specifically for private hospitals.

**Design/methodology/approach** – Data for this study has been collected through various online databases. Collected literature was then analyzed for relevance to topic, citations per author, year wise analysis, interrelations and collaboration patterns using Bibexcel and VOSviewer.

**Research limitations/implications** – This systematic plotting of the relationship marketing helps graphically demonstrate the publications evolution over time and identify areas of present-day research interests and potential directions for future research. In short it will provide research gaps which can be explored by researchers.

**Originality/value** – This paper contributes to the fast-growing and fragmented relationship marketing literature by refining the understanding of its dimensions and situating it in a network of conceptual relationships. It focuses on satisfaction and loyalty effects of relationship marketing especially in healthcare sector.

**Keywords:** Relationship marketing, Patient satisfaction, Patient loyalty, Healthcare management.







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## **Social Responsibility of Pharmaceutical Industries: Is CSR enough for corporates**

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Human rights are rights inherent to all human beings, regardless of race, sex, nationality, ethnicity, language, religion, or any other status which falls as an obligation on Government as per International human rights law. On the other hand, corporates have evolved on the basic premise of profit devoid of any human rights responsibility. It's not erroneous to say that Human rights and corporates are in congruous nexus since the ages. Ruggie report and recent changes in the trend has brought worldwide attention to the conditions of those living in less developed countries and their human rights. Recently Pfizer put on hold on the sale and marketing of its products which was being used as lethal injections for capital punishment in its country, citing moral responsibility towards society. The researchers will look into the merging responsibility of corporate and government towards the human rights through the lens of case study of Pfizer. The research will purely be a doctrinal study with the help of secondary data. The research article has limited its universe to the Pharmaceutical Companies, as they need to have a heightened sense of moral responsibility because of the nature of their consumers and products. The researchers will also try to posit a theory of corporate responsibility for human rights protection which will be ultimately helpful towards policy making decisions of south bound countries.

**Key words:** pharmaceuticals, human rights, moral responsibility.





## **Ocular Manifestation of Pediatric Systemic Diseases: Inter Disciplinary Approach**

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Early diagnosis of eye diseases in pediatric population is of out most importance, since many of them are potential enough to cause permanent visual impairment. Among them specific disease like cataract, subluxated lens, corneal disorder, phacomatosis, high refractive error, squint etc. can be associated with other systemic involvement. An array of ocular manifestations of hyperthyroidism, hypoparathyroidism, diabetes mellitus, porphyria, cystinosis, mucopolysaccharidosis, Wilson disease, juvenile idiopathic arthritis, systemic lupus erythematosus, Marfan s syndrome, Weill-Marchesani syndrome, down's syndrome are described. On contrary, ocular examination provides significant information for the diagnosis and monitoring of systemic disease. In an eye, micro circulatory system can be visualized directly and investigated with precision; neural tissue can be evaluated easily; and the results of minute focal lesions are so prominent that is unmatched with any other body part. This article presents the Ocular manifestation of various pediatric diseases relevant to Clinician and also encourages interdisciplinary interaction between eye care practitioner and pediatrician.

**Key words:** Systemic Disease, Ocular manifestation, Pediatric.



## **Assessment of Ergonomics in practicing dentists to study the co-relation between physical and psychological factors with prevalence Musculoskeletal disorders (MSD's) in practicing dentists**

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**Introduction:** MSD's are very commonly seen in dentists. These disorders can hinder their clinical practice and at times results in severe complications leading to an early retirement.

**Aim:** The aim of this study to find a to study the co-relation between physical and psychological factors with prevalence of MSD's in practicing dentists.

**Novelty/Originality.** This study is a culmination of two fields of medicine Physiotherapy and Dentistry, thus proving to be of significant value in terms of Interdisciplinary Approach to Healthcare.

**Materials and Methods:** The sample size consisted of 50 dentists. It was an observational cross-sectional study with a questionnaire divided into 3 sections Section 1-Demographic data and basic questions related to the aim of the study.

Section 2- Cornell Musculoskeletal disorder questionnaire, Section 3- Perceived Stress Test.

**Results:** Wrong posture, existing physical illness, lack of exercise and increased levels of psychological stress increase the prevalence of MSD's

**Application:** This study could be used to implement better treatment options to dentists suffering from MSD's considering both physical and mental factors.

**Conclusion:** It is very important to increase the awareness of ergonomics and the influence of psychological stress in practicing dentists so that they can avoid these disorders and provide a high quality treatment to their patients without any hindrance in their professional careers due to these disorders.

**Key words:** Ergonomics, Psychological stress, musculoskeletal disorders.



## **Contraception Use: Does Socio Economic Factors Matter in Maharashtra, India? An Investigation through NFHS-4 Data**

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**Introduction:** Reproductive health care is the collection of preventive methods, techniques and indicators that contribute towards healthy and reproductive well-being. Under reproductive health and rights, it is the right of every women and men to be informed about the contraceptive choices and to have access to quality family planning techniques.

**Objective:** The research paper examines the use of modern limiting, spacing and traditional methods of contraceptives among tribal and non-tribal women of Maharashtra. It also attempts to study the factors associated with the current use of modern methods of contraceptives in Maharashtra. The reason behind lack of contraceptive usage due to barriers, opposition to use, knowledge, fear and complications related to contraceptive usage is also studied.

**Methods:** The NFHS IV (2015-16) data published by Ministry of Health and Family Welfare (MoHFW) is used for the study. The data on family planning is accessed from woman questionnaire of the survey with a sample size of 29,460 women of Maharashtra. The data is analyzed using SPSS by applying binary logistic regression method.

**Results:** The use of modern contraceptives in association with age, education, wealth index among the young couples of both tribal and non-tribal married women is found. Unmet need for High Priority Districts (HPS's) and a district wise trend for modern use of contraceptives among tribal and non-tribal women is analyzed.

**Conclusion:** The finding of research study will contribute to identify the various socio cultural, demographic and community-based interventions which can significantly improve the contraceptive usage among married couples of Maharashtra.

**Keywords:** Contraceptives, tribe, socio-economic, Maharashtra, NFHS-4.







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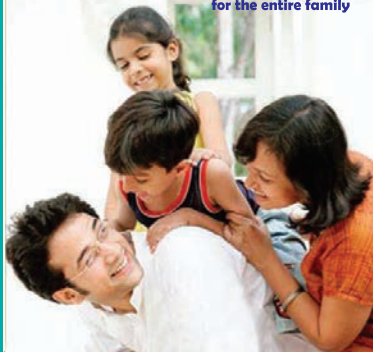
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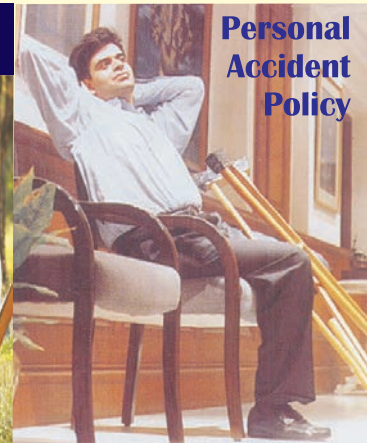
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## **Enhancing Service Experience through Excellence in Patient Relationship (EPR) Training Programs**

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**Introduction:** Healthcare is a fundamental necessity for every human being, yet the quality of care and treatment offered to patients is abysmally low. The situation is an outcome of hospitals failing to train their workforce on areas of service delivery to patients. This gap in patient service augments issues such as patient dissatisfaction, law suits against hospitals, reputation disaster and several others. This paper discusses the need for Excellence in Patient Relationship (EPR) program as a unique training intervention addressing patient care and relationship management. The program involves key personnel such as doctors, nurses, administrators who are responsible for addressing patient needs and ensuring service satisfaction.

**Objectives:** Highlighting the need for training the hospital personnel to ensure patient service satisfaction; Promoting training in healthcare institutions to facilitate service excellence and foster relationship with patients.

**Novelty/Originality :** The study draws its inspiration from a first-hand experience of conducting Excellence in Patient Relationship (EPR) programs across medical institutions and hospitals pan India, comprising of doctors, nurses and other key hospital workforce.

**Application (Benefit to the community/society):** The paper discusses the need to promote service excellence as a culture by healthcare professionals, thereby enhancing patient experience; Enrichment of healthcare services through training will positively impact the healthcare climate in the community, thereby benefiting the society at large. .

**Conclusion:** Healthcare service providers need to be trained not only on technical skills but also on behavioral areas that govern the quality of services being provided to patients.

**Keywords:** Healthcare, training, service excellence.



# ABSTRACTS

## **A study on Remote Patient Monitoring**

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**Introduction:** With the beginning of new era led by digital technology, we are launching into fourth revolution where machine learning, deep learning, artificial intelligence and internet of things would be common terms and part of our everyday life.

**Objective:** The objective of this paper is to study the current scenario of RPM, its effects on Healthcare and the gaps in Indian health system that demands the RPM.

**Novelty:** Though there is plethora of research papers exists regarding RPM globally but there is lack of research in India specific data. Hence, with this paper we have tried to establish a link between data collected outside India and existing gaps within Indian healthcare system in order to understand the potential benefits of RPM in Indian setting.

**Methodology:** The study is a purely descriptive study. Search was conducted in Google scholar, pub med and published journals. Citations were screened for relevance against predetermined criterion. Study designs included both randomized controlled trials (RCTs), observational studies, and systematic reviews. Protocols, nonsystematic reviews, commentaries and letters or editorials were excluded.

**Results and discussion:** Although substantial diversity in health-related outcomes were noted, studies predominantly reported positive findings.

**Application:** This review will help decision makers develop a better understanding demonstrating the utility of RPM in various patient populations.

**Conclusion:** It is well justified that RPM should be implemented on a larger scale in India and is a win-win solution for the typical problems posed by the Indian Healthcare system

**Keywords:** Remote Patient Monitoring, Patient driven care, Indian Healthcare System.





## **Right of bodily privacy of women: the constitutional dilemma**

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**Introduction:** Do women have real autonomy over their bodies? Can they exercise complete and absolute choice as to abortions? Is it the autonomy that an individual possesses over his body? Or is it the autonomy guaranteed under the Constitutional right of privacy? Right over one's own body has been accepted as a fundamental right. An article from the World Health Organization calls safe, legal abortion a "fundamental right of women, irrespective of where they live" and unsafe abortion a "silent pandemic". In this context, the Medical Termination of Pregnancy Act, 1971 raises important questions of Constitutional importance. An easy analogy can be drawn from a recent statement made by Justice Y.V. Chandrachud of the Supreme Court of India where he stated that "when a man is lynched for the food that he eats, it is the failure of the Constitution." Similarly, when an archaic law decides the fate of a woman's pregnancy and her adjacent choice, it is indeed the failure of the Constitution.

**Purpose:** In this paper, the authors attempt is to scrutinize the MTP act as to its Constitutional validity and also from the Human Rights perspective.

**Type of study:** It would be a doctrinal study and would include critically reviewing the history of abortion law and policy in India.

**Keywords:** abortion, privacy, MTP.



# ABSTRACTS

## **Study on public awareness of mHealth apps introduced by the Government of India**

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**Introduction:** The functionality and concept of a smartphone has undergone humungous changes in the last few years. The Indian government, realizing this potential, introduced mobile applications in healthcare to the public in 2016. However there is no evidence or effort to track the awareness and usage of these applications by the public.

**Objective:** To estimate the awareness & usage of the mHealth applications among public introduced by the Government of India in 2016.

**Originality:** The studies on mHealth in India have focused merely on its potential and neither the awareness nor tracking of its usage by the population.

**Material and methods:** 6 health apps under 'National Health Portal' of India were considered. A self-administered questionnaire was prepared and sent to respondents over email. The data collection is still underway.

**Results:** Out of 103 responses recorded till date, 50.5% were unaware of the government's health apps. Among those who were aware, a meager 1.9% had used any of these apps.

**Discussion:** The trend of the results show that inadequate advertising has been done for the apps. Also the population is not motivated enough to use the apps.

**Application:** The results of this study would be forwarded to the government for necessary insight and action.

**Conclusion:** The trend indicates low awareness and negligible usage of mHealth apps given by the Government of India.

**Key words:** mHealth, mobile applications, Government of India.





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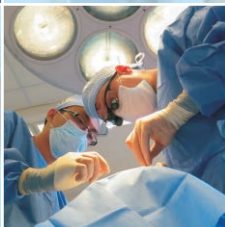
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## **Role of CSR expenditure in health care – A comparative study of select market cap ranked Indian companies**

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**Introduction:** With the enforcement of CSR Act 2013 by Government of India, the corporate sector has been mandated to spend 2% of their average net profit for the last three years on community development related activities. Indian companies have been actively spending the CSR budget on various areas which includes health and sanitation. It has been observed that major emphasis in terms of CSR is on their own areas of interest. The paper aims to investigate the pattern of CSR budget spend in the health and sanitation areas by top 300 stock market listed Indian companies in the context of the UN Sustainable Development Goals.

**Objectives:** To explore the pattern of CSR spend by the top 300 stock market listed companies in various areas; to analyze the pattern of CSR spend by health care business related companies in the area of health and sanitation. To compare and analyze CSR expenditure of health care business and non-health care business with area of spend.

**Novelty:** The paper discusses the pattern of CSR expenditure of the top ranked market cap Indian companies with special focus on health care expenditure. This study would help in understanding the preferred areas for CSR spend and also tries to link it with the Government of India's Aayushman Bharat Scheme and UN SDG's and hence will be novel in its approach.

**Methods and Materials:** For the study the data was collected from the annual reports available on the company websites for the financial years 2015, 2016, 2017 and 2018 as also from online financial platforms like Bloomberg.

# ABSTRACTS

**Results:** The preliminary findings of the data suggest that most of the pharma and health care companies CSR spend is focused on health and related areas.

**Discussion:** From the results it has been observed that the major emphasis of pharmaceutical companies have been spending the CSR budget in the health care and allied areas. The paper discusses the CSR spend and also recommends the areas for companies for utilizing the CSR budget in line with the UN SDG goals for community development.

**Conclusion:** For the betterment of the community and the nation it is pivotal that the health and sanitation facilities provided to the citizens be given the highest priority in the CSR spend. The paper discusses the CSR spend patterns followed by pharma and non-pharma companies and provides recommendations on how non-pharma also can contribute through their CSR spend in health care and sanitation for the betterment.

**Keywords:** CSR, Health Care, SDG, Pharmaceutical industry.



## **Health problems experienced by rural residents- An explorative qualitative study conducted among private medical practitioners of Sus village in a Western Indian city**

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**Introduction:** Health is evidently not the mere absence of disease. It is a vital basis for defining a person's sense of well-being. Prevention and promotion of health justifies the need to gauge the health problems of the population. Especially, of rural residents as they have limited access to health care facilities. The objective of the study was to identify pattern of diseases in order to plan and build correct health interventions.

**Novelty/originality:** The research would contribute in context specific health care services interventions.

**Methods:** Explorative qualitative design, in depth interviews with 10 private medical doctors practicing in the Sus village. An open ended guideline was administered

**Results:** Non communicable diseases; stress induced hypertension in the young age group between 35-40 years, type 2 diabetes among elderly, anemia in adolescents and pregnant women. Vector borne diseases of Malaria and Dengue in all age groups. Cold cough and fever because of viral infections among children. The high prevalence of malnutrition and worm infestations among children. The study revealed possible underneath reasons including high risk behavior and lifestyle, water and sanitation issues, lack of knowledge and awareness for the disease pattern in the community.

**Conclusion:** Comprehensive health education sessions for different age groups, organizations of screening camps for hypertension and diabetes for early detection of cases, target oriented interventions to prevent and control diseases and robust collaboration with government health facilities would improve the scenario.

**Application:** The findings could be helpful to build large surveys on similar themes the findings of which could be generalized to larger rural community.

**Key words:** Health Problems, Rural population, Health facility.



# ABSTRACTS

## **A study on the job satisfaction among nurses in selected hospital**

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**Introduction:** In any organization Human resource is considered to be the most valuable asset. Nursing staff plays a major role and occupies a large proportion of the human resource in hospital. To a large extent the success of patient care and the reputation of the hospital depend on the efficiency of the nursing staff and their performance is influenced by job satisfaction.

**Aims and objectives:** To find the factors which are determining job satisfaction among nurses; to assess the level of job satisfaction among the nurses of selected hospital; to suggest measures to implement job satisfaction among nurses.

**Methodology:** In this study, data was collected by giving pre designed questionnaire to the Nursing staff; a structured open and closed ended questioner was prepared and given to the nursing staff. The questioner was structured with the help of literature sources. The questionnaire was constructed with a 2 point and 5 point rating scale system.

**Result:** The data was interpreted by using pie chart, graphs and tables showing the number of respondents and its percentage.

**Conclusion:** In hospital, each department is running in a very compels work place and the work areas are mostly of emergency nature. This places a heavy burden of both functional and moral responsibility on the part of nursing staff. The quality of patient care can be achieved when the nurses are motivated to perform better and have a positive outlook towards their job or is satisfied with their job.

**Keywords:** human resource, job satisfaction, hospital.





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## **Socio-Demographic Determinants of Anemia among Women: A Study about Empowered Action Group (EAG) States of India**

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**Introduction:** Anemia is found amongst 54-59 million pregnant women globally. Surprisingly nearly 446- 491 millions non pregnant females are suffering from anemia. It is still one of the major public health problems in India; most common nutritional deficiency in pregnant women is identified Iron deficiency anemia (IDA) in various studies over the time. Anemia is a condition in which the number of red blood cells is insufficient to meet physiologic needs, which vary by distinguish socio-demographic factors, economic factors and pregnancy status including number of pregnancies and children ever born. Iron deficiency is emerged out as one of the most common cause of anemia globally.

**Objective:** To investigate the determinants of anemia among women and its association with socioeconomic and demographic factors in Empowered Action Group (EAG) states of India.

**Materials and methods:** In this study secondary data was used. More specifically, fourth round of national family health survey (2015-16) data was considered to fulfill the objectives of the study. Appropriate statistical techniques were applied to identify the significant socio-demographic and economic determinates of anemia among women in EAG states of India namely univariate, bivariate and multivariable logistic regression. In India, the eight states with poor indicators pertaining to social, economic, demographic and health are considered as EAG states. These states include Uttar Pradesh, Bihar, Madhya Pradesh, Rajasthan, Orissa, Uttaranchal, Jharkhand and Chhattisgarh.

## ABSTRACTS

**Results:** The preliminary analysis shows, in India 53 % women are reported with any kind of anemia. In EAG states, anemia level amongst females are reported as; Madhya Pradesh and Chhattisgarh (52.5% & 47.0%), Bihar and Jharkhand (63% & 65%), Uttar Pradesh and Uttaranchal (52.4% & 45.2), Rajasthan (46.8%) and Odisha (51%) respectively.

**Conclusion:** Among the EAG states, identified several modifiable risk factors that could be targeted to reduce anemia among women in age group (15-49), in rural areas socio-economic factors and body mass index (BMI). Focused key points include prevention and treatment of anemia during pregnancy and provision of adequate complementary diet.

**Key words:** Anemia, BMI, women, EAG states, NFHS-4.



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## **A literature review of measurement of Health Literacy in India.**

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**Introduction:** WHO defined Health literacy (HL) as 'the cognitive and social skills which determine the motivation and ability of individuals to gain access to understand and use information in ways which promote and maintain good health' There is lack of related research in Low and Middle Income Countries.

**Objective:** The study was undertaken to investigate the tools used to measure HL in Indian population.

**Novelty/Originality:** On the background of paucity of research, this review is unique in its kind and depicts latest scenario.

**Materials and methods:** Studies mentioning measurement of HL and published from 2014 to 2019 were searched in SCOPUS, PubMed and Google Scholar databases. After excluding those not meeting inclusion criteria; findings of 36 studies were analysed.

**Results and discussion:** Pre-validated HL scales were used in 13 studies; 9 of which measured only reading ability of the respondents. In other 23 studies; self-designed questionnaires were used which were developed from past literature and questionnaires measuring knowledge, attitudes, awareness and practices. 89% of studies measured HL related to specific medical conditions; 72% of which comprised of dental, mental and diabetes disorders. 88% of total studies were cross-sectional in nature and 75% were related to children and patients. Though aspects measured for HL were different, low HL was reported by all studies.

**Application:** The findings will be useful to design action plan for development of conceptual clarity amongst researchers.

**Conclusion:** Limited use of pre-validated HL measuring scales and conceptual inaccuracy is evident in studies undertaken in India. The available data lacks in representation of all sections of society. A comprehensive nationwide study undertaking uniform measurement of HL is recommended.

**Key words:** Health Literacy, India, Literacy.



## **A comparative electromyographical analysis of biceps brachii and brachioradialis during eight different types of biceps curl**

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**Introduction:** Biceps curl is one of the most traditional and highly popular weight training exercise that targets the muscles of the upper arm (Biceps Brachii muscle). There are many variations of this exercise that can be used to design a training schedule for the best result.

**Objective:** This study aimed at analyzing the muscle activation of Biceps Brachii and Brachioradialis muscles while performing different biceps curl exercises with same load.

**Novelty:** To the best of our knowledge none of the studies has analyzed the muscle activation of Biceps Brachii and Brachioradialis muscles with the selected exercises.

**Material and methods:** Ten healthy subjects ( $20.8 \pm 1.75$  years) performed 70% of 1 repetition maximum (RM) for eight different biceps curl exercises. Surface Electromyography (SEMG) was used for measuring muscle electrical activity that occurs during muscular contraction.

**Results and Discussions:** The results of the study shows that, in case of muscles activation in Biceps Brachii, except supine narrow grip Z curl (SNGZC) and prone lying biceps curl (PLBC), all the other exercises reveal significant differences with the concentrated curl (CC). No statistical difference was observed when comparing the muscle activation of Brachioradialis muscle in the eight different biceps curl exercises.

**Application:** It will help the fitness trainers to design the training schedule for both the muscles (Biceps Brachii and Brachioradialis) along with the different variations of the biceps exercises.

**Conclusion:** Concentrated curl is more effective exercise for activation of biceps muscles as compared to other exercises with same load. All the selected biceps exercises has same effect on activating the Brachioradialis Muscles.

**Keywords:** Electromyography, Muscle activation, Biceps curl, Biceps Brachii and Brachioradialis.



## **A study of accident and emergency services in multispecialty hospital: To know the major causes of delay that increases the length of patient stay**

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**Introduction:** The accident & emergency department (A&ED) provides most critical services in a multispecialty hospital but also, often faces overcrowding due to different delays.

**Objectives:** To understand the major causes of delay in the A&ED of a hospital, and to find different ways to decrease those delays.

**Originality:** This is purely an original study and plagiarism has been avoided.

**Materials & Methods:** This was a retrospective cohort study. 822 cases registered in A&ED of a private multispecialty hospital in a month, were included. Records of disposition of patients to Critical care units (ADCC), inpatient wards (ADW), discharge (DIS), death (DEA) and length of stay (LoS), were collected and analyzed statistically.

**Results:** Delays in disposition has been considered when length of stays (LoS) exceeded more than 180mins. 49.87% (n=412) of admitted cases experienced delays in disposition. Out of all delayed cases, 48.78% (n=200) were ADCC, and 46.82% (n=200) were of ADW. Exit block appeared as the major cause of delay (80.73% out of 410 cases). These causes were many times appeared to be associated/ followed with other causes.

**Discussion:** Delays to disposition of patients from A&ED was found due to Exit Block, investigation delays, radiology delay, admission delay, assessment & stabilization delay, GDA non-availability, shifting delay and Sr. Consultant delay & procedure delay. These all lead to increase in LoS of patients in A&ED. Exit Block was found to be the major cause of delay.

**Conclusion:** - Introducing, different managerial ways- (lean management, TQM, six sigma), certain setups like; more beds in the hospital indoor facility, separate radio-diagnosis and lab investigation, Accident and Emergency ICU, domiciliary services, etc. can decrease delay.

**Keywords:** Emergency, delays, cohort





***KNOWLEDGE BYTES***

### **Antibiotic resistance kills over 58,000 children in India annually**

Antibiotic-resistant infections are spreading wings in India, killing over 58,000 children every year, while uncontrolled dumping of untreated urban waste into water bodies is affecting aquatic life and environment.

With some of the highest antibiotic resistant bacteria that commonly cause infections in the community and healthcare facilities, India suffers severely, reminds Centre for Disease Dynamics Economics and Policy (CDDEP), as World Antibiotic Awareness Week 2018 ends on Sunday.

"Every year globally, almost 700,000 lives are lost. More than 58,000 children die every year in India alone, from antibiotic-resistant infections," said CDDEP.

The antibiotic resistance is the ability of disease-causing bacteria and micro-organisms to resist the antibiotics or medicine due to adaptation.

Earlier in 2017, a team of experts from India and Sweden had also flagged concerns over uncontrolled dumping of partly treated and untreated urban waste into rivers -- leading to the spread of antibiotic resistance.

According to CDDEP research, the global use of antibiotics in humans has increased by 65 per cent in 2015 since 2000, while consumption in low- and middle-income countries increased by 114 per cent. India saw the highest increase in antibiotic use by 103 per cent. This has resulted in a modern-day crisis with a shortage of effective antibiotics and a weak pipeline for novel antibiotics.

The CDDEP research showed that resistance to the broad-spectrum antibiotics is detected in more than 70 per cent of organisms causing pneumonia and sepsis. As a leading producer of critical medicines which include antibiotics, India is known as the pharmacy of the world. But the flip side of this is that the toxic effluents from these manufacturing sites wreak an even greater havoc on the Indian rivers and environment.



### Health Insurance in India

India is home to over 1.2 billion people. Though the Indian population comprises 17.74 percent of the world population, only 27% any kind of health insurance. This figure isn't only alarming; it reflects the gaping maw which is yet to be filled by the health insurance sector in India.

Making optimum utilization of technology, platforms such as health insurance plans have made it easier for insurance buyers to buy health insurance in a matter of few seconds.

Participation of foreign players was banned until recently. Oxford Economics predicts that the revenue from health insurance premiums will reach USD 3.5 billion by the year 2021. Since the year 2006, the sector has witnessed exponential growth at the rate of 12 percent per annum.

#### Factor Affecting the Growth of Health Insurance in India

Here are the factors that affect the growth of health insurance in India.

##### 1. **Rising income:-**

The Indian middle-class is growing at an unprecedented speed. From the year 2016 – 2021, it is estimated to grow by a compound annual growth rate of 7 percent.

The rising prosperity in India is acting as a catalyst and triggering a demand for quality healthcare and participation of private sector players.

##### 2. **Increased Life Expectancy:-**

With the development in the healthcare sector, the average life expectancy in India has increased. While the average life expectancy has increased, the number of people over 65 years of age is expected to rise. As reported by Oxford Economics, by the year 2021, 95 million Indians will be 65+.

##### 3. **Market Potential:-**

The growth prospects for Indian economy are higher than most developed economies. India has a gaping maw of unfulfilled needs in medical care. Because of that, there are many Indians who don't have health insurance coverage.

Despite being one of the top emerging economies, health insurance penetration in India is between 20-27 percent.

### **The Challenges in Growth of Health Insurance in India**

While there is a wide scope of growth, these growth opportunities come with their own set of challenges. Since 80 percent of Indians don't have health insurance coverage, India ranks among the countries with the highest out-of-pocket expenditure in the medical sector across the globe.

As per the World Health Organization's data, the Indian public sector spends just 1.46 percent of gross domestic product on medical care. India ranks 187 among 194 countries in the world. China, on the other hand, has made medical care one of its top priorities. China spends double the amount India does on government-funded healthcare.

### **The State of Health Care in Rural India**

As compared to urban India, the state of healthcare in rural India is much worse. In rural India, government-aided basic health care services may be available but are not enough for patients to be suitably benefitted from this facility.

There are loopholes in regulation and standardization of health clinics and hospitals. While policies have been formulated, they are weak. To make the matter worse, they aren't executed well.

Among the growing middle class (for whom medical insurance is considered to be worth it), an awfully low number of Indians understand the importance of having health insurance coverage.

### **The Potential for Growth of Health Insurance in India**

Thanks to techno-savvy and well-educated middle class, the potential for growth of health insurance in India is vast. India is going through entrepreneurial experimentation. Now, Insurance companies are moving beyond providing hospitalization coverage to offering highly comprehensive policies. These policies can revolutionize wellness and promote overall preventive care.

Additionally, the rise in the usage of smartphones is encouraging fintech companies to promote digitization of health insurance. Digitization is being promoted by initiatives to expand telehealth models, disease-specific micro-insurance plans, and new smartphone-based apps that monitor patient behaviors.

### **Innovation is the key**

As mentioned earlier, the number of uninsured individuals in India is high. The government spending on health care, as well as health insurance, is not up to the mark. That is why private players are developing innovative solutions. These solutions encourage more Indians to buy health insurance and to recognize the value of preventive health care.

Here are the innovations that are occurring regarding digital distribution as well as the creation of effective underwriting.

#### **1. Linking coverage with wellness:-**

A few health insurance providers are linking health insurance programs to apps that keep a track of physical activity. Aditya Birla's new health insurance program offers up to 30 percent reimbursement on monthly premium to the policyholders who work out on a regular basis. It is making the best use of digital technologies to enhance customer engagement.

#### **2. Family Insurance**

Employer-provided health insurance offers basic insurance coverage. One must enhance this insurance coverage by purchasing a comprehensive health insurance plan. Providing coverage for hospitalization expenses isn't a sustainable strategy for a majority of insurance providers. They want to develop a base of insurance buyers and provide insurance coverage to an entire extended family be it infants or aunts/uncles.

An extended family can include up to 50 members. By providing coverage to an entire family, insurance companies can grow their customer base.

### **In a Nutshell**

While the health insurance sector of India has scaled many milestones, it has a long way to go. Indeed, it is on the right track, but only positive perception and increased awareness about health insurance will support its journey.





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### **Central Government implements HIV & AIDS (Prevention and Control) Act, 2017.**

A crucial legislation for ensuring equal rights to persons affected by HIV and AIDS in getting treatment, admission in educational institutions and jobs has come into force.

The Ministry of Health has announced implementation of the Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) Act through a Gazette Notification issued on 10-09-2018.

The Act, which received Presidential assent on 20<sup>th</sup> April 2017, prohibits discrimination against such persons in accessing healthcare, getting jobs, renting accommodation, and in admission to public and private educational institutions.

The move comes after the Delhi High Court asked the Centre why it has not yet notified the law to prevent discrimination against HIV and AIDS patients despite the statute receiving Presidential assent in April last year.

Hearing a PIL that sought immediate notification of the legislation, a bench of Chief Justice Rajendra Menon and Justice C Hari Shankar had asked the health ministry, "You make a law and are not notifying it. Why?"

"In exercise of the powers conferred by sub-section 3 of section 1 of the Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (Prevention and Control) Act, 2017, the Central Government hereby appoints the 10<sup>th</sup> day of September, 2018, as the date on which the provisions of the said Act shall come into force," the notification read.

According to the provisions of the Act, no HIV test, medical treatment or research will be conducted on a person without his informed consent and no person shall be compelled to disclose his HIV status for obtaining employment or services, except with his informed consent, and if required by a court order.

The legislation has provisions to safeguard the property rights of HIV positive people, every HIV infected or affected person below the age of 18 years has the right to reside in a shared household and enjoy the facilities of the household.

The Act also prohibits any individual from publishing information or advocating feelings of hatred against HIV positive persons and those living with them.

The Act seeks to prevent and control the spread of HIV and AIDS and creates mechanisms for redressing the complaints of persons infected with HIV and AIDS.

Violation of the Act by publishing information about people living with HIV (PLHIV) or advocating hatred against them would attract imprisonment ranging from three months to two years or a maximum fine of Rs one lakh or both.

As per the Act, Union and State governments shall take measures to prevent the spread of HIV or AIDS, provide anti-retroviral therapy and infection management for persons with HIV or AIDS, and facilitate their access to welfare schemes especially for women and children, among others.

The Government will also issue necessary guidelines with respect to protocols for HIV and AIDS related diagnostic facilities. Anti-retroviral therapy and opportunistic infection management will also be applicable to all persons.



### **In India, 38% kids under 5 are malnourished, one in four girls is a mother before age of 20**

NGO Save the Children's End of Childhood Report 2018, released recently with data from 175 countries, shows 38.4% children below the age of five are stunted, a marginal improvement from 39% the previous year.

Two in five children below the age of five in India are stunted due to severe undernourishment, a global report has said, highlighting a stubborn problem in child health, which otherwise has shown improvement in India.

Stunted children's growth and development is impaired. Such children are vulnerable to repeated infections that can also effect brain development, which can create learning problems.

India's battle with severe acute malnutrition (SAM) has been hard and long. The World Health Organisation defines it as a very low weight for height, visible severe wasting or the presence of nutritional oedema (swelling).

According to National Family Health Survey-4, about 7.5% of country's under-five children are severely wasted, means they are underweight. The government has set up around 1,000 rehabilitation centres in its hospitals for such children as part of a string of initiatives under the National Health Mission (NHM). National Health Mission aims to improve healthcare by strengthening primary infrastructure, with special focus on improving on mother and child.

Only 7-10% SAM children require hospitalisation and most are managed within the community. "It continues to be a challenge to manage these children but most states have extremely well-utilised rehabilitation services for these children, and there are protocols in place to provide quality care to them.

The second big challenge that emerges from the report is that of adolescent pregnancy. In India, the number of births per 1,000 girls aged 15-19 is 23.3%, which means almost one in four girls is a mother before she is even 20.

It is alarming that adolescent pregnancy is still high in the country even though a girl is neither physically nor mentally prepared for it. Awareness generation is crucial if we want things to change.

The good news, however, is that compared to 2017, India's score has improved, from 754 to 768. In South Asia, four out of eight countries improved their scores. Bangladesh made the most progress in the region... mostly by getting more children into school. India's reduced rate of child marriage helped increase its score.



### **India plans to implement Charter of Patient Rights**

The charter lists right to information, informed consent, second opinion and right to choose alternate treatment options among 17 specified rights.

After having stopped short last year of making health an actionable right in the National Health Policy, the Indian health ministry is now planning to implement a “Charter of Patient Rights”.

The charter, prepared by the National Human Rights Commission, lays down the basic rights of citizens like right to Information, right to records, right to emergency care, right to informed consent, right to privacy and confidentiality, right to transparency and even a right to a second opinion. The draft charter has been uploaded on the website of the ministry of Health and Family Welfare for stakeholder comments.

Once adopted, the charter will have to be prominently displayed at all hospitals, clinics, pharmacies etc and State Governments will need to set up a grievance redressal mechanism as specified by the NHRC. Right to grievance redressal is one of the 17 rights listed.

There is a growing consensus at international level that all patients must enjoy certain basic rights. In other words, the patient is entitled to certain amount of protection to be ensured by physicians, healthcare providers and the State, which have been codified in various societies and countries in the form of Charters of Patient's Rights. However a charter still does not match up to what India had proposed in 2015 of making health a justiciable right through a National Health Rights Act. The charter in a sense takes forward the principle of self-regulation as currently practiced in the health sector and which many experts say, has not really done anything to change business malpractices in the sector.

The charter lays down: “Every patient has a right to adequate relevant information about the nature, cause of illness, provisional / confirmed diagnosis, proposed investigations and management, and possible complications to be explained at their level of understanding in language known to them. The treating physician has a duty to ensure that this information is provided in simple and intelligible language...”.



The scope of “information” extends also to billing. It also lays down that prior to any potentially hazardous treatment such as chemotherapy, patient's informed consent should be obtained.

The charter also emphasises on the need to uphold human dignity and privacy. “Female patients have the right to presence of another female person during physical examination by a male practitioner. It is the duty of the hospital management to ensure presence of such female attendants in case of female patients. The hospital management has a duty to ensure that its staff upholds the human dignity of every patient in all situations,” the charter says. Comments on the charter are required to be sent to the ministry by the end of the month.

### **World Health Organisation (WHO)-Patients' rights**

Formalized in 1948, the Universal Declaration of Human Rights recognizes “the inherent dignity” and the “equal and unalienable rights of all members of the human family”. And it is on the basis of this concept of the person, and the fundamental dignity and equality of all human beings, that the notion of patient rights was developed. In other words, what is owed to the patient as a human being, by physicians and by the state, took shape in large part thanks to this understanding of the basic rights of the person.

Patients' rights vary in different countries and in different jurisdictions, often depending upon prevailing cultural and social norms. Different models of the patient-physician relationship—which can also represent the citizen-state relationship—have been developed, and these have informed the particular rights to which patients are entitled. In North America and Europe, for instance, there are at least four models which depict this relationship: the paternalistic model, the informative model, the interpretive model, and the deliberative model. Each of these suggests different professional obligations of the physician toward the patient. For instance, in the paternalistic model, the best interests of the patient as judged by the clinical expert are valued above the provision of comprehensive medical information and decision-making power to the patient. The informative model, by contrast, sees the patient as a consumer who is in the best position to judge what is in her own interest, and thus views the doctor as chiefly a provider of information. There continues to be enormous debate about how best to conceive of this



relationship, but there is also growing international consensus that all patients have a fundamental right to privacy, to the confidentiality of their medical information, to consent to or to refuse treatment, and to be informed about relevant risk to them of medical procedures.

The Universal Declaration of Human Rights has been instrumental in enshrining the notion of human dignity in international law, providing a legal and moral grounding for improved standards of care on the basis of our basic responsibilities towards each other as members of the “human family”, and giving important guidance on critical social, legal and ethical issues. But there remains a great deal of work to be done to clarify the relationship between human rights and right to health, including patient rights.

### **UK Patients' Charter:-**

The UK Patients' Charter first published in October 2012 confers various rights under following 6 headings:-

- 1) Access - The right to access NHS services that are appropriate to the needs.
- 2) Communication and participation - Right to get information about health and the services available. The rights to be involved in decisions about care.
- 3) Confidentiality - Right for personal health information to be kept confidential, to know how it is used and how to access it.
- 4) Respect - Right to be treated as an individual and with dignity and respect.
- 5) Safety - Right to the best care and treatment possible by qualified staff in a safe and clean setting.
- 6) Feedback and complaints - Right to have a say about health care and to have any concerns or complaints dealt with in the most appropriate way.





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  - Understand the principles of assessment and primary surgical management of infected and contaminated soft tissues.
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### **India's Home Healthcare market expands rapidly**

Growing hospitalisation costs, rising elderly population and a need for personalised medical attention have fueled a rapid increase in India's home healthcare services sector, which is set to grow manifold in the coming years.

The home healthcare sector in India is burgeoning and is expected to reach \$6 billion (Rs 40,000 crore) by 2020 from a \$2 billion market opportunity in 2014. The Indian market had a significant potential though it was now at a nascent stage. The Indian market is currently estimated at over \$3 billion per annum and is growing at over 20 percent annually. Home healthcare market In India is witnessing tremendous growth due to the rise in the aging population. The market for home healthcare services in India is set to double in the coming years.

The overall homecare market is growing at a compound annual growth rate (CAGR) of 40 per cent over the past three-four years. Cost competitiveness for in-home health services has been a major driver of their demand.

Homecare as a concept is gaining ground in India and the reasons are clinical and societal... it definitely works out cheaper to the extent of 30 per cent as compared to the hospital cost as there is no infrastructure and other overheads. This apart, the cost of a family member needing to stay off from work is an additional saving. Patients end up saving 20-50 per cent cost as compared to regular hospital treatment depending upon the services taken. For instance, ICU services are 40-50 per cent cheaper than those provided in hospitals. Again, Oncology care at home would also be cheaper by 20 per cent compared to similar hospital facilities.

Homecare service providers also said improved affordability, need for a personalised care for chronic and lifestyle-based diseases, changes in the traditional family system and rise of nuclear families contributory factors in market growth. The operators are providing an array of services, but the most sought-after include COPD management, stroke rehabilitation, ICU, dentistry, oncology, baby care, attention to post transplant patients and geriatric population.

However, non-availability of comprehensive insurance coverage for these services is seen as the most important piece missing in the entire ecosystem, adding an insurance facility will be a game changer for the industry going forward.

Although home healthcare services are gaining considerable traction in India, they are currently not comprehensively covered by health insurance companies. We expect these policies to change in the coming years as these services prove to be an indispensable treatment option for many.

The organised players in home healthcare are in discussions with leading insurance providers and hoping a couple of them would take this up as a value added service for their clients.

While home healthcare services have several "clear advantages" for a section of patients over treatment in a traditional hospital, choosing in-home care for one's elderly parents or other loved ones is "not without risk.

In a developing country like India, where corruption has riddled through virtually all aspects of public services, with hardly any checks and balances even for the qualified doctors... the new field of home healthcare services is likely to attract unscrupulous people in this lucrative business.

In the US and other developed countries, more and more people have been opting for home healthcare services for elderly and debilitated patients for more than two decades. The Indian Government should lay down a "strict and transparent mechanism and licensing system" to regulate the businesses of home health services before they are allowed to operate.





### **Poor healthcare kills 16 lakh in India every year, finds Lancet Study**

Global experts have identified a new killer: poor quality healthcare. Around five million people die every year — almost a third of them in India (1.6 million) — due to inadequate healthcare, said a new analysis published in The Lancet. There is an “epidemic of poor quality care”, said the study compiled by 30 public health experts from across the world and supported by the Gates Foundation and Harvard T H Chan School of Public Health. As countries work towards the WHO's diktat of providing free healthcare access to all, the Lancet Global Health report aimed to point out that “improved access to care is not sufficient to improve health”.

The past 20 years have been called a golden age for global health, said the report while noting the major increase in domestic health spending and donor funding in low and middle income countries. The number of deaths due to heart attacks, stroke, diabetes, neonatal mortality, and injuries have either increased or stagnated. It is becoming clear that access to health care is not enough, and that good quality of care is needed to improve outcomes. “India learned this with Janani Suraksha Yojana, a cash incentive programme for facility births, which massively increased facility delivery but did not measurably reduce maternal or newborn mortality,” said the analysis that included India's Public Health Foundation of India. At present, 130 women die during childbirth for every 1,00,000 live births in India.

The Lancet study noted that only 40% of the items on WHO's safe childbirth checklist are followed in UP. Diagnostic accuracy for childhood pneumonia in primary healthcare settings in India hovers between 8 and 20% and mammogram coverage is 1% in India. Healthcare has grown in the last few decades, but it has not translated into better healthcare. One explanation could be that the growth has occurred mainly in private sector that most of the population cannot access. “Quality care should not be a privilege for a lucky few, in a few facilities, in a few countries. Health systems must effectively protect, treat and respect all people, especially the vulnerable,” noted the study.





### **Role of Evidence-Based Medicine in improving quality of healthcare**

Improvement of health care quality is an important deliverable in all healthcare organizations in the country today as they face pressures of keeping up with an increasingly digital ecosystem, amongst other key pressing concerns of the financial health of the organization, defining cost-efficient workflows and enhancing the patient experience.

According to a study published in the BMJ, it has been observed that if the medical error was a disease, it would be the third largest killer in the US. There hasn't been an equivalent study for India, but a study conducted in 2013 by Harvard University estimates that 5.2 million injuries occur across India each year (out of the 43 million globally) due to medical errors and adverse events.

In this light, it becomes pertinent to avoid preventable deaths – to the extent that is possible using available clinical tools. One of the ways of refining healthcare quality and reducing medical errors within healthcare organizations is adapting an Evidence-Based Medicine (EBM) centric approach.

Evidence-based medicine (EBM) is the conscientious, prudent and reasonable utilization of the best evidence in reaching an assessment of the best care to be provided to patients. EBM integrates clinical experience and patient values with the best available research data. It advocates the use of high-quality clinical research in clinical decision making.

Experienced healthcare practitioners use individual clinical expertise, patient dialogue, and the best available external evidence, and none of these elements alone are enough. Without current best evidence, practice risks becoming rapidly out of date, denying patients access to new treatments and management techniques.

In India, shared decision making isn't the norm – integrating research evidence and incorporating patient inputs holistically is still not widely prevalent. Supplementing physician experience with

evidence from high quality randomized controlled trials and observational studies, clinical expertise and the needs and requirements of patients would take time to implement in India – otherwise, it would risk being a concept restricted to the academic discussions instead of its point-of-care execution.

The usage of a clinical decision support tool (CDSS) to practice EBM is widely documented. CDSS tools have been recognized for their potential to reduce medical errors and increase health care quality and efficiency. CDSS is a tool/aid to supplement clinical decision making - in which the characteristics of an individual patient are matched to a computerized clinical knowledge base and patient-specific assessments or recommendations are then presented to the clinician or the patient for a decision.

A clinical decision support tool can help a clinician to have access to the latest relevant information when making diagnostic and treatment decisions. CDSS tools such as BMJ Best Practice are structured around the clinical workflow and updated daily, using the latest evidence-based research, guidelines and expert opinion to offer step-by-step guidance on diagnosis, prognosis, treatment and prevention. Incorporation of a CDSS tool within the hospital workflow can help healthcare organizations in India to deliver better quality healthcare by reducing clinical errors, enhancing clinical productivity, and building treatment standardization.

In a country like India, the adoption of CDSSs is likely to run into implementation barriers such as discrepancy between real and ideal clinical workflows, continuous demands for an easy to use point of care tool developed in meaningful healthcare technology but is likely to see widespread adoption with the current batch of new physicians, with their familiarity with advanced technology.

Though CDSS implementation is not a panacea for all the ills that plague the Indian healthcare system, but a meaningful and thoughtful implementation will go a long way in reducing the variations in care exist.



### **Suicide Rates Falling Globally, but is it the same in India?**

The rate of deaths from suicide worldwide has decreased by almost a third since 1990, according to a study published recently, which also found that over 44.2 percent of those who took their own lives in 2016 were from India and China. The study published by The BMJ report journal found that total number of deaths from suicide increased by 6.7 per cent globally between 1990 and 2016 to 817,000 deaths in 2016.

However, when adjusted for age, the global mortality rate from suicide decreased by almost 33 percent worldwide over the same period. Researchers from University of Washington in the US show that men had higher mortality rates from suicide than women, and that higher rates tended to be linked to higher levels of social and economic deprivation.

The research also showed that suicide trends vary substantially across countries and between groups, reflecting a complex interplay of factors that warrant further investigation. Suicide is a global public health concern, with around 800,000 deaths reported annually. The World Health Organisation aims to reduce suicide mortality by one third between 2015 and 2030.

Identifying those most at risk is therefore crucial for national prevention efforts, researcher said.

Suicide was the leading cause of age standardised years of life lost in the high income Asia Pacific region and was among the top 10 leading causes of death across Eastern Europe, central Europe, high income Asia Pacific, Australasia, and high income North America.

The analysis of data from the 2016 Global Burden of Disease Study also found that the worldwide rate of suicide death was higher among men (15.6 deaths per 100 000) than women (7 deaths per 100 000).

However, that wasn't true for most countries with what the researchers called a "low sociodemographic index" - a measure of fertility, income and education. In those nations, women had higher suicide rates than men, according to the study.

However, the rate of decrease was lower for men (24 percent) than for women (49 percent). Women also experienced higher rates than men in most countries with a low sociodemographic index.

Suicide continues to be an important cause of mortality in most countries worldwide, but it is promising that both the global age standardised mortality rate and years of life lost rate from suicide have decreased by a third between 1990 and 2016, researchers said.

Whether this decline is due to suicide prevention activities, or whether it reflects general improvements to population health, warrants further research, study said.

The World Health Organization's goal is to reduce suicide deaths by one-third between 2015 and 2030, so identifying people at greatest risk is crucial for prevention efforts.

The researchers noted that the study had a number of limitations, including under-reporting or misclassification of cause of death in some countries, which means that it could still be underestimating the actual number of suicide deaths worldwide.

The results could help governments, international agencies, donors, civic organizations, physicians, and the public identify the places and groups at highest risk of suicide, and to determine priorities for interventions.



# ***WELLNESS QUOTES***

# WELLNESS QUOTES

## 1. Conveying how you FEEL will help you HEAL:

Talk about your feelings can help you stay in good mental health and deal with times when you feel troubled.



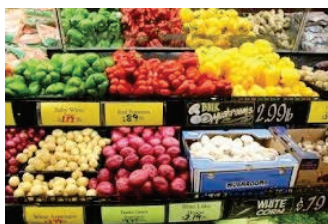
## 2. Health Benefits of Turmeric:

Use natural raw turmeric powder in food preparations / with milk / water in the morning to improve your immunity and reduce the risk for inflammation induced diseases such as obesity and certain types of cancers.



## 3. Minimum Eat 5 a day:

Eating 5 portions of differently coloured vegetables and fruits (yellow, green, orange, red and beet colour) reduces the risk of mortality from chronic diseases.





## WELLNESS QUOTES

**4. A multi-colored fruit (5 varieties) or vegetable salad (5 types of vegetables or a few types of vegetables with sprouts excluding potatoes) a day could reduce the risk for a majority of the diseases and provide health and wellness.**



**5. Having a positive relationship with oneself allows one to mitigate stress better:**  
So 'Say at least one positive thing to yourself everyday'



**6. Eating a variety of fruits and vegetables provides a variety of micro nutrients such as vitamin A, C, beta carotene, calcium, folic acid, and B-Vitamins. Regular consumption of fruits and vegetables are important to prevent diseases and preserve health.**

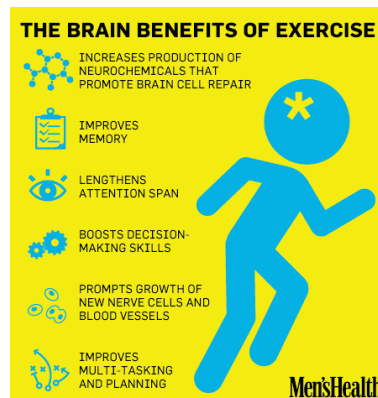


# WELLNESS QUOTES

**7. Being Mindful helps in reducing stress, anxiety and depression:**  
Meditation is one way of being mindful



**8. Exercise to feel mentally better:**  
Good physical health is related to better mental health.



**9. Eat Planet Healthy Diet for sustainable health:**

The planetary health diet is a global reference diet for adults that is symbolically represented as below:



## WELLNESS QUOTES

### 10. Will Strength Training make you look Masculine?

If it is not your intention to bulk up from strength training you won't. Putting on muscle is a long hard slow process. Your strength-training regime coupled with quality food will determine how much you will bulk up. To bulk up you also require more food. Women don't produce enough of the hormone testosterone to allow for muscular growth, as large as men. So strength training is not taboo for women ! Further, strength training has its own inherent advantages such as – increasing bone density which prevents Osteoporosis (so important, especially in post menopausal women).



### 11. Fitness isn't a Punishment It's a Blessing Nutrition,

isn't Restrictive, It's a Healing. Health isn't a one size Fits all things and may not look the same for everyone but it is something worth fighting for.



### 12. Food Swaps: Make it Heart Healthy:

Nuts are healthy snacks if consumed in smaller amounts (5-10 nuts a day). While nuts are good appetite regulators, the use of nuts ensures the supply of essential nutrients including selenium, zinc, manganese, copper, calcium, iron, vitamin E, folic acid and healthy fatty acids. Research evidence indicates that regular use of nuts such as raw almonds, Brazil nuts, or walnuts are good for heart and brain health. Swap fried and salted nuts with roasted/ baked and unsalted nuts.



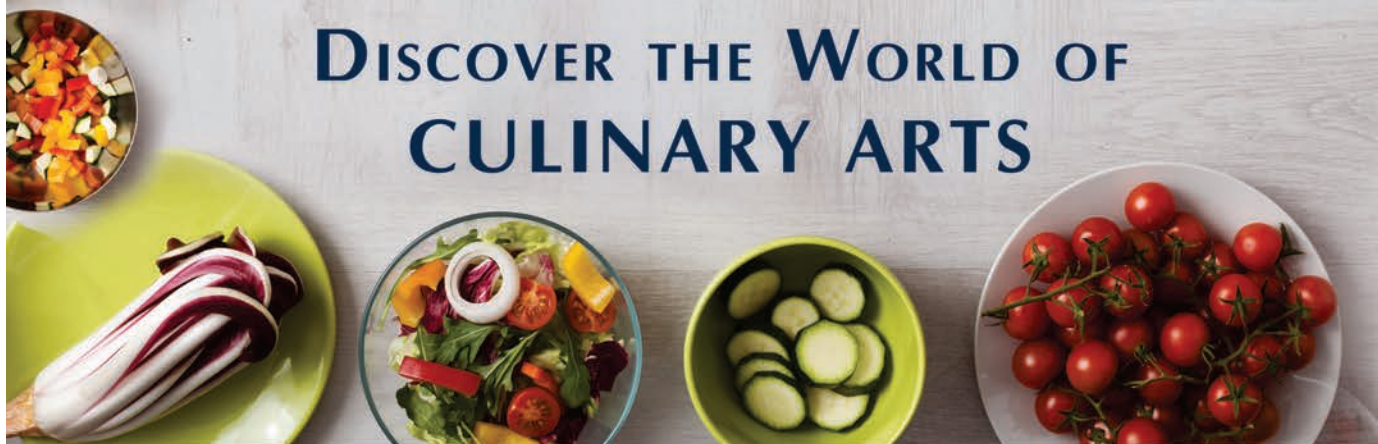




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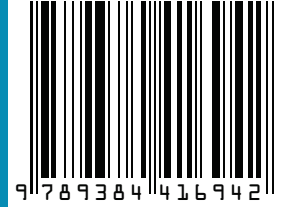
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