Greetings from IIHMR Delhi!!

We are happy to inform you that ‘Synapse’ is back to its reader in the form of monthly health e-newsletter which will broadly give insights into hospital and health care, recent researches, publications, reflections, events at IIHMR Delhi and quick facts pertaining to various health issues. We are re-launching the 62nd issue of Synapse for the month of November 2015.

SHUBH DIWALI

SYNAPSE TEAM
UN WARNS INDIA OVER ITS HIGH INFANT MORTALITY RATE

UN issued a dire warning to India over its high IMR and MMR. According to UNICEF - if current trends continue, by 2030 only five countries (India, Pakistan, Nigeria, Republic of Congo and Angola) will contribute half of all under 5 years deaths; one in every 21 children born in India is dying before 5 years of age, India recorded with highest number of under-five years deaths in 2015; the U5MR (under 5 mortality rate) in India is 7 times higher than in higher income countries; 20% of the global under 5 years deaths occur in India. Infectious diseases such as diarrhea (9% of 1.2 million deaths) and pneumonia (15% of 1.2 million deaths) are the main killers of children below 5 years. UNICEF says 70% of global decline in U5MR is attributable to tackling key infectious diseases. Read more

HOW ARTIFICIAL INTELLIGENCE CAN CHANGE INDIAN HEALTHCARE SECTOR

Ahmedabad-based ezDI, an informatics and data analytics company, has signed a memorandum of understanding (MoU) with Indian Institute of Technology Patna's computer science department recently, to conduct research in applications of artificial intelligence, which helps in diagnosing and enhancing the sensitivity to pico nano gram levels, natural language processing and machine learning that can enhance healthcare and diagnostics. Imagine if we don't have to go through rigorous diagnostic test and with the help of artificial intelligence doctors have broaden the scope of diagnostics, they can know prevalence of diseases and predict the next probable time of outbreak. Above mentioned are some of the possibilities that researchers are exploring by introducing artificial intelligence to the field. The end result would not only help doctors but also patients and medical fraternity at large. Read more

WORLD WIDE FUND(WWF) FOR NATURE INDIA PARTNERS APOLLO HOSPITALS OFFERING HEALTHCARE FOR FOREST GUARDS

Forest guards play an indispensable role in protecting the forest habitats and species. In case of any severe mishaps on the job, they patrol vast swathes with bare minimum personal protection and hardly any access to emergency medical facilities. To address such conditions, WWF India and Apollo Hospitals have announced a one-year partnership to offer healthcare benefits to forest guards. The partnership will entail the Chennai-based hospital chain providing treatment and recovery support for Frontline staff in case of a severe medical emergency, like attack from wild animals, fall from elevated areas, burns, sharp weapons injury; while on field. Read more
INDIA EMERGING AS MAJOR DESTINATION FOR QUALITY HEALTHCARE

Commerce secretary Rita Teaotia recently said, Government is focusing on several areas including quality standards and easy visa processes to make India a global destination for healthcare services. The country is emerging as a major destination for quality and affordable healthcare sector. Delegates from 65 countries participated in the three-day event in FICCI and witnessed the news. The market size of India's healthcare sector is expected to increase to $160 billion by 2017 from around $79 billion currently. Growing population and increasing income have triggered the demand for quality healthcare services. The cost of treatment in India is also very low compared to western countries. India is a platform which provides allopathy, ayurveda, yoga and naturopathy. About 1.27 million medical tourists are visiting India annually from countries including the US, the UK, Sri Lanka, Bangladesh and China. Facility of electronic-tourist visas have been extended by India to as many as 130 countries. To facilitate medical tourism, Fiscal laws are required to be relaxed for genuine foreign patients, allowing them to transfer money to India in case of additional requirements.

NEW TEST CAN DETERMINE DIABETES MELLITUS RISK IN WOMEN AFTER PREGNANCY

A “point system” test method has been created by the researchers of Institute of Diabetes Research (IDF) in Helmholtz Zentrum Munchen, Germany which enables them to calculate the risk of a woman developing type 2 diabetes post-pregnancy. Body mass index (BMI), genetic predisposition, whether the mother breastfed her baby and whether her gestational diabetes had to be treated with insulin play a role in the calculation.

36 YEARS ON, CHINA LIFTS 1-CHILD POLICY

China introduced the one-child policy in 1979 as a temporary measure to curb then surging population. The restrictions forced them to pay fine, lost jobs to abort their babies or to be sterilized. This led to in-balanced sex ratio as per strong preference for boys and aborting female fetuses. This lead to declining in fertility rates. After years of strict enforcement, China’s population is now aging rapidly, workforce is shrinking.

POISONING IN POLAND ILLUSTRATE GLOBAL CHALLENGE OF SYNTHETIC DRUGS

New psychoactive substances which resembles to effects of marijuana, cocaine, LSD and other illicit substances in 2010. Marian zembala health minister of Poland said Silesian poisonings were an inadvertent consequence to the country’s drug law. A recent analysis by the European drugs emergencies network found that only 9% of all drug related emergencies in 10 european countries in 2014 involved new psychoactive substances, a figure that officials expect to rise steeply in 2015. Poland being first European country to start systematically addressing the problem.
HEART DISEASE GENE 'FOUND IN WOMEN'

Scientists have identified a gene that puts women at higher risk of heart disease, an early study suggests. In the study, published in the journal, Circulation: Cardiovascular Genetics, researchers from University College London pooled data from five European research projects, involving nearly 4,000 men and women. Comparing their genes, the health of their blood vessels and the thickness of key arteries, scientists pinpointed a version of a gene that was linked to a higher risk of heart attacks, strokes and diseased blood vessels in women. Read more

DIAMONDS CAN HELP SPOT CANCERS AT EARLY STAGE

Researchers have found a way to use diamonds to act as beacons in magnetic resonance imaging (MRI) scans and identify cancerous tumours before they become life-threatening. Their findings revealed how a synthetic version of the precious gem can light up early-stage cancers in MRI scans. The researchers turned their attention to hyperpolarising nano-diamonds, a process of aligning atoms inside a diamond so they create a signal detectable by an MRI scanner. Read more

SITTING POSTURES LEADING TO MORE SPINE PROBLEMS

A survey of 1,300 people with spine-related problems across Mumbai, Pune and Delhi showed that the number of patients with desk jobs was four times the number of those with field jobs. WHO's Global Burden of Diseases study 2010 said lower back pain arising from ergonomic exposures at work is an important cause of disability. It said lower back pain was emerging as a leading cause of absenteeism at workplace and had resulted in 21.7 million disability-adjusted life years in 2010. Experts say patients who suffer pain for more than six weeks should go to a doctor, preferably a specialist, for detailed investigation. Read more

DRUG FROM BANANA SUBSTANCE MAY HELP FIGHT AIDS

A substance originally found in bananas and carefully edited by scientists could lead to drugs that fight off a wide range of viruses, including those that cause AIDS, Hepatitis C and influenza, new research suggests. The new research focused on a protein called banana lectin, or BanLec, that "reads" the sugars on the outside of both viruses and cells. Five years ago, scientists showed that the banana protein could keep the virus that causes AIDS from getting into cells - but it also caused side effects that limited its potential use. This new research has created a novel form of BanLec that still fights viruses in mice, but does not have a property that causes irritation and unwanted inflammation, the scientists said. Read more
UPCOMING CONFERENCES

1) **AIIMS ISHWMCON-International Conference 2015**
   - Date: 14-15 November, 2015
   - Theme: Hospital Waste Management and Infection Control
   - Venue: Jawahar Lal Auditorium, AIIMS, Delhi

2) **2nd National Conference of Family Medicine and Primary Care 2015**
   - Date: 19-20 November, 2015
   - Theme: Healthcare is Primary
   - Venue: India Habitat Centre, Delhi

3) **2nd National Conference of Family Medicine and Primary Care 2015**
   - Date: 21-22 November, 2015
   - Theme: Youth for Universal Health Coverage
   - Venue: India Habitat Centre, Delhi

REFLECTIONS

Mr. Jay Sultan is the Principal Strategy Advisor at Edifecs, responsible for subject matter expertise and thought leadership with an experience-based director to foster innovations in Healthcare Industry. He is an internationally recognized expert in payment reform. He began work implementing episodes for payment over 15 years ago and has authored two patents in payment bundling.

Prior to Edifecs, he spent 5 years at TriZetto, where he met with leadership at over 120 health plans and 100 provider organizations about payment reform and clinical transformation topics.

Mr. Jay’s expertise - Payment Bundling ~ Quality of Care and Efficiency Measurement ~ Hospital & Payor Consulting ~ Pay for Performance ~ IT Background ~ Statistics & Business Intelligence ~ Predictive Modeling ~ ROI Focus ~ Budgeting ~ Data Management ~ Programmer ~ Project Management ~ Data Modeling ~ Leadership ~ Process Improvement ~ Coaching ~ ROI Focus ~ Strategic Consulting ~ Statistical Training.
NATIONAL VECTOR BORNE DISEASE CONTROL PROGRAMME

Launched in 2003-04 by merging National anti-malaria control programme, National Filaria Control Programme and Kala Azar Control programmes Japanese B Encephalitis and Dengue/DHF have also been included in this Program.

List of Vector Borne Diseases Control Programme Legislations:
1) National Anti-Malaria programme
2) Kala-Azar Control Programme
3) National Filaria Control Programme
4) Japanese Encephalitis Control Programme
5) Dengue and Dengue Hemorrhagic fever

1) NATIONAL ANTI-MALARIA PROGRAMME

Malaria is one of the serious public health problems in India. At the time of independence, malaria was contributing 75 million cases with 0.8 million deaths every year prior to the launching of National Malaria Control Programme in 1953. A countrywide comprehensive programme to control malaria was recommended in 1946 by the Bhore committee report that was endorsed by the Planning Commission in 1951. The national programme against malaria has a long history since that time. In April 1953, Govt. of India launched a National Malaria Control Programme (NMCP).

4) KALA-AZAR CONTROL PROGRAMME

Kala-azar or visceral leishmaniasis (VL) is a chronic disease caused by an intracellular protozoan (Leishmania species) and transmitted to man by bite of female phlebotomus sand fly. Currently, it is a main problem in Bihar, Jharkhand, West Bengal and some parts of Uttar Pradesh. In view of the growing problem planned control measures were initiated to control kala-azar.

5) NATIONAL FILARIA CONTROL PROGRAMME

Bancrftian filariasis caused by Wuchereriabancrofti, which is transmitted to man by the bites of infected mosquitoes - Culex, Anopheles, Mansonia and Aedes. Lymphatiafilariaria is prevalent in 18 states and union territories. Bancrftianfilariasis is widely distributed while brugianfilariasis caused by Brugiamalayi is restricted to 6 states - UP, Bihar, Andhra Pradesh, Orissa, Tamil Nadu, Kerala, and Gujarat. The National Filaria Control Programme was launched in 1955. The activities were mainly confined to urban areas. However, the programme has been extended to rural areas since 1994.

6) JAPANESE ENCEPHALITIS CONTROL PROGRAMME

Japanese encephalitis (JE) is a zoonotic disease and caused by an arbovirus, group B (Flavivirus) and transmitted by Culex mosquitoes. This disease has been reported from 26 states and UTs since 1978, only 15 states are reporting JE regularly. The case fatality in India is 35% which can be reduced by early detection, immediate referral to hospital and proper medical and nursing care. The total population at risk is estimated 160 million. The most disturbing feature of JE has been the regular occurrence of outbreak in different parts of the country.
7) **DENGUE AND DENGUE HEMORRHAGIC FEVER**

One of the most important resurgent tropical infectious disease is dengue. Dengue Fever and Dengue Hemorrhagic Fever (DHF) are acute fevers caused by four antigenically related but distinct dengue virus serotypes (DEN 1,2,3 and 4) transmitted by the infected mosquitoes, Aedes aegypti. Dengue outbreaks have been reported from urban areas from all states. All the four serotypes of dengue virus (1,2,3 and 4) exist in India. The Vector Aedes aegypti breed in peridomestic fresh water collections and is found in both urban and rural areas. Read more

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**MIND GAMES**

a) The box pictured here has been folded together from one of the four choices given. Which one?

![Box choices](image)

b) Let’s exercise our occipital Lobes (visual interpretation and rotation). Pick the piece that’s missing from the diagram on the left.

![Diagram](image)

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Answers: a) C & D  b) C

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**NOTE:**

The newsletter is open for inclusion of any information or advertisement; however selection of information will be governed by the SYNAPSE Team, IIHMR, New Delhi

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