RNI No.: UPENG/2014/59232

A COMPLETE HEALTH JOURNAL

Double Helical

DOUBLE HELICAL

December 2017

VOL IV, Issue I, Rs. 100

Also available on
www.doublehelical.com
www.doublehelical.in

Exclusive Story
National Eligibility –cum– Entrance Test (NEET) by Dr Prof. Raj Bahadur

Dr Vijay Aggarwal
Why is the society angry with medical professionals?

Dr. Neelam Mohan
Gastro-Esophageal Reflux (GER)

SHOCKED MEDICAL PRACTICES

EXOTICA
creating space for life

Aapki khushiyon ke humsafar

Member of CREDAI

luxury beyond excellence

EXOTICA fresco™

homes close to nature

2/3/4 BR Homes • Sec. 137 Expressway, Noida

OUR AMENITIES

- Located in Lush Greens of sector-137 Expressway Noida
- Two side open project with Splendid View
- Beautiful landscaped central garden
- Grand entrance with water feature
- High end clubhouse equipped with all modern amenities
- Most modern security system

Corporate Office: H-63, Sector-63 Noida-201301 I Ph: 0120-491-5555

www.exoticahousing.in • info@exoticahousing.in

CALL: 8010-137-137 • SMS: EXO to 53030

All specifications, design, layout, condition are only indicative and any of these can be changed at the discretion of the builder. These are purely conceptual and constitute no legal offering. 1 sq.mt. = 10.764 sq. ft. *Terms & Conditions Apply.

Follow us on :

DOUBLE HELICAL

A COMPLETE HEALTH MAGAZINE

Volume IV Issue I
December- 2017

http://Facebook.com/doublehelical1
http://twitter.com/doublehelical
Advertisements & Marketing
Gautam Gaurav, Abhinav Kumar
Email:sales@doublehelical.com

Double Helical is owned, printed and published monthly. It is printed at Polykam offset, Naraina Industrial Area Phase 1, New Delhi-110028, and published from G-1, Antriksh Green, Kaushambi, Ghaziabad-201 010.
Tel: 0120-4219575, 9953604965.
Contact us : dhelical@gmail.com
Email: doublehelicaldesign@gmail.com, editor@doublehelical.com
Website: www.doublehelical.com, www.doublehelical.in

Contents

Medical treatment and its impact of health and life

Dear readers,

Wish you very happy New Year 2018 and thank you for your continuous support to Double Helical in the dissemination of knowledge and awareness about issues confronting the health and well-being of people and the challenges before the healthcare sector.

Double must appreciates your unstinted patronage, we have not only been able to regularly update you about the latest health news and expert views, but also fulfil our avowed commitment to honour and award the extraordinary contribution of the medical professionals in wiping the tears of the suffering humanity with their remarkable expertise and ceaseless research and development efforts..

Our cover story in this year end month is on Shocked Medical Practices. Today expectations from medical treatment had reached a scale, where death is considered to be the result of a mistake. While this may be true some of the time, in most cases it is not. Medical treatment and its impact of health and life, is a complex interaction of many factors, which cannot be attributable to one factor alone. We must revisit the time when doctors were revered and literally placed next to God!. From that time till now there have been many changes in the understanding of illnesses, medical practices, technology and thereby expectations of the medical profession.

As a matter of fact, intentionally no any doctor can show his/her negligence while treating his/her patients. But sometimes some mishaps occur in the course of medical treatment which does not call for any harsh punishment. It is essential to note that the protection of patient's right should not be at the cost of professional integrity and autonomy. There is definitely a need for striking a delicate balance……

Medical negligence is an oft-quoted but much-abused term today. To begin with, it is important to know what constitutes medical negligence. In simple terms, the doctor owes certain duties to the patient who consults him for illness, any deficiency in this duty results in negligence.

The doctors need a basic knowledge of how medical negligence is adjudicated in courts of law to help them practice their profession without undue worry about facing litigation for alleged medical negligence. As a matter of fact, intentionally no any doctor can show his/her negligence while treating his/her patients. But sometimes some mishaps occur in the course of medical treatment which does not call for any harsh punishment. Such disputes must be solved amicably.

There is a general perception that healthcare is expensive for the simple reason that the common man does not budget for it. Sickness is never anticipated and is considered as a not-likely-to-happen event. Under the circumstances, the cost of treatment for major ailments appears deceptively high. Yet another reason for such a perception comes as government run community health centers or hospitals extend free healthcare services. We do not realize that free healthcare is actually not free. It comes from the tax payer's money."

As part of exclusive story we highlight the current trends of medical entrance test. National Eligibility –cum-Entrance Test (NEET) has come out following extensive churning to improve the quality of new entrant to medical profession. The efforts of MCI, Ministry of Health & Family Welfare (Govt. of India) and Hon'ble Supreme Court is undoubtedly laudable to bring all the desirous candidates in our country under one ambit of NEET. Since NEET 2017 is a first experience but the lesson learnt from it would further help in improving the scope of NEET in identifying the good quality of students in medicine.

A story on Gastro- esophageal reflux (GER) is also an exclusive story which describes GER is a common but under-diagnosed condition in children. There is a low awareness about GER in children in India although the available data indicates that prevalence of GERD symptoms among Indian infants are almost the same as in Western infants. There are fundamental differences in the pathophysiology, clinical features, diagnostic evaluation and treatment in children and adults. Reflux is a physiological phenomenon occurring in every individual. Hence it is important to distinguish a benign and developmentally normal physiological event from a possible pathological GER. Most of neurologically normal children with GER have an excellent prognosis. Only children with 'red flag 'signs require intervention.

Apart from this, there are many more interesting and insightful stories, based on intensive research and analysis. So, happy reading to all of you!

Warm regards,
Amresh K Tiwary,
Editor-in-Chief

Member of:
CREDAI

Indian Green Building Council
MEMBER

EON
RESORT & SPA JAIPUR

UPCOMING PROJECT IN JAIPUR

TYBROS INFRATECH PVT. LTD.

Booking & Corporate Office Address : Tybros House, 5/54 Main Shankar Road, Rajinder Nagar, New Delhi - 110060, INDIA, Mob.: +91- 9212377077 • www.tybrosinfra.com

OFFICES IN INDIA

■ DELHI ■ NOIDA ■ GURUGRAM ■ LUDHIANA ■ LUCKNOW ■ KOLKATA ■ BENGALURU ■ MUMBAI

A member of CREDAI
IPL
SOLUTIONS FOR GOOD LIVING

An Initiative by
TYBROS
MICE • LEISURE TRAVEL • HOSPITALITY • WELLNESS ESTATE • PROJECT DESIGNING
SUPPORTS

Anupriya Patel inaugurates 22nd AHWP conference

Hon'ble MoS (Health & Family Welfare) Anupriya Patel, recently inaugurated the 22ndconference of Asian Harmonization Working Party (AHWP) at New Delhi. The five day conference is being conducted by Central Drugs Standard Control Organization (CDSCO) and National Drug Regulatory Authority (NDRA) of India in collaboration with Ministry of Health & Family Welfare.

The key objective of the event is to develop and recommend approaches for the convergence and harmonization of medical device regulations in Asia and beyond and to facilitate the exchange of knowledge and expertise amongst regulators and the industry. Asian Harmonization Working Party (AHWP) was established in 1999 as a voluntary non-profit organization of the 30 national regulators of member countries and industry members with a goal to promote regulatory harmonization on medical device regulations in Asia and other regions in accordance with the guidance issued by International Medical Device Regulators Forums (IMDRF). The AHWP works in collaboration with related international organizations such as IMDRF, WHO, International Organization for Standardization (ISO), etc.

The Government has effected an ecosystem to promote Make In India, R&D and innovation in medical device sector in the country. Moreover, the Health Ministry has also come out with the recent regulation i.e. Medical Devices Rules, 2017,for better harmonization with global regulatory practices and to have transparent, predictable and robust regulatory system which will further ensure safety, quality and performance of medical devices and In vitro diagnostics being manufactured in the country.

Additionally, the Government has already allowed 100% FDI in the medical devices sector to promote Make in India. With these combined efforts for Make in India and with a strong regulatory framework, the government has strived to create the ecosystem which caters to all stakeholders.

The government intends that with such efforts, affordable medical devices to the best of the quality standards, is made available to the citizens across the vast and diverse geographical locations.

The inaugural function was also attended by Preeti Sudan, Secretary (HFW), Dr. RK Vats, Additional Secretary (Health) along with the other senior officers of the Ministry, CDSCO, NDRA, dignitaries from other countries and representatives of the development partners.

India and Morocco sign MoU for enhanced cooperation in healthcare

India and Morocco signed a Memorandum of Understanding (MoU) for enhanced cooperation in the health sector, recently. J P Nadda, Union Minister of Health & Family Welfare and Dr. Abdelkader Amara, Ministry of Health, Kingdom of Moroccosigned the MoU in the presence of senior officers from the Union Health Ministry and a high level delegation from Morocco.

J P Nadda mentioned that both the countries share a strong and rich traditional relationship.He highlighted that India is producer of quality generic medicines and drugs that are exported to more than 200 countries and has a strong and robust public health system monitored through National Health Mission. He suggested that through this framework MOU between two countries, both the countries can work together in identified areas of cooperation as both countries have much to offer to each other in the field of health.

The main areas of cooperation include the following:

- Non-communicable diseases, including child cardiovascular diseases and cancer;
- Drug Regulation and Pharmaceutical quality control;
- Communicable Diseases;
- Maternal, child and neonatal health;
- Hospital twinning for exchange of good practices and
- Training in administration and management of health services and Hospitals

Another MoU was signed between Jawaharlal Institute of Post Graduate Medical Education and Research (JIPMER), Puducherry and Marrakech Mohamed VI University Hospital, Morocco in the presence of both the Ministers. Under this MoU both the Institutes agreed to collaborate in the field of telemedicine. The focus areas under this MoU will be Tele-Health Care, Health Education, technical support in controlling epidemics and support in rendering second opinion on various complicated cases.

Shri J P Nadda reviews the preparedness on Seasonal Influenza (H1N1)

Union Minister of Health and Family Welfare, J P Nadda, recently, issued necessary directions to monitor seasonal influenza cases with particular focus on creating awareness, ensuring availability of medicines and vaccines at field level and effective and early treatment of patients as per protocol.

In a high level meeting he chaired, to review the preparedness for prevention and management of seasonal Influenza (H1N1). Preeti Sudan, Secretary (Health) and senior officers from the Ministry, NCDC, DGHS and ICMR were present.

During the review meeting, it was brought out that advisories have already been issued during the year to the States and the situation is being weekly monitored by the Union Health Ministry. The Ministry has also undertaken adequate steps to augment capacity of health facilities, to manage cases of Influenza (H1N1) and have further strengthened its testing facilities. The Ministry has also ensured availability of PPE Kits and N-95 Masks for healthcare workers dealing with the cases. It was observed that there are sufficient tablets of Oseltamivir for early treatment of Influenza (H1N1) cases.

Considering the seasonality of the disease,Shri Nadda has directed the officials to ensure continuous monitoring and vigil on all cases of Swine Flu. He specifically instructed that early detection, reporting and proper categorization of patients is critical for Swine Flu management. Accordingly, the Minister has instructed National Centre for Disease Control (NCDC) to monitor the cases on a daily basis. He suggested that States shall ensure that proper awareness is created on the disease with particular focus on interior and rural areas. All States shall also ensure that sufficient supplies of Oseltamivir drug are maintained at State level. The drug has been now kept under schedule H1 of Drugs and Cosmetics Act and hence States shall ensure its wider availability with private pharmacies also.

He further directed that necessary action be initiated to increase number of testing facilities for Swine Flu case both in Government and Private Sector and NCDC shall provide required support to the States on the issue. Further, all cases which require hospitalization shall be monitored intensively both at district and State level so as to ensure that fatalities can be avoided. Availability of sufficient functional ventilators for critical case management is important and States shall be advised accordingly. NCDC shall coordinate with States to provide ventilator support training, if need be.

The Union Minister directed the Central government institutions to also earmark sufficient number of beds for seasonal influenza A (H1N1) patients. Further all states shall follow and ensure that sufficient beds are earmarked in their available government and private health facilities for management of swine flu as per exigencies. .

Accelerating the Elimination of Malaria in the South-East Asia Region

India has reduced its new malaria cases by one third, and even crossed the malaria mortality targets of 2020. This was stated by J P Nadda, Union Minister of Health and Family Welfare at the High Level Roundtable on "Accelerating the Elimination of Malaria in the South-East Asia Region", here today. Shri J P Nadda further said that with nearly ¾ of the share of the regional burden, India's successes have significantly contributed to the reduction of the burden of malaria for the entire South-East Asia region.

Health Ministers from the countries of South Asia Region, Heads of Country Delegations, Dr. Poonam Khetrapal Singh, Regional Director, WHO South-East Asia Region and Dr. Soumya Swaminathan, WHO, Deputy Director General Designate also graced the occasion.

Speaking at the occasion, Nadda said this success comes against the backdrop of the political leadership and support that health programs have received in India. "The commitment to ensure health for every person in India comes from the highest office of the Government. It is Prime Minister Shri Narendra Modi ji's vision to see health and development reach to the furthest corners of our country, and use the very latest innovations in technology and implementation science to achieve these outcomes," the Union Health Minister elaborated.

Nadda stated that that the majority of malaria cases in the country come from the bordering districts, forest and tribal areas, while most of the remaining parts of the country remain malaria free. "Addressing malaria therefore, is not only an issue for India's aspiration of achieving universal health coverage, but also achieve it with equity, Shri Nadda added

Reiterating the commitment to eliminate Malaria, Shri Nadda stated that the focus on the bordering districts and empowering local authorities with information, tools and knowledge will help malaria reductions in India and its neighbors. The Union Health Minister further said that India as a hub for research and science would also support malaria implementation research, as well as capacity building in health research.

At the function, J P Nadda also launched the book "Addressing the challenge of controlling malaria across international border lines" and unveiled the Regional Action Plan (2017-2030).

The three-day ministerial roundtable on accelerating elimination of malaria in the South-East Asia region is in consonance with the United Nations Assembly Resolution on consolidation and accelerating efforts to control and eliminate malaria.

Also present ate the event were Asia Pacific Leaders Alliance against Malaria, representatives from the Asian Development Bank, the Global Fund to Fight AIDS, TB and Malaria, members of the Strategy Advisory Group for Malaria Elimination and various development partners..

National Trachoma Survey Report (2014-17)

JP Nadda, Union Minister of Health and Family Welfare released the National Trachoma Survey Report (2014-17), here today. He declared thatIndia is now free from 'infective trachoma', and termed this as a momentous achievement.

JP Nadda stated that the survey findings indicate that the active trachoma infection has been eliminated among children in all the survey districts with overall prevalence of only 0.7%. This is much below the elimination criteria of infective trachoma as defined by the WHO-active trachoma is considered eliminated if the prevalence of active infection among children below 10 yearsis less than 5%, he added.

Minister of State (HFW), Anupriya Patel was also present at the release of the Survey Report. The Health Ministers congratulated all the people associated with the survey, especially the frontline health workers who have worked often in try conditions to conduct the survey.

The Union Health Minister stated that the Survey results indicate that active trachoma is no longer a public health problem in India. We have met the goal of trachoma elimination as specified by the WHO under its GET2020 program, he said. This has been possible due to decades of inter-sectoral interventions and efforts that included provision of antibiotic eye drops, personal hygiene, availability of safe water, improved environmental sanitation, availability of surgical facilities for chronic trachoma, and a general improvement in the socio economic status in the country, he added.

Nadda emphasized the need for constant surveillance by the states to report any fresh cases of trachoma and trachoma sequelae(TT cases) and to treat them promptly to finally be completely free of trachoma.

At the release of the Survey Report, Nadda stated that it is our aim to eliminate trachoma toustrichiasis from the country. States which still report cases of active trachoma need to develop a strategy for community-based case finding of patients of trachoma toustrichiasis (TT). These cases must be provided free entropion surgery/ treatment in local hospitals, he stated.

Nadda further said that a careful record of each case identified and its management status must be maintained as per the WHO Guidelines. Also, adequate surveillance of the disease must be done all over the country in order to certify India as trachoma free (eliminated). Monthly data on indicators of trachoma surveillance as per WHO guidelines must be regularly sent to the NPCB, he urged the states.

Speaking at the function, Anupriya Patel, Minister of State (Health and Family Welfare) stated that findings of the survey are extremely encouraging. Congratulating the team, SmtAnupriya Patel said that Active Trachoma is no longer a public health threat. She further said that surveillance has to go up along with regular monitoring for completely eliminating trachoma from the country.

Trachoma (Rohe/Kukre) is a chronic infective disease of the eye and is the leading cause of infective blindness globally. Trachoma is a disease of poor environmental and personal hygiene and inadequate access to water and sanitation. It affects the conjunctiva under the eyelids. Repeated infections cause scarring leading to in-turning ofthe eyelashes and eyelids. This further causes damage to the cornea and blindness. It is found affecting the population in certain pockets of the States of North India like Gujarat, Rajasthan, Punjab, Haryana, Uttar Pradesh and Nicobar Islands. Trachoma infection of the eyes was the most important cause of blindness in India in 1950s and over 50% population was affected in Gujarat, Rajasthan, Punjab, and Uttar Pradesh. It was the most important cause of corneal blindness in India, affecting young children.

The National Trachoma Prevalence Surveys and the Trachoma Rapid Assessment Surveys were conducted by Dr. Rajendra Prasad Centre for Ophthalmic Sciences, All India Institute of Medical Sciences, New Delhi in collaboration with National Program for Control of Blindness & Visual Impairment, Union Ministry of Health and Family Welfare from 2014 to 2017. This was conducted in 27 high-risk districts across 23 states and union territories. Trachoma Prevalence Surveys were done in 10 districts selected from the previously hyper-endemic states. Under the survey, 19662 children in 1-9 year age group were examined by trained ophthalmologists.

As many as 44135 persons were examinedamong the 15yr+ age group. The Trachoma Rapid Assessment Surveys (TRA) was done in 17 other districts from other parts of the country in places where trachoma cases have been reported, which were not previously hyper-endemic. Preeti Sudan, Secretary (HFW) and senior officers of the Ministry were also present at the release of the Survey.

New Diagnostic kits

The Indian Council of Medical Research (ICMR) and Zydus announced the launch of new diagnostic kits, developed by ICMR's National Institute of Virology (NIV), Puneto detect neglected infectious diseases in livestock. The kits have been developed to detect infections in the animal population, as they often are the hosts or reservoirs, spreading the infection to humans who come in close contact with them.

This public private partnership will open newer avenues for many more indigenously diagnostics for public health benefits. These technologies will enable detection of outbreaks of dangerous and life-threatening diseases and also give a boost to the government's 'Make in India' efforts.

According to Secretary, Department of Health Research and DG-ICMR Dr Soumya Swaminathan, "ICMR is taking a lead in commercializing the innovations as a result of ICMR's intramural and extramural research, so that the benefits of the research reach the common man. While tackling neglected infectious diseases, timely diagnosis and treatment are critical. To reach the ultimate goal of elimination of these neglected diseases, it will also be important to improve access, focusing on the fundamentals of preventive interventions.It is important to maintain constant vigilance through appropriate diagnosis, robust surveillance, monitoring and reporting mechanisms. Partnerships with diverse stakeholders including the private sector, NGOs and community-based organisations are specifically useful in creating awareness, case detection, treatment completion and most importantly, managing stigma associated with several of these diseases."

These kits will be manufactured and marketed by Zydus Diagnostics, a division of Cadila Healthcare based in Ahmedabad. The kits provide results within 2.5 to 3 hours and are both highly sensitive and specific. The kits will beavailable for use in public health laboratories and hospitals across India and other countries. These diagnostic tests will help public health services in effective detection and surveillance. Another product in the pipeline is a Multiplex real time PCR kit for the detection dengue and chikungunya, which is useful in detection during early stages of the infection.

"In line with our mission to create healthier communities, we have always supported initiatives in public health, making niche technologies and therapies accessible to people and bridging unmethealthcare needs. We are happy to partner with ICMR and help in beingbetter equippedin this war against infectious disease outbreaks. This makeinIndia initiative is dedicated to the well-being of our people, who are at high risk, particularly in distant, remote areas of the country. This collaboration makes us self-reliant in detecting and starting early treatment so that precious lives can be saved," said Pankaj Patel, Chairman, Zydus Group.

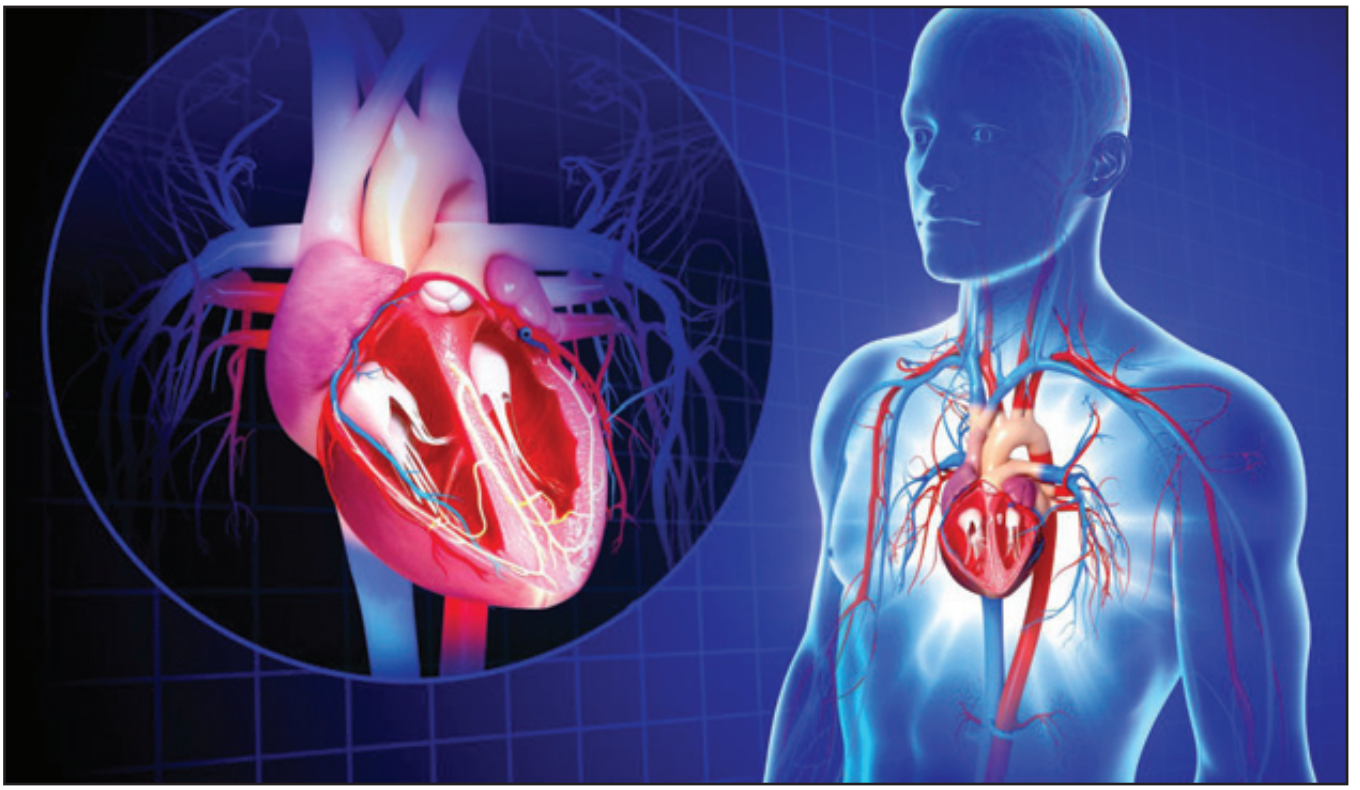
According to the National Vector Borne Disease Control Programme, India witnessed 1916 cases of Japanese Encephalitis (JE) leading to 226 deaths in 2017. The virus is transmitted through more than 15 species of Culex mosquitoes, predominantly found in rural and semi-urban settings, where humans live in close proximity to these hosts. Timely detection of JE is a much needed public health intervention, as 1 in 4 cases can prove fatal. The test is user-friendly and detection is possible within four hours.

Apart from India, the Crimean Congo Haemorrhagic Fever is also reported from Eastern Europe, former Soviet Union, throughout the Mediterranean, in North-western China, central Asia, Southern Europe, Africa and the Middle East. Animal herders and livestock workers in endemic areas are at risk of CCHF. The other fairly common vector borne infectious diseases are Kyasanur Forest Disease and the ChandipuraVirus Disease, which have been posing a threat to public health with periodic life-threatening outbreaks.

QUICK BYTE

- Simple, quick and cost-effective diagnostic kits developed to detect transmittable infectious diseases to ensure timely interventions to controloutbreaks, under an ICMR and Zydus public-private partnership initiative.
- The diagnostic tools that are ready for the market include ELISA kit for detection of Japanese Encephalitis Virus (JEV) in mosquito vectors;and the Crimean-Congo Haemorrhagic Fever (CCHF) in sheep, goat and cattle.
- Additional products in the pipeline, which will be ready for release shortlyinclude diagnostic kits for measles; Kyasanur Forest Disease Virus (KFDV)and Chandipura Virus (CHPV) in Humans;and multiplex real-timePolymerase Chain Reaction (PCR) for simultaneous detection of dengue and chikungunya.

DISEASE CONTROL PRIORITIES, 3RD PUBLISHES VOLUME ON CARDIOVASCULAR, RESPIRATORY, AND RELATED DISORDERS



Often referred to as "silent" diseases, cardiovascular, respiratory, and related disorders are responsible for a significant portion of the world's health burden. While many of these conditions are preventable and treatable, countries need to build greater capacity to detect and treat at earlier stages, according to new findings presented in Cardiovascular, Respiratory, and Related Disorders – the latest volume of the Disease Control Priorities, 3rd Edition (DCP3) series.

Dr. D. Prabhakaran, volume lead editor and Director of the Centre for Chronic Disease Control at the Public Health Foundation of India says, "The diseases covered in this volume of DCP3 are responsible for creating significant economic burden for countries due to reduced productivity and high household spending for treatment costs. The rise of these conditions in low-and middle-income countries, along with the continued presence of infectious diseases such as HIV/AIDS and malaria, creates a double burden of disease with devastating economic consequences."

This volume provides a summary of the available evidence for effective and scalable interventions, identifies the most effective and cost-effectiveness priorities, and describes health platforms that are able to deliver these interventions. With attention to treatable health problems, such as stroke, ischemic heart disease, and congestive heart failure – as well as disease causes, such as obesity, tobacco use, and physical activity –it can serve countries as a broad roadmap for much needed attention to treatment and prevention of these conditions.

Dr. Rachel Nugent, volume editor and Vice President for Global Noncommunicable Diseases at RTI International, suggests that DCP3's Volume 5 will serve as a foundation for Universal Health Coverage packages. "We are offering countries an essential package of 39 policies and health interventions that constitute the most cost-effective and feasible interventions for low-income settings," says Nugent. "We hope this work will spur countries to accelerate and expand their actions to reduce the burden of these diseases and slow their rise."

The DCP3 series is comprised of nine individual volumes that are being published by the World Bank Group through 2018. Cardiovascular, Respiratory, and Related Disorders is available open access on the World Bank's Open Knowledge Repository.

URGENT REQUIRED

A multi-disciplinary engineering consultancy organization, seeks qualified and experienced professionals at all levels for various disciplines for ongoing projects in different parts of India.

A) SUPERVISION / DESIGN ENGINEERS – BUILDINGS /Roads/Sewerage/Drainage

1.	Project Managers,	BE (Civil) with 20 years relevant experience
2.	Civil Engineers,	BE (Civil) / Diploma with 5+years experience
3.	Structural Engineers,	BE (Civil) Preferable Masters Degree (Structural) with 10 years Experience
4.	Sr. Architects/Architect,	B. Arch with 5+ Yrs experience
5.	Electrical Engineers	B.E. (Electrical) with 5 Yrs Experience
6.	Plumbing and Fire Fighting Engineers	Degree with Specialization in Fire Fighting, with 5 Yrs Experience
7.	HVAC / Mechanical Engineers	B.E (Mechanical), with 5 Yrs. Experience
8.	Bio-Medical Engineers	Degree in Biomedical Engineering, with 5 Yrs. Experience
9.	Environment Experts	B. E. (Civil) or Equivalent Relevant Qualification or Master in Environmental Engineering, with 10 yrs Relevant exp
10.	Material / QC Engineers	B. E. (Civil) / DCE (Civil), with 5 Years & above Experience as Senior Quality / Material Expert in major building/highway projects.
11.	Quantity Surveyors	B. E. (Civil) / DCE, with 10 yrs Relevant exp in Major Buildings and Highways Projects.
12.	Survey Engineers	B. E./Diploma in Surveying, with 5 to 10 yrs Relevant exp in Major Buildings and Highways Projects
13.	Contract Specialists	B E (Civil) or Equivalent relevant Qualification with Masters Degree, with 10 years of relevant experience
14.	Sewerage Expert	Graduate civil engineer (higher qualification desirable) more than 5 years professional Experience
15.	Drainage Expert	Graduate civil engineer (higher qualification desirable) more than 5 years professional Experience

Proficiency in computer operations and fluency in English is a must.

Retired govt. personnel can also apply. Candidates with relevant experience may apply through e-mail at **enarchjobs@gmail.com**

ENARCH Consultants Pvt. Ltd.
(Consulting Engineers, Planners and Architects)
B-66, Sector- 63
Noida – 201301

Rakesh Kumar, Director, Marketing & Operation, Tybros group receives Double Helical State Health Awards 2017 from Manohar Lal

Tybros delivers **healthy life style homes**

Tybros group is a conglomerate with diverse interest in Wellness Estate, Construction & Designing, Hospitality, Corporate MICE Travel, and Managing Events. Tybros Group started with travel and tour sector in the year 1994, and is one of the earliest players to engage in the MICE category.

Rakesh Kumar, MD, Tybros group, said, "We have been recognized as the 'Best Corporate Travel Management Company' in 2013 as presented by the Indian Edition of World Travel Brands Foundation. The group has a profound name for offering exemplary services to its discerning patrons. The main motto of the group is to provide a quality services for all, thus changing the way you travel & explore."

Today the company is a well-known face in the industry and deals with top MNCs and corporate houses which include Fortune 500 companies. For

Khattar, C M, Haryana for best Luxury Resort Developers

over two decades we have executed milestone events for leading MNCs, Blue chip Corporates, and Reputed PSUs amongst others. In our endeavor to create unforgettable events for our patrons we have gone the distance, literally. When it comes to making the special occasions of your life unforgettable, look beyond and find Tybros as your answer.

EoN- The Adventure Nature Resort, Uttarakhand

Every hill station nestled in the foothills of Himalayas is known to offer seamless sense of bliss on every visit and, what can be better if you get the opportunity to bask in timeless luxury in such a serene environment. Essence of Nature, India's one of the finest wellness based luxury resorts, is a splendid blend of luxury and peace, amid the Himalayas. Among the top most luxury resorts in Himalayas, Essence of Nature has been honored as one of the best wildlife safaris and treks you can enjoy in Uttarakhand. Here unparalleled luxury will pamper you while you soak in holistic wellness, naturally.

It's situated in the catchment of the world famous Jim Corbett National Park and Ranikhet.Spread across 12.5 acres of serene greens, our development 'EoN- The Adventure Nature Resort' is operational since 2015 offering best of hospitality services and amenities.

Located in Kumaon range of Uttrakhand at a height of 6000 ft. above sea level with 360 degree panoramic view of snow clad Himalayas at one side and river valley at the other is 50 kms away from Jim Corbett National Park towards Ranikhet. With just 310 km derive from Delhi,Resort is very popular among nature lovers and is frequently visited by couples and families looking for a break from city life into the abode of serene and tranquil nature with 100% fresh oxygen and a view of Himalayas.

This place offers many excursions in the vicinity like Nainital, Ranikhet, Kausani and Almora among others. Visit the resort. Explore the unexplored. Indulge in luxury.

Recognizing the harm of **Air Pollution**

Air pollution is the leading cause of mortality and disability in India. The problem has been compounded by household and ambient air pollution, caused by factors such as burning of biomass fuel

BY DR SUNEELA GARG/ DR RUCHIR RUSTAGI

Among the huge spectrum of air pollutants, there are certain air pollutants, which are regarded as most harmful to health. They include, particulate matter (PM 2.5 and PM 10), Carbon monoxide (CO), black carbon (BC), Ozone (O3), sulfur dioxide and nitrogen oxides (NOX). All these pollutants including the particulate matter, are often not visible to the naked eye, because the sizes of these pollutants are much smaller than the detection power of human eye……

Clean air, free of all contaminants is the key to maintain good overall health. Cleaner air provides us with many health benefits, like cleaner lung, improved digestion, improved mood, decreased allergies/ asthma, and thus overall, a longer life span. Thus, a basic requirement for human health and well-being is clean air. However, an increase in the various natural events, and human activities, in the recent past, have led to worsening of the ambient air quality.

Air pollution is defined as the contamination of outdoor/indoor air by a wide range of harmful pollutants, which can be in gaseous form, or solids. Among the huge spectrum of air pollutants, there are certain air pollutants, which are regarded as most harmful to health. They include, particulate matter (PM 2.5 and PM 10), Carbon monoxide (CO), black carbon (BC), Ozone (O3), sulfur dioxide and nitrogen oxides (NOX). All these pollutants including the particulate matter, are often not visible to the naked eye, because the sizes of these pollutants are much smaller than the detection power of human eye. But, their invisibility does not guarantee their non-existence in the concurrent environment.

The particulate matter (PM2.5 and PM10) is defined as any solid or liquid substance, that is suspended in the air. Unlike the other major air pollutants, particulate air pollution is defined by the particle size (rather than its chemical composition). The smaller the size of these particulates, the more damage they can cause to our body. PM10 is mainly generated by road dust and construction related activities, like stone processing, stone crushing etc. PM2.5 comes primarily from combustion activities in coal or natural gas fire-plants, fireplaces, care engines etc.

PM10 cause irritation of the airways, especially in the asthmatics and elderly. They also cause drying of the throat, and burning sensation in the eyes. However, a sizeable portion of the PM10 inhaled, is halted in the respiratory tract, thus reducing damage.

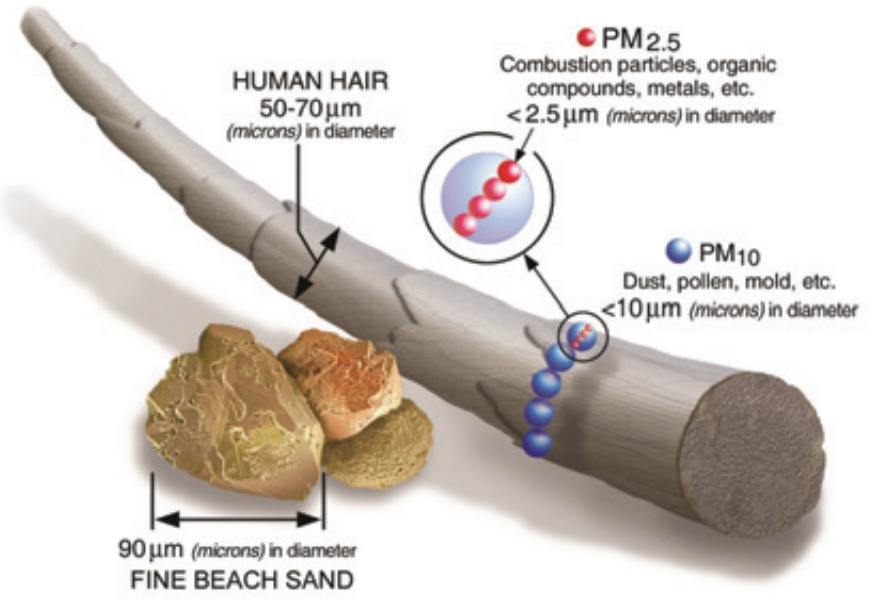
PM2.5 are however, small enough to bypass the respiratory system, and thus, very easily get into the lungs, and can even penetrate the blood stream. In long term, continued

exposure to PM2.5 can lead to premature heart attacks, depressed lung function, worsening of Asthma, and overall decrease in life expectancy. The risk increases when engaged in physical activity and exercise.

PM2.5 (also called as FINE PARTICULATE MATTER) is the key indicator for measuring air pollution health impacts, and the permissible limits (WHO guidelines) are 10 μg/m3 annual mean, and 25 μg/m3 24-hour mean.

Air pollution has both acute as well as chronic effects on our health, and it affects different systems and organs at the same time. The ill health effects can range from minor upper respiratory tract irritation, to, chronic respiratory diseases, and also, heart diseases, lung cancer, acute respiratory infections in infants and children, and chronic bronchitis in adults. In susceptible individuals, there can be exacerbation of lung diseases, and increase in blood coagulability, which in turn explains the increase in cardiovascular morbidity and mortality.

	Permissible Limits	Health Effects
PM10	**20 µg/m3 annual mean 50 µg/m3 24-hour mean**	**Irritation of airways, drying of throat, burning sensation in the eye**
PM2.5	**10 µg/m3 annual mean 25 µg/m3 24-hour mean**	**Premature heart attacks, worsening of Asthma, decrease in lung function**



AIR QUALITY INDEX AND ASSOCIATED HEALTH IMPACTS

In India, the air quality is monitored by the National Air Quality Index (AQI), which was launched by the Ministry of Environment, Forests, and Climate Change, in October 2014. The AQI is a "One Number- One Colour-One Description", devised for the common man, so that he/she can judge the air quality within their vicinity. For calculating AQI, a sub-index of eight pollutants is calculated, and the worst sub index reflects overall AQI. The eight Pollutants are, namely, PM10, PM2.5, NO2, SO2, CO, O3, NH3 and Pb. These are monitored 24 hourly, except for O3 and CO, which are monitored 8 hourly.

Six colour coded categories have been defined, based on the AQI, and the health impacts also worsen, with worsening of the AQI.

The AQI values are periodically updated (region wise) on various public and private web portals.

STRATEGIES TO PREVENT HARMFUL EFFECTS OF AIR POLLUTION

Health Education is the key

Numerous public health agencies like World Health Organization, Ministry of Health, have and keep issuing Public Health Advisories, at the time of alarming pollution levels, in order to minimize the impact of those air pollutants. The advisory recommends certain measures to be taken, like: -

• To Remain Indoors, especially during high pollution episodes, and particularly, those more vulnerable (children, older people, pregnant women, pre-existing severe illnesses etc.). It is advised to keep the doors and windows closed, to limit the penetration of pollutants, especially particulate matter, from outside.

• To prevent any additional sources of air pollution in home, by avoiding the usage of certain items in home, like wood burning stoves, candles, incense sticks, tobacco products etc.

• To prefer wet mopping and dusting for cleaning inside home. Avoid sweeping or vacuuming, as they stir up additional dust and particles.

• Certain appliances can help to reduce the levels of indoor air pollution, like

1. Air purifiers, with carbon and HEPA (High Efficiency Particulate Air) filters.
2. Electronic air cleaners (e.g. electrostatic precipitator)

AQI Category	AQI range	Colour Coding	Associated Health Impacts
Good	0-50		Minimal health impact
Satisfactory	51-100		May cause minor breathing discomfort in sensitive people
Moderately polluted	101-200		May cause breathing discomfort in people with lung diseases such as Asthma, people with heart diseases, children and older adults
Poor	201-300		May cause breathing discomfort to people on prolonged exposure, and discomfort to people with heart disease
Very poor	301-400		May cause respiratory illnesses in people on prolonged exposure, with more pronounced effects in

AQI Category	AQI range	Colour Coding	Associated Health Impacts
			people with lung and heart diseases
Severe	401-500		May cause respiratory impact and serious health impacts even on health people, and the impacts may be experienced even during light physical activity

Under the Graded Response Action Plan (GRAP) for Delhi and NCR, a new category of "Severe + or Emergency" has been added in 2017.

Severe + or Emergency	Above 500 persisting for 48 hours or more		May cause respiratory impact and serious health impacts on health people

The AQI values are periodically updated (region wise) on various public and private web portals.

3. Vacuum cleaners with a HEPA filter.
4. Air conditioners, with an appropriate filter.

• To limit driving motorized vehicles, and promote the use of public transportation and ride sharing. This helps by preventing worsening of the already high levels of pollution.

• Plan outdoor activity during the middle of the day, when the particulate levels have been seen to be considerably lower, compared to the morning and evening hours.

• Use respiratory masks for protection, when outdoors for long time periods. The recommended masks are N95, and more sensitive persons can use N99 version of masks. Scarves, face masks, bandanas etc. are of no use, as they do not filter the airborne particulate matter.

The Air Quality Index (AQI) has been developed by the Environmental Protection Agency (EPA) to provide accurate, timely, and easily understandable information about daily levels of air pollution. The Index provides EPA with a uniform system of measuring pollution levels for the major air pollutants regulated under the Clean Air Act. Once these levels are measured, the AQI figures are reported in all metropolitan areas of the United States with populations exceeding 200,000.

Index figures enable the public to determine whether air pollution levels in a particular location are Good, Moderate, Unhealthy for Sensitive Groups or worse. In addition, EPA and local officials use the AQI as a public information tool to advise the public about the general health effects associated with different pollution levels and to describe whatever precautionary steps may need to be taken if air pollution levels rise into the unhealthy range.

The EPA uses the Air Quality Index to measure five major pollutants for which it has established National Ambient Air Quality Standards under the Clean Air Act. The pollutants are sulfur dioxide, carbon monoxide, nitrogen dioxide and ozone. (Note: Ozone at the ground level can be a health and environment problem, but ozone is beneficial in the stratosphere (6-30 miles above the Earth) where it shields the Earth from the sun's harmful ultraviolet radiation. EPA has programs to reduce chlorofluorocarbons and related substances to protect the stratospheric ozone layer. The AQI relates only to ground-level ozone, a major component of smog.)

For each of the five pollutants, EPA has established air quality standards protecting against health effects that can occur within short periods of time (a few hours or a day). For example, the standard for sulfur dioxide - that is, the allowable concentration of this pollutant in a community's air - is 0.14 parts per million measured over a 24-hour period. Air concentrations higher than 0.14 parts per million (ppm) exceed the national standard. For ozone, the 8-hour average concentration permitted under the standard is 0.085 parts per million (ppm).

The AQI converts the measured pollutant concentration in a community's air to a number on a scale of 0 to 500. The most important number on this scale is 100, since that number corresponds to the standard established under the Clean Air Act. A 0.14 ppm reading for sulfur dioxide or a 0.085 ppm reading for ozone would translaate to an AQI level of 100. An AQI level in excess of 100 means that a pollutant is in the Unhealthy for Sensitive Groups range or worse on a given day; an AQI level at or below 100 means that a pollutant reading is in the satisfactory range.

The intervals and the terms describing the AQI air quality levels are as follows:

- From 0 to 50.....good
- From 51 to 100.....moderate
- From 101 to 150..... unhealthy for sensitive groups
- From 151 to 200.....unhealthy
- From 201 to 300...very unhealthy
- From 300.....hazardous

The intervals on the AQI scale

Current EPA Air Quality Index and Clean Air Campaign Health Advisory

AQI Range	EPA Color Scale	EPA Descriptor	Clean Air Campaign Health Advisory
0 to 50	Green	Good	The air quality is good and you can engage in outdoor physical activity without health concerns.
51 to 100	Yellow	Moderate	At this level the air is probably safe for most people. However, some people are unusually sensitive and react to ozone in this range, especially at the higher levels (in the 80s and 90s). People with heart and lung diseases such as asthma, and children, are especially susceptible. People in these categories, or people who develop symptoms when they exercise at "yellow" ozone levels, should consider avoiding prolonged outdoor exertion during the late afternoon or early evening when the ozone is at its highest.
101 to 150	Orange	Unhealthy for Sensitive Groups	In this range the outdoor air is more likely to be unhealthy for more people. Children, people who are sensitive to ozone, and people with heart or lung disease should limit prolonged outdoor exertion during the afternoon or early evening when ozone levels are highest.
151 to 200	Red	Unhealthy	In this range even more people will be affected by ozone. Most people should restrict their outdoor exertion to morning or late evening hours when the ozone is low, to avoid high ozone exposures.
201 to 300	Purple	Very Unhealthy	Increasingly more people will be affected by ozone. Most people should restrict their outdoor exertion to morning or late evening hours when the ozone is low, to avoid high ozone exposures.
Over 300	Black	Hazardous	Everyone should avoid all outdoor exertion.

relate to the potential health effects of the daily concentrations of each of these five pollutants. Each value has built into it a margin of safety that, based on current knowledge, protects highly susceptible members of the public.

EPA determines the index number on a daily basis for each of the five pollutants; it then reports the highest of the five figures for each major metropolitan area, and identifies which pollutant corresponds to the figure that is reported. For example, if EPA reports an AQI level of 90 for ozone for a given metropolitan area, residents of the area would know that the ozone level for the region is at the high end of the moderate range; they would also know that ozone is the pollutant with the highest AQI reading for the day, and that all other pollutants are therefore in the good or moderate range. On days when two or more pollutants exceed the standard (that is, have AQI values greater than 100), the pollutant with the highest index level is reported, but information on any other pollutants above 100 may also be reported.

Levels above 100 may trigger preventive action by State or local officials, depending upon the level of the pollution concentration. This could include health advisories for citizens or susceptible individuals to limit certain activities and potential restrictions on industrial activities. The 200 level is likely to trigger an "Alert" stage. Activities that might be restricted by local governments, depending upon the nature of the problem, include incinerator use, and open burning of leaves or refuse. A level of 300 on the AQI will probably trigger a "Warning," which is likely to prohibit the use of incinerators, severely curtail power plant operations, cut back operations at specified manufacturing facilities, and require the public to limit driving by using car pools and public transporation. A AQI level of 400 or above would constitute an "Emergency," and would require a cessation of most industrial and commercial activity, plus a prohibition of almost all private use of motor vehicles. If air pollution were to reach such extremely high levels, death could occur in some sick and elderly people, and even healthy people would likely experience symptoms that would necessitate restrictions on normal activity. Before determining which stage is to be called, officials examine both current pollutant concentrations and prevailing and predicted meteorological conditions.

The table above identifies health effects associated with different levels of air pollution, along with the cautionary statments that would be appropriate if air pollution in a community were to fall into one of the "unhealthful" categories on the AQI scale.

In most communities in the United States, AQI levels generally fall between zero and 100; readings in excess of 100 are likely to occur only a few times a year, if at all. Only 1.4% of all readings in the U.S. exceeded

100 during calendar years 1990 and 1991. Several metropolitan areas in the U. S. have more severe air pollution problems, and may often experience AQI levels in excess of 100. However, even in these areas, AQI readings in excess of 200 are quite rare. During calendar years 1990 and 1991, for example, just one-tenth of one percent of the AQI readings exceeded 200, and only 0.003 of one percent exceeded 300. (Urban areas outside the U. S. with dense population centers and large numbers of uncontrolled pollution sources frequently report AQI levels in excess of 250.)

Significant seasonal variations can occur in AQI-reported values. In winter, carbon monoxide is likely to be the pollutant with the highest AQI levels, because cold weather makes it much more difficult for automotive emission control systems to operate effectively. In summer, the chief pollutant in many communities is likely to be ozone, since emissions of volatile organic compounds and nitrogen oxides form ozone much more rapidly in the presence of heat and sunlight.

The AQI places maximum emphasis on acute health effects occurring over very short time periods - 24 hours or less - rather than chronic effects occurring over months or years. By notifying the public when an AQI value exceeds 100, citizens are given an adequate opportunity to react and take whatever steps they can to avoid exposure. The approach EPA follows is conservative, because (1) each standard has built into it a margin of safety that is designed to protect highly susceptible people, and (2) the public notice is triggered as soon as a single sampling station in the community records an AQI level that exceeds 100.

Use of the AQI allows for flexible reporting. A typical television or radio announcement might read: "The pollution index reported at noon today is 150, and the air is considered unhealthful. The pollutant causing

this problem is ozone, which, along with other components of smog, can cause eye, nose and throaat irritation, as well as chest pain. We expect the concentration of ozone to diminish this afternoon. People with respiratory ailments and heart disease should reduce physical exertion and outdoor activity at this time. The forecast for tomorrow calls for no change in the index."

A more detailed account could be provided by recorded telephone reports or newspapers. For example, listeners can be informed that ozone normally peaks in he afternoon so that later AQI reports will show the index declining, unless there is a significant episode taking place that would cause ozone to continue to build throughout the day. Likewise, if carbon monoxide is the pollutant of concern, the AQI report could add that carbon monoxide is usually only a problem during morning or evening rush hours with acceptable air quality expected during the rest of the day.

WHAT THE AQI CANNOT DO

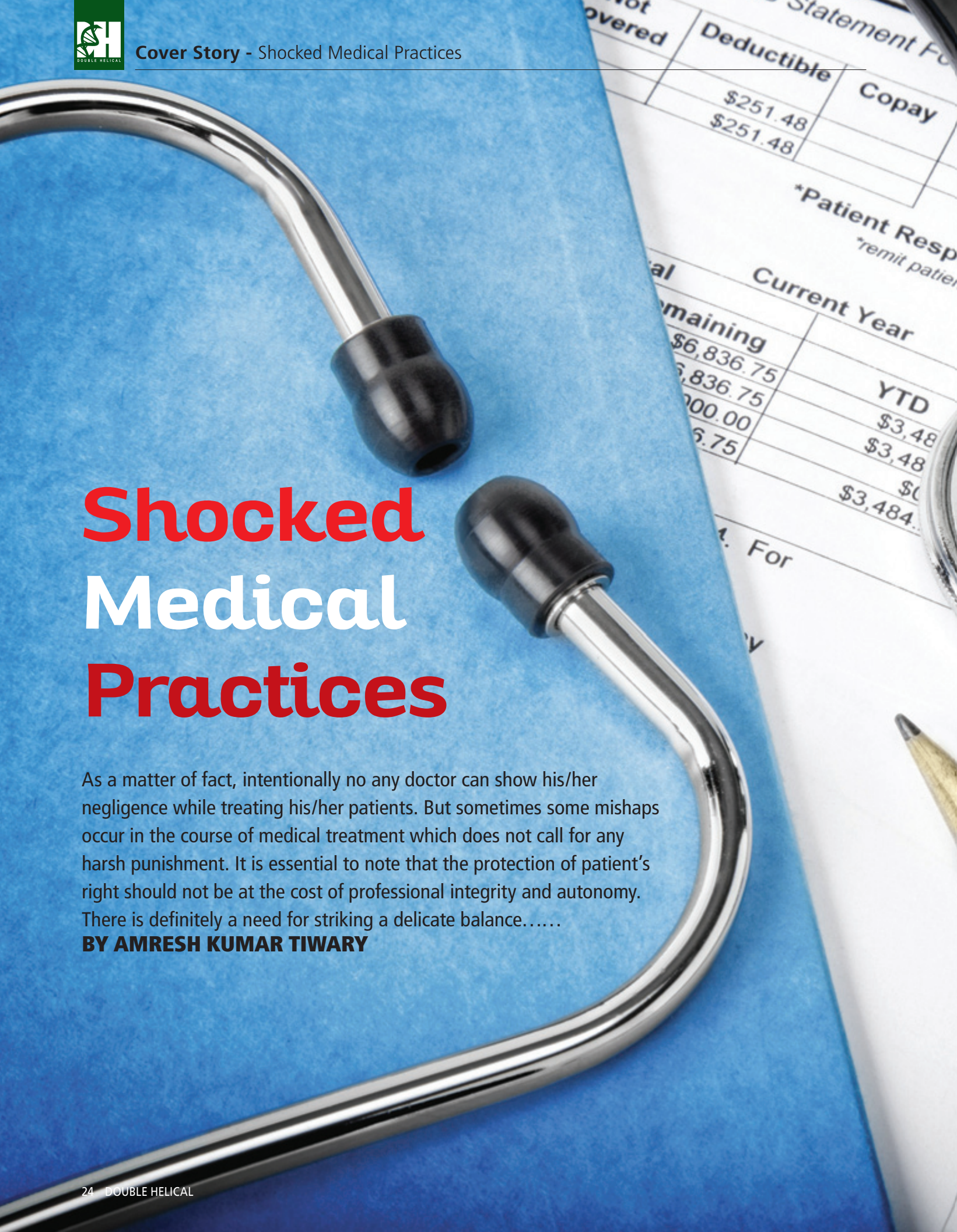
Although it is uniform across the country, the AQI cannot be used as the sole method for ranking the relataive healthfulness of different cities - a variety of factors in addition to AQI levels would have to be considered. For example, the number of people actually exposed to air pollution, transportation patterns, industrial composition, and the representativeness of the monitoring sites would also need to be taken into account in developing an accruate ranking of metropolitan areas.

Moreover, the AQI does not specifically take into account the damage air pollutants can do to animals, vegetation, and certain materials, like building surfaces and statues. There is, however, likely to be a correlation between increased AQI levels and increased damage to the overall environment,and a local regulatory agency might choose to point out the impact that an elevated AQI value is likely to have on agriculture and property in the region.

Finally, the AQI does not take into account the possible adverse effects associated with combinations of pollutants (synergism). As more research is completed in the future, the AQI may be modified by EPA to include such effects.

Condensed from Measuring Air Quality: The Pollutant Standards Index; Office of Air Quality Planning and Standards, US EPA; EPA 451/K-94-001; February 1994.

(The authors are from Department of Community Medicine, Maulana Azad Medical College, New Delhi)



Shocked Medical Practices

As a matter of fact, intentionally no any doctor can show his/her negligence while treating his/her patients. But sometimes some mishaps occur in the course of medical treatment which does not call for any harsh punishment. It is essential to note that the protection of patient's right should not be at the cost of professional integrity and autonomy. There is definitely a need for striking a delicate balance……

BY AMRESH KUMAR TIWARY

Recently trouble mounted for both Delhi Shalimar Bag's Max hospital and Gurgaon's Fortis hospital in death case due to negligence as claimed by their family members challenged credibility of medical practices.

The first case relates to the death of a 7-year-old girl, who was admitted in September to the Fortis Hospital, Gurgaon. The parents of the girl had alleged they were billed Rs 16 lakh, which also included the cost of 2,700 gloves.The hospital has charged the family over a lakh rupees per day for fifteen days after they admitted their 7-year-old daughter, Adya, to the hospital for treatment of dengue. Adya was declared dead on September 15. 2017.

The hospital in the bill showed that 2,700 gloves and 600 syringes were used in 15 days during her treatment. They even charged us for the cloth they wrapped our daughter in after she died. The hospital charged us Rs. 4 lakh for medicines. Adya was detected with Dengue in August and admitted to Rockland Hospital in Dwarka Sector 12. After five days she was shifted from Rockland Hospital to Fortis Hospital in Gurugram, where the 7-year-old was immediately put on a ventilator without informing her parents.

After being put on a ventilator, Adya's condition deteriorated as her brain and kidneys also got affected.Haryana health minister Anil Vijsaid the state government has lodged an FIR against the hospital for criminal negligence on their part and cancelled their land lease.The land was provided to the hospital at concessional rates on the condition that it will provide 20 per cent beds and other health amenities at concessional rates to the poor patients.

A day after Delhi government cancelled (now resumed) the license of Shalimar Bagh's Max Hospital in case of a baby declared dead by the

hospital was found to be alive. A 20-year-old Varsha gave birth to premature twins at the hospital. While the baby girl was declared stillborn, the baby boy was declared dead a few hours later.

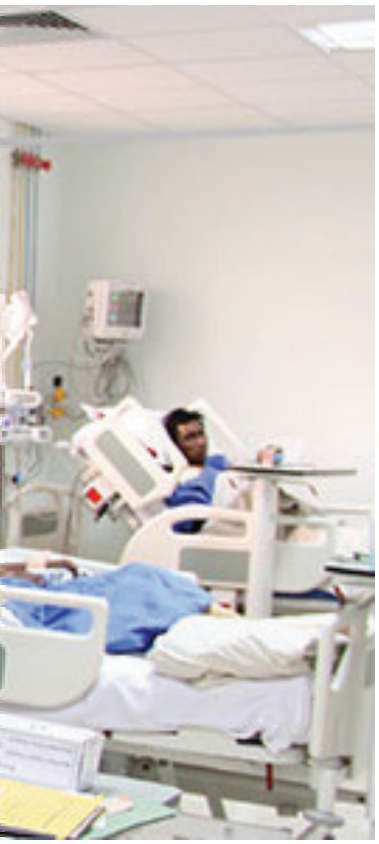
As the family was taking the bodies for their last rites, the baby boy was found breathing. He was admitted to a private nursing home, where he stayed till his death.

The enquiry found that the hospital failed to keep proper temperature and vital sign monitor record of the period of comfort care provided to the live male newborn, the cancellation order reads. The panel under Director General of Health Services (DGHS) found that the staff nurses had handed over the bodies of the babies without written directions from a pediatrician and missed the signs of life. The hospital had also entered the baby boy's name in a register of stillbirths, the inquiry found, leading the DGHS to say it was prima facie a case of medical negligence.

Medical negligence is an oft-quoted but much-abused term today. To begin with, it is important to know what constitutes medical negligence. In simple terms, the doctor owes certain duties to the patient who consults him for illness, any deficiency in this duty results in negligence.

According to **Dr A K Agarwal**, Professor of Excellence and Medical Advisor, Appolo Group of Hospitals, doctors need a basic knowledge of how medical negligence is adjudicated in courts of law to help them practice their profession without undue worry about facing litigation for alleged medical negligence. As a matter of fact, intentionally no any doctor can show his/her negligence while treating his/her patients. But sometimes some mishaps occur in the course of medical treatment which does not call for any harsh punishment. Such disputes must be solved amicably.

Dr, Gridhar Gyani, Director General, Healthcare Providers of India, said, "There is a general perception that healthcare is expensive for the simple reason that the common man does not budget for it. Sickness is never anticipated and is considered as a not-likely-to-happen event. Under the circumstances, the cost of treatment for major ailments appears



deceptively high. Yet another reason for such a perception comes as government run community health centers or hospitals extend free healthcare services. We do not realize that free healthcare is actually not free. It comes from the tax payer's money."

Dr Anup Mohta, Director, Chacha Nehru Bal Chiktsalya, East Delhi, said, "We must believe that as a matter of fact, no doctor intentionally is negligent while treating his/her patients. But sometimes errors of judgement may occur in the course of medical treatment which does not call for any harsh punishment."

"It is essential to note that the protection of patient's right should not be at the cost of professional integrity and autonomy. There is definitely a need for striking a delicate balance. The identification of minimum reasonable standards enables the medical professionals to internalize them in their day-to-day discharge of professional duties, minimizing instances of medical negligence," Dr Mohta, said.

Dr Vinay Aggarwal, Former President, Indian Medical Association, New Delhi, said, "Today, there is a growing awareness regarding patient's rights. This trend is clearly discernible from the recent spurt in litigation concerning medical professional or establishment liability, claiming redressal for the suffering caused due to medical negligence, vitiated consent, and breach of confidentiality arising out of the doctor-patient relationship."

The patient-centered initiative of rights protection is required to be appreciated in the economic context

of the rapid decline of State spending and massive private investment in the sphere of the health care system and the Indian Supreme Court's painstaking efforts to constitutionalize the right to health as a fundamental right.

"In legal parlance, medical malpractice refers to professional negligence by a medical practitioner in which treatment provided was substandard, and caused harm, injury or death to a patient. In the majority of cases, the medical malpractice or negligence involved a medical error, possibly in diagnosis, medication dosage, health management, treatment or aftercare. Medical malpractice law provides a way for patients to recover compensation from any harms resulting from sub-standard treatment. The standards and regulations for medical malpractice differ slightly from country-to-country; even within some countries, jurisdictions may have varying medical malpractice laws."Dr VinayAggarwal, said.

Padam Shri Dr K KAggarwal, President, Indian Medical Association, New Delhi, "A hospital, doctor or other healthcare professional is not liable for all the harms a patient might suffer. They are only legally responsible for harm or injuries that resulted from their deviating from the quality of care that a competent doctor would normally provide in similar situations, and which resulted in harm or injury for the patient.In the context of obtaining processes, there is a deserving need for a two-pronged approach."

On one hand, the desirable direction points towards identification of minimum reasonable standards in light of the social, economical, and cultural context that would facilitate the adjudicators to decide issues of professional liability on an objective basis. On the other hand, such identification enables the medical professionals to internalize such standards in their day-to-day discharge of professional duties, which would hopefully prevent to a large extent the scenario of protection of patient's rights in a litigative atmosphere. In the long run, the present adversarial placement of doctor and the patient would undergo

a transformation to the benefits of both the parties.

Dr S K Nanda, President, IMA, Himachal Pradesh, said, "In legal terms, a consumer is a person who hires or avails of any services for a consideration that has been paid or promised or partly paid and partly promised or under any system of deferred payment and includes any beneficiary of such services other than the person hires or avails of the services for consideration paid or promised, or under any system of deferred payment, when such services are availed of with the approval of the first mentioned person. This definition is wide enough to include a patient who merely promises to pay."

"Further, a complaint is an allegation in writing made by a Complainant like a consumer that he or she has suffered loss or damage as a result of any deficiency of service.Deficiency of service means any fault, imperfection, shortcoming, or inadequacy in the quality, nature, or manner of performance that is required to be maintained by or under any law for the time being in force or has been undertaken to be performed by a person in pursuance of a contract or otherwise in relation to any service."Dr S K Nanda, said.

Basically, medical negligence is simply the failure to exercise due care. The three ingredients of negligence are being considered today like the defendant owes a duty of care to the plaintiff, the defendant has breached this duty of care; and, the plaintiff has suffered an injury due to this breach. Medical negligence is no different. It is only that in a medical negligence case, most often, the doctor is the defendant.

The duty owed by a doctor towards his patient, in the words of the Supreme Court is to bring to his task a reasonable degree of skill and knowledge and to exercise a reasonable degree of care. The doctor, in other words, does not have to adhere to the highest or sink to the lowest degree of care and competence in the light of the circumstance. A doctor, therefore, does not have to ensure that every patient who comes to him is cured. He has to only ensure that he confers a reasonable degree of care and competence.

Eventually we can say that though the same standard of care is expected from a generalist and a specialist, the degree of care would be different. In other words, both are expected to take reasonable care but what amounts to reasonable care with regard to the specialist differs from what amount of reasonable care is standard for the generalist. In fact, the law expects the specialist to exercise the ordinary skill of this speciality and not of any ordinary doctor.

As of now, the adjudicating process

with regard to medical professional liability, be it in a consumer forum or a regular civil or criminal court, considers common law principles defining medical negligence. However, it is equally essential to note that the protection of patient's right should not be at the cost of professional integrity and autonomy. There is definitely a need for striking a delicate balance. Otherwise, the consequences would be disastrous, to say the least.

According to **Dr H P Singh**, Senior Child Specialist, Mother Child Care, Vaishali, Ghaziabad. there is hardly a gathering where medical profession is not being discussed with negative overtones. Not a day passes when the media does not draw attention to some event which serves to continue to multiply the trust deficit between public and medical professionals.

Highlighting of medical errors by media and violence faced by medical profession, has pushed them to the wall and has left them bewildered.A dispassionate analysis will reveal the problems to be at many levels. Let us look and discuss two major areas felt by the community and talked about in the media.

Dr Manisha Yadav, said, "Healthcare delivery has become so complex and hi-tech that even advanced countries are grappling with the issue of adverse events and unfavorable outcomes. The Joint Commission's Annual Report on Quality and Safety 2007 found that inadequate communication between healthcare providers, or between providers and the patient and family members, was the root cause of over half the serious adverse events even in accredited hospitals. Other leading causes included inadequate assessment of the patient's condition, and poor leadership or training. Inadequate documentation adds to the problems in case of dispute."

One of the reasons for this scenario has been the fact thatclinicians have kept themselves away from learning soft skills and unfortunately this aspect is still not a part of our medical curriculum. Added to this scenario is also the inability of the clinician to comprehend that delivery of healthcare service is now teamwork.

There is a dire need for medical professionals to make a sincere attempt to adhere to patient safety guidelines, improve on communication with patients and adopt efficient work processes. Patient safety has become a distinct healthcare discipline.

Clinicians are rather reluctant to learn from quality/hospital managers who have learnt on the job and are "specialists" in quality. Most of the time, these quality managers are much junior in hierarchical set-up of the hospital and are not able to convince senior clinicians about the need for following processes and documentation. On the other hand, senior administrators focus their entire attention on the balance sheet and consider issues raised by the quality manager as unnecessary. Needless to say, quality implementation can happen only with the active involvement of all stakeholders and with clinicians taking up the leadership.

The SOPs and guidelines have to be owned by all the members of a department/hospital. In most hospitals there is no concept of regular structured Departmental or Functional Group meetings (Operational Excellence Meetings).

The concept of Operational Excellence Meetings involves all departments in association with Quality team and Management representation and has a defined agenda for discussion at predefined and regular intervals. These meetings help clinicians and nurses beresponsible for quality while the role of quality personnel is to mainly audit the work; and to present the findings in these meetings.

In the mind of the public, the cost of private healthcare has become "unreasonably" expensive and the reason for this is perceived to be ethical and malpractice issues.

When something is termed as "unreasonable" there is a need to understand the foundation, ie, the cost of quality healthcare delivery. No doubt, this answer is not readily available as it is far more complex than it sounds. Various efforts have been made to work out package costs for various procedures. Here again, there are many variables depending upon, whether the hospital is secondary care or tertiary care, whether it is single specialty or multi-specialty, whether the hospital is located in tier-I, II or III city.

A few insurance companies have attempted to develop differential packages based on some of these considerations. In case of some of the government health insurance schemes, the costing of various procedures has been fixed on the basis of L1 (lowest) quote from the tenders invited from private hospitals. However, these efforts have not met the expectations of either the consumers or the health care providers.

The major cost heads factored for computing the operational cost of a procedure are generally taken based on the direct cost comprising of fee to the doctor and cost of drugs and other medical consumables. There are other innumerable indirect costs i.e. salary for allied healthcare workers including nursing staff, lease of land/rent, administrative cost, power and utilities, legal and regulatory compliance and the cost incurred on marketing and advertisement of services. The interest on the capital employed for plant and machinery and the working capital is also significant. Medical equipment is expensive, has a limited life resulting in depreciation adding to the cost.

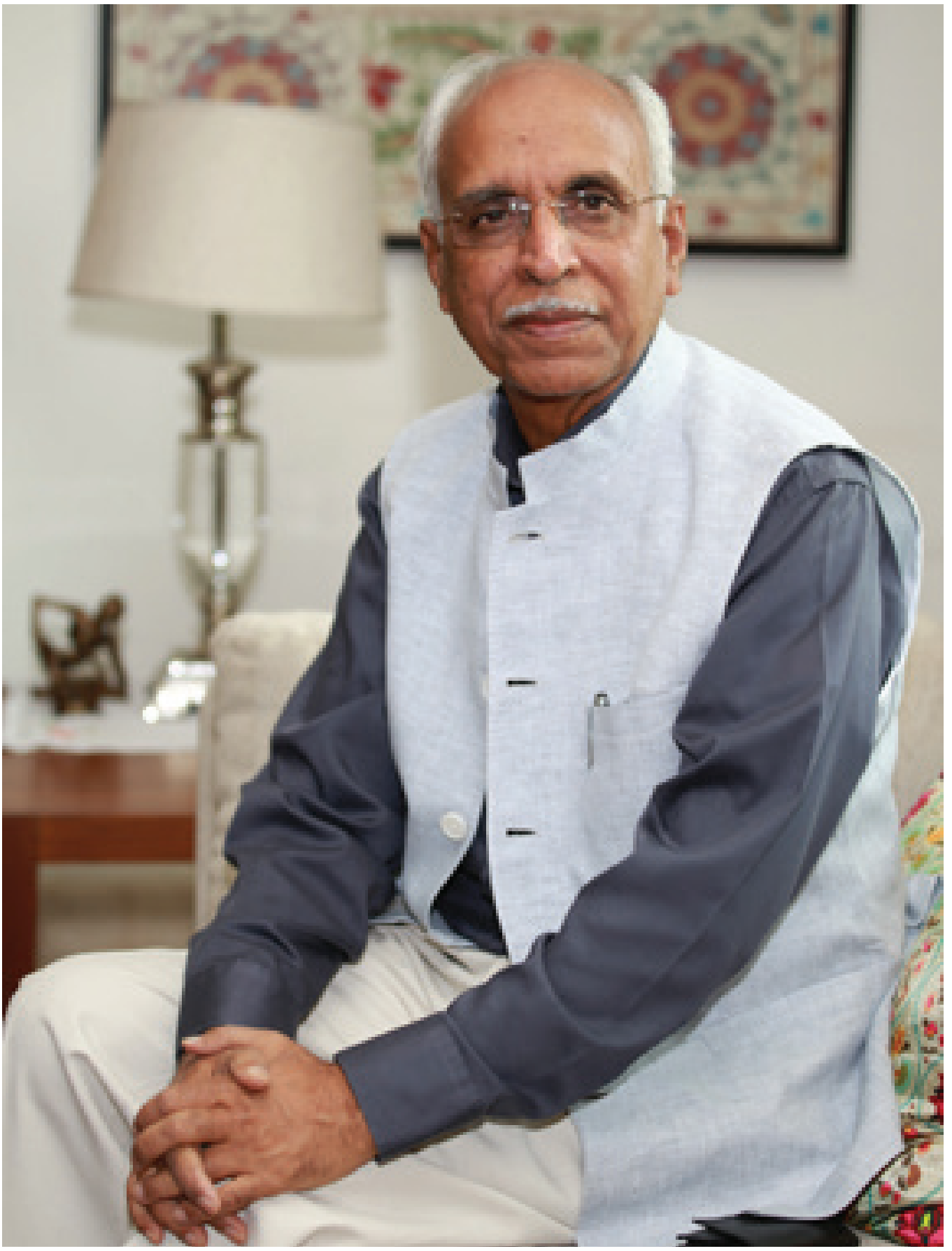
Pricing for most procedures is arbitrary and is based on market forces rather than on actual costing. Hospitals are making money on some components while losing on many others. The money making ones get highlighted while the very economical ones are not mentioned at all. Despite the perception that private hospitals make huge profits, the fact is that most of these establishments are financially stressed and ROI (Return on Investment) is very slow and poor.

Hospitals need to correct their billing and pricing procedures and the community must understand this and give time for this change to happen. One of the simple ways to understand the cost involved in healthcare delivery will be to analyze the expenditure in Government run hospitals.

Healthcare is also becoming an election agenda and an increasing number of government health insurance schemes are being launched for certain section of the society to meet with the intended objective of Universal Health Coverage. These are largely cashless schemes where patients can visit to hospitals of their choice and receive treatment for secondary/tertiary levels of ailments.

As per estimate made by World Bank, nearly 50% of Indian population is being covered under some or other kind of insurance. Yet, the flip side is that scheme owners (government) have been fixing the package rates for various medical procedures unilaterally without involvement of healthcare providers. Most of these rates are unviable for tertiary care/ super-specialty hospitals complying with quality standards as shown by a recent study conducted by Govt of Karnataka with support from IIMB, AHPI and CAHO.

With a large majority of population getting covered either through government insurance or through private insurance, hospitals will be left with little option but to accept patients at these unviable rates. While hospitals may manage some degree of sustenance through cross subsidizing from cash paying patients, it is a situation that will ultimately affect the quality of services for very obvious reasons. The Government and insurance companies therefore need to take cognizance of the fact that safe healthcare would cost definite amount, whereas absence of safety may cost lives and accordingly need to fix the cost of medical procedures on scientific basis on not on basis of tendering and perception.



Need to work towards **transparency**

Keep recent incidence of alleged medical negligence while treating the patients in mind, today it is important to know that Why is the Society Angry with Medical Professionals? To understand this question, we must revisit the time when doctors were revered and literally placed next to God!. From that time till now there have been many changes in the understanding of illnesses, medical practices, technology and thereby expectations of the medical profession……

BY DR VIJAY AGGARWAL

Impact on lifespan: As life expectancy rose from 30 years plus in 1947 to approx 70 years in 2017, our expectation too rose that 'all' will live long lives. This belief was further fuelled by the rapid advances in medical science and technology - death from illness slowly became more and more unacceptable!

These changes were reflected across the lifespan - thus, introduction and acceptance of immunization programs resulted in many children living after age five; and mothers lived after childbirth as institutional deliveries became common. Alongside, while all this was happening, there were huge advance in anesthesia and surgical techniques, and gradually more and more patients began seeking medical services in their own cities.

1990, most people who could afford it, travelled to the US for medical procedures. With rapid adoption of advanced technology by doctors in India and number of premier institutions like AIIMS becoming Centres for Excellence and Learning turned the tide, and people began to rely on the services provided by hospitals in India and by doctors who were Indian. Unfortunately, the state-run hospitals alone could not keep up with this increasing demand from the society and the private health care sector, sensing an opportunity, began investing in physical infrastructure and handsome remuneration to doctors and other health care human resources.

Result: Our society, once mortally afraid of undergoing even a simple surgery, reacted to the favorable outcome and increased quality and quantity of life, by undergoing complex surgeries when required. Medical practice assumed heroic proportions and even complex life threatening cases were being treated in hospitals in the country.

Expectations from medical treatment hadreached a scale, where death is considered to be the result of a mistake. While this may be true some of the time, in most cases it is not. Medical treatment and its impact of health and life, is a complex interaction of many factors, which cannot be attributable to one factor alone.

Thus, death while undergoing treatment of complex diseases is a possibility that family, relatives and friends may not be willing to accept, which becomes a major cause of anger when it happens.

Cost of treatment: This changing scenario of private sector providing tertiary care was associated with high cost of medical and surgical treatment. There was a very high setting up expense involved (approx Rs 1 crore per bed) as well as huge operating expense. There was no preparation of the community for such an expense especially when the medical treatment in Government hospitals was provided 'free' for the patient by gathering tax payers' money. On the other hand, the prompt, personalized, better service and treatment options in the private sector were appreciated by

ABOUT VIJAY AGARWAL

Dr. Vijay Agarwal is currently the President of Consortium of Accredited Healthcare Organization (CAHO) and Advisor to Max Healthcare focused on Quality & Business Excellence. He is an Advisor to Global Association of Physician of Indian Origin.

Over the last four decades he has played a key role in making an impact in improving the state of Healthcare in India. He played an anchor role in driving national programs such as Pulse Polio Program and introducing Centralized Waste Management Scheme in Delhi. These programs have had far-reaching impact.

He has been the chairman of Nursing Home Forum of Delhi for ten years from 1992 to 2002.

Dr. Agarwal is a graduate and post graduate in pediatrics from the prestigious Maulana Azad Medical College and continues to leverage his expertise as an excellent organizer, strategist & administrator.

He is playing an important role in promoting quality through accreditation in Healthcare. He is the co-chairman of Accreditation Committee of NABH.

He has conceived the idea of training quality implementers in the country. Already, more than 280 professionals have been trained in the basic program approved by NBQP. The advanced program has been approved by HSSC

(Health Sector Skill Council) and has 80 plus professionals who have been trained.

He is the founder President of Society for Child Development. The society works towards vocational training of mentally challenged children and their work has foot prints all over the country.

He is a recipient of Distinguished Alumnus Award of Maulana Azad Medical College and Lifetime Achievement Award of Indian Medical Association.

(The author is President of Consortium of Accredited Healthcare Organization (CAHO)

all, yet the high price was deeply resented and criticized especially when they were paying out of pocket and when comparisons were made with the 'free' government facilities.

Hospitalization expenditure is still hardly ever budgeted for in families and medical insurance has a low penetration. In spite of such a scenario, there has been a rapid expansion of private healthcare to meet the demand of the community. In fact, private hospitals in India are now attracting patients from overseas as the standards of service in these hospitals have increased and pricing was much lower in comparison. Interestingly, the pricing (even when they were paying 25 to 50% more) was considered very reasonable by International patients while domestic patients continued to complain!

One of the problems regarding pricing/billing has been lack of logic based billing in place of market driven pricing. In the current system (market driven), a hospital makes money on some products and loses money on many others. Fault finding by the community focused on areas where hospitals appeared to make high and unreasonable profits with no

discussion on its overall economic situation.

There needs to be a wider debate and discussion about the economics of providing good healthcare to people. A misgiving about the cost of medical services is at the root of major discontentment. In spite of the fact that private hospitals are being blamed for looting and fleecing, most hospitals are financially stressed and most medical professionals are not earning as much as professionals in other fields.

To address this, there is a need to work towards transparency in pricing and a change in the billing system based on actual costing. This may not bring down the prices but will help both hospitals and community to understand the rationale of pricing. This is applicable for both private and the government runs hospitals.

If transparent pricing is required for the private sector, then the same is also true for the government run hospitals, but this is often not asked for since the service provided by the latter is perceived to be 'free'. Thus, in comparison private sector charges appear to be high and unreasonable. Even after repeated requests, the government does not reveal its financial data to show how much are they spending for various procedures in their hospitals. Availability of this data will help everyone understand the relative cost and benefit of both.

A recent study done in Karnataka showed that Government is paying only about 50% as reimbursement for the cost of procedures, and hospitals are eventually loading their costs to regular paying patients.

This lack of transparency in billing and pricing by Government run hospitals results in anger in the community as they are unable to understand why the private sector charges are so high.

Medical Errors: The expectation from the treatment has reached a proportion where every unfavorable outcome is dissected till a mistake is found! There has been no exposure of the public that despite spending huge amounts and best intentions of doctors, medical errors will happen.

The fact that medical errors have become the 3rd leading cause of death in a developed country like USA is a pointer to the possible scenarios around the world especially in developing countries including India. One of the milestones to highlight that medical errors were not anecdotal but a regular feature even in the best of the hospitals was the famous article "To Err is Human" published by Institute of Medicine (IoM) in the year 2000.

The study estimated that as many as 98,000 people were dying every year from medical errors that occur in hospitals in the US - more than the death rate from motor vehicle accidents, breast cancer, or AIDS - three causes that receive far more publicattention. A 2006 follow-up of the IoM study found that medication errors were among the most common medical mistakes, harming at least 1.5 million people every year. The World Health Organization has recognized patient safety as an endemic issue of concern and has declared that healthcare errors impact 1 in every 10 patients around the world.

Nonetheless, these statistics are not a licence to kill for the medical profession; and the need to recognise that to increase the number of lives that continue to be saved is a call for administrators to do something more. The only way such errors can be minimized is to analyse the root cause. Most errors are due to systemic failures and hence punishing individuals is counterproductive.

To make systemic improvement, the Quality Council of India introduced NABH and NABL accreditation. Even after 12 years of the inception of this initiative, less than1% hospitals and labs are accredited. Them why some reasons are lack of skilled manpower and supporting infrastructure.

The need of the hour is raising the level of awareness in all sections of the population, the media with its reach and penetration would help by focusing on affirmative action that would encourage systemic improvements rather than wasting time on individual incidents and fuelling the now-common mistrust between the medical profession and public.

In addition the community needs to be educated that medical errors cannot be equated to criminal acts like murder and they need to be addressed through available redressal mechanisms like the Medical Council of India, consumer and/or other appropriate judicial forums

Extensive Churning

National Eligibility –cum-Entrance Test (NEET) has come out extensive churning to improve the quality of new entrant to medical profession. The efforts of MCI, Ministry of Health and Family Welfare (Govt. of India) and Hon'ble Supreme Court is undoubtedly laudable to bring all the desirous candidates in our country under one ambit of NEET. Since NEET 2017 is a first experience but the lesson learnt from it would further help in improving the scope of NEET in identifying the good quality of students in medicine…….

BY DR PROF. RAJ BAHADUR

Quality is a measure of excellence or state of being free from deficiencies and significant variations. It is brought about by strict and consistent commitments to certain standards that achieve uniformity. Medical profession in that matter deserves human resource which does not compromise the quality health care. This all has been enshrined in "Hippocrates Oath" that there should be "Non-maleficence " i.e. "to do no harm". To ensure it, the society expects that medical professional should be well versed with the latest knowledge and skill.

Although all human beings are vested with sufficient brain power to acquire knowledge

NEET (UG) – 2017

Category	Registered Candidates	Appeared	Absent	Qualified
Male	497043	473305	23738	266221
Female	641839	616772	25067	345313
Transgender	8	8	-	5
Total	1138890	1090085	48805	611539*

Category	Qualifying Criteria	Marks Range	No. of candidates
OTHERS	50th Percentile	697-131	543473
OBC	40th Percentile	130-107	47382
SC	40th Percentile	130-107	14599
ST	40th Percentile	130-107	6018
UR & PH	45th Percentile	130-118	67
OBC & PH	40th Percentile	130-107	152
SC & PH	40th Percentile	130-107	38
ST & PH	40th Percentile	130-107	10
TOTAL	611739*		

and skill, but when it refers to taking care of human life, acquiring of knowledge in Medicine should be excellent in quality. In addition, more important is to have inculcated the quality of compassion.

While the principle that education must not be a commodity that can be purchased without merit is a sound one but the stark reality of medical education bazaar in our country has dangerous repercussion.

National Eligibility –cum-Entrance Test (NEET) has come out following extensive churning to improve the quality of new entrant to medical profession. The efforts of MCI, Ministry of Health & Family Welfare (Govt. of India) and Hon'ble Supreme Court is undoubtedly laudable to bring all the desirous candidates in our country under one ambit of NEET. Since NEET 2017 is a first experience but the lesson learnt from it would further help in improving the scope of NEET in identifying the good quality of students in medicine.

Analysis of data, depicted by CBSE which conducts the NEET, to underline the issue of quality of the new entrants into medical profession reflect the

health care delivery of country.

According to this data, 11,38,890 candidates were registered for NEET-2017. Of these 10,90,085 appeared in the NEET examination. Among these, 6,11,739 candidates were declared as NEET qualified on the basis of minimum qualifying criteria of NEET – UG 2017(50/40th percentile). It was further observed that as many as 5,43,473 candidates had qualifying criteria as 50th percentile with marks range between 697 – 131 out of total 720. While in the cohort of 40th percentile among various categories the marks range between 130 - 107 out of 720. (Candidates over 130 marks in case

NEET (UG) – 2016

Category	Eligible Regd. Candidates	Appeared	Absent	Qualified (15%)	Qualified (Over All NEET)
Male	3,69,649	3,37,572	32,077	11,058	1,83,424
Female	4,32,930	3,93,642	39,288	8,266	2,26,049
Transgender	15	9	6	1	4
Total	8,02,594	7,31,223	71,371	19,325	4,09,477

Category	Qualifying Criteria	Marks Range	No. of Candidates
OTHERS	50th Percentile	685-145	171329
OBC	40th Percentile	678-118	175226
SC	40th Percentile	595-118	47183
ST	40th Percentile	599-118	15710
UR & PH	45th Percentile	474-131	437
OBC & PH	40th Percentile	510-118	597
SC & PH	40th Percentile	415-118	143
ST & PH	40th Percentile	339-118	36

FRAME ITS OWN RULES & REGULATIONS

Dr (Prof) is a Vice Chancellor, Baba Farid University of Health Science, Faridkot, Punjab. The first and foremost activity for this University is to frame its own Rules & Regulations, which were pending since its inception i.e. year 1998. The resources of the University, which were absolutely choked could be revived only by pleading the Govt. to release funds, which has happened after many years of inception. Great thrust has been put to improve the Examination System, as earlier, the University used to mere compile the results, rather than conducting the examinations. Several reforms in the examination system have been designed, which has started producing its results and from January, 2016, the University envisaged to have digital transfer and digital evaluations of the question papers, which shall result into absolute unbiased, transparent pattern of examination and its evaluation. The concept of Bio-Ethics is being introduced by having a MoU with UNESCO Chair and such activities shall place the University at a higher level.

Along with continuing best practice in his field Dr Raj Bahadur has also served as best administrator on various committees of one of the prestigious government institutions like New Delhi based Safdarjang Hospital and Maulana Azad Medical College, Govt Medical College and Hospital, Chandigarh, RSIC, Mohali and PGIMER, Chandigarh.Medical Superintendent, Government Medical College & Hospital, Chandigarh. He was responsible for supervising of day to day functioning of this state of the art hospital which is a role model for MCI to guide other hospital to emulate. As a Medical Superintendent, He was involved in selections of Group C and D employee in the hospital, maintenance of their service record and associated issues pertaining to their annual increments and establishment.

He played an active role in the construction and planning of the hospital during these three and a half years when the main hospital block got completed and commissioned adding 300 beds. Besides this, 14 operation theatres – 7 fully equipped world class operation theatres were made operational. Cobalt unit, linear accelerator, dialysis unit and a large number of other facilities were added to further strengthen the services available. In view of the financial constraints he started a process of involving the private sector in providing diagnostic facilities at GMCH. Installment of latest CT scanning machine at this hospital under this scheme is one of my biggest contributions towards improving diagnostic facilities. Establishment of a biomedical waste management system including a recycling project to recycle organic waste called "Waste to Wealth- Eco Innovative Project" which meets all the statutory requirements is one of the many projects which

were started and completed in my tenure.

Dr Raj Bahadur is also Project Director at Regional Spinal Injuries Centre, Mohali since 2000 to continue. Running this institute from its inception and it is coming up as an exclusive Centre for spinal ailments. Among the four such centres sanctioned by Govt. of India, this is main one in the Northern part of the country which has created niche for itself. It is catering to the patients ofJammu Kashmir, Punjab, Haryana, Himachal Pradesh, Uttar Pradesh & Rajasthan.

The patients of Spinal Injuries and Spinal Ailments are treated here. It has a robust Physiotherapy Unit for rehabilitation of spinal injury victims and other orthopedic ailments. Lakhs of patients have been provided the medical and surgical care and by now, more than 1000 major Spinal Surgeries of Spinal Cord and Spinal Ailments have been done.

Outpatient Clinic is seen to be believed, where Prof. Raj Bahadur examines more than 250 patients on Saturday including operating two major Spinal Surgeries. This clinic runs from 8:00 a.m. till midnight every week. On Sunday again, the surgeries are done from 9:00 am to 5:00 p.m. It is becoming self sufficient with the meager charges i.e. Rs.25000/- for Surgery, Medicine, Stay in Hospital for 15 days, where the standard of Hospital is like a Corporate Hospital.

This activity to work even on weekends, when most of the people enjoy is persistent protocol

of Prof. Raj Bahadur. He is serving at this place honorary since 2000.

of reserved category were considered against General Category, wherever eligible).

From these figures, it is evident that in the group of 50th percentile, candidates securing as high as 96.8% marks and getting as low as 18.2% marks were eligible for admission to MBBS course. This group had as many as 5,43,473 candidates. Similarly, in the group of 40th percentile, the maximum marks obtained was 18.05% of total and the low was 14.8% . These were the 68,266 candidates.

Similarly, in the year 2016, a total of 8,02,594 were registered candidates of which 7,31,223 appeared in the NEET examination. Among these, 4,09,477 candidates were declared as NEET qualified on the basis of minimum qualifying criteria of NEET – UG 2016(50/40th percentile). It was further observed that as many as 1,71,329 candidates had qualifying criteria as 50th percentile with marks range between 685 – 145 out of total 720 marks. While in the cohort of 40th percentile among various categories the marks range between 678-118 out of total 720. From these figures, it is evident that in the group of 50th percentile, candidates securing as high as 95.1% and as low as 20.1% were eligible for admission to MBBS course. This group had as many as 1,71,329 candidates. Similarly, in the group of 40th percentile, the maximum marks obtained were 94.1% and lowest were 16.3% marks and these were 2,38,148 candidates. (Here the candidates were considered in their respective categories as compared to the data reflected in NEET 2017, where the candidates of reserved categories were shown to be considered in general category.

The above statistics reveals that for the academic year 2017-18 the candidates securing 18.2 percent marks, i.e. 131 out of 720 in General category and 14.8 percent marks, i.e. 107 out of 720 was eligible for admission. Similarly, in the academic

year 2016-17, the candidates securing 20.1 percent marks, i.e. 145 out of 720 in General category and 16.3 percent marks, i.e. 118 out of 720 was eligible for admission.

NEET which is a competitive eligibility examination has allowed the admissions of candidates who were lower in ranks, which probably would have never ever been admitted in Medical Schools since from 1947 to 2017. The one who loses out for admission following NEET, must often be the weakest students in terms of money and influence, whose only asset may be merit, that probably does not count much in our country.

The very purpose of the competitive examination stands defeated, when one has to fill the required number of seats in a medical college with all and sundry, rather than best available candidates under the guise of 50th/40th percentile.

At this juncture, it appears that to ensure that the admissions are of meritorious candidates, only three times the sanctioned intake capacity in MBBS course in the country should be deemed to be eligible irrespective of the percentile secured in the NEET examination.

The Government at it's end, in order to provide sufficient doctors in the healthcare delivery, apparently matching the WHO norms adopting two prong strategy to increase the number of seats and simultaneously is reducing the eligibility merit in the qualifying examination in both U.G. and P.G.

The feedback taken from the meritorious students, who had forgiven the seats in private institutions despite higher merit position indicates that they could not afford fee structure of private institutions and deemed universities. Therefore, the methods may be devised to cap the fee of Private Institutions/Private Universities/ Deemed Universities, so that the Govt. is not compelled to lower the eligibility score.

Hence, in order to justify one's decision of increasing the number of medical seats in the country to strengthen the healthcare delivery, we must look for other avenues like opening of new Govt./Govt. aided Medical Colleges with affordable fee structure (as has been recently adopted by Northern three States like Punjab, Haryana & Himachal Pradesh), rather than lowering the qualifying merit of NEET to fill the vacant medical seats.

Your Guide to Healthy Living

Subscribe to Double Helical Magazine Now

Subscription Offer

Duration (year)	Issue	Newsstand Price INR	Subscription Price INR	Savings Price INR
1	12	1200	1020	180
2	24	2400	1920	480
3	36	3600	2520	1080

Please fill this form in Capital Letters

First Name..... Last Name.....

Designation/Profession.....

Mailing Address.....

City..... Postal Code.....

State..... Country.....

Telephone..... Fax.....

Email..... Website.....

I/We would like to subscribe for 1☐ 2☐ 3☐ Year

I am encloing a cheque/DD No. ..... Drawn on ..... (Specify Bank)

Dated.....In favour of Double Helical Pvt. Ltd. payable at

Ghaziabad For Rs .....only

Advertisements & Marketing
Abhinav Kumar, Gaurav Gautam
Email: doublehelicaldesign@gmail.com, sales@doublehelical.com

Double Helical is owned, printed and Published monthly. It is printed at Polykam offset, Naraina Industrial Area Phase 1, New Delhi-110028, and published from G-1, Antriksh Green, Kaushambi, Ghaziabad-201 010. Tel: 0120-4219575, 9953604965.
Contact us
Email: editor@doublehelical.com, doublehelicaldesign@gmail.com
Website: www.doublehelical.com, www.doublehelical.in

Recipient of Double Helical State Health Awards 2017 for Haryana, Punjab and Himachal Pradesh chapter

Dr S K Nanda is a State President, Indian Medical Association, Himachal Pradesh and runs Nanda Multispecialty Hospital, Hamirpur Road, Una, HP. He did his M B B S degree from, Dayanand Medical College, Ludhiana (Punjab). He was Medical Officer/Surgical Specialist in Himachal Pradesh Health &Family welfare Department during1978 to 2001. After completed Master of surgery course during1982-1984, he got WHO Fellowship MIS, PittsBurg, USA. Voluntary retired from government health services in 2001, Dr Nanda runs Nanda Hospital in Una very successfully. He is associated with many social organizations to explore his credibility among masses. Dr S K Nanda is well known for his outstanding contribution in medical field by organizing number of health programmes at national level. He is also chairman of Nanda Institute of Nursing.

Vipul

RERA
REGISTRATION NO.
131 OF 2017
FROM HRERA

Aarohan

Rise Above

At Aarohan you don't seek nature. You live with it.

ENTRANCE


SKY HUB

THE LOCATION

Well established, the posh address of Golf Course Road, Gurgaon

Rapid metro to be operational

Soon to become signal-free 16 lane expressway

*THE FACILITIES

Over 1 lac sq.ft. (approx.) of multiple social hubs

A unique offering of Sky Hub with Social, Wellness and Tranquility zones

Leisure hub with a Retreat Pool at the ground level

Fully equipped business centre

THE RESIDENCES

3 towers; G+34 and G+36 Storey high

Well planned layouts

THE RESOURCES

pnb Housing Finance Limited
Ghar Ki Baat

The project is funded by PNB Housing. all the required resources i.e. men, machines, methods, material and money are well in place to deliver a spectacular living experience.

THE CONSTRUCTION

LEIGHTON

World's leading construction company Leighton has been entrusted with construction of the project.

HOME LOAN AVAILABLE FROM

pnb Housing Finance Limited Ghar Ki Baat | HDFC HOME LOANS WITH YOU, RIGHT THROUGH | ICICI Bank khayaal aapka | Indiabulls HOME LOANS

On offer are 3 BHK luxury residences in Phase-I

Call: +91 9555 600 200 I e-Mail: aarohan@ vipulgroup.in I www.vipulaarohan.in

*Legal Disclaimer: License No. & date: License nos. 168,169,170,171 and 172 of 2004 all dated 16.12.2004 License Nos. 545 and 546 of 2006 both dated 13.03.2006; RERA Registration No. & Date : Regd No. 131 of 2017 dated 28.08.2017 in respect Phase - 1 of the Project Residential Plot measuring about 19.244 acres; Name of Developer to whom the licenses have been granted- M/s Vipul Limited and Moon Apartments Pvt. Ltd; The Developer has obtained the Zoning plan approved for the entire project vide Memo. No ZP/170/AD(RA)/2014/17497 dated 06.08.2014 and Building Plan ONLY for the part of the project vide Memo No. ZP-170/SD(BS)/2015/18566 dated 29.09.2015 (which part of the project hereinafter referred to as Phase-I); Total No. of Residential Units 458 out of which 76 are for Economically Weaker Section; Name of Development-"Aarohan Residences" , Sector -53, Gurgaon, Haryana, India. Allotment of the Units shall be made out of the proposed development of Phase-I only. The Developers may either commence the development of other future phase(s) upon approval of building plan(s) of other future phase (s) simultaneously with Phase I or after completion and/or the handing over the Units proposed to be developed in Phase I and in view of such Specific Disclosure by the Developer ,the Intending Applicant has to undertake and confirm that he/she/they/it shall not in any manner whatsoever object or raise issues/claims that the development and construction activities in relations to other future phase(s) commencing or continuing after the completion and/or the handing over the Units proposed to be developed in Phase I is/has been a cause of nuisance or hindrance , obstacles and hardship to the right of ingress and egress of the residents of Phase I of the project or otherwise creating obstruction or is hazardous or otherwise oppose to peaceful environment and living in the gated community or threat to the safety and security of the residents/ Units forming part of the Phase I and/or the project. All the areas and facilities including without limitation all recreational facilities and activities at and/or under the "SKY HUB" and "AAROHAN RETREAT" (hereinafter referred to as the "Facilities") other than the areas and facilities considered for calculating the Area of the Unit are specifically excluded from the scope of allotment, which Facilities may be developed simultaneous to or after the development of the Phase I of the Aarohan Apartments. It is further clarified that the Facilities may have been located and/or developed at more than one location in the Aarohan Residences. It is further specifically clarified that the Developer reserves its right to name or rename any of the Facilities. Since the facilities have not been and shall not be included in the computation of Area for calculating the sale price of Unit, the right, title, ownership, possession and interest of the Facilities shall vest solely with the Developer and/or their usage and manner/ method of use shall be at the sole discretion of the Developer . Projects has been mortgaged to PNB Housing Finance Limited and with second ranking charge in favour of Catalyst Trusteeship Ltd and may further be Mortgaged to other financial institutions /banks and NOC will be provided, if required, for sale, transfer and conveyance of the units to be constructed in the Phase I. **General Disclaimers:** All plans and images shown in this brochure are indicative only and are subject to change(s) at the discretion of the Developer or competent authority. All images are artistic rendition of proposed development and are for representation purposes only. All floor plans, site plans, specifications, dimensions, designs, measurements and locations are indicative and are subject to change as may be decided by the Developer or competent authority. Revision, alteration, modification, addition deletion, substitution or recast, if any, may be necessary during construction. Sizes/dimensions mentioned in all drawings/documents are all of unfinished rooms and these may vary post finishing/plastering/paneling/cladding, etc. Marble/Granite/Stone being natural material have inherent characteristics of color and grain variations. Specifications are indicative and are subjected to change as may be decided by the Developer or competent authority. Marginal variations may be necessary during construction. The brands of the equipments/appliances and the specifications and facilities mentioned are tentative and liable to change at sole discretion of the Developer. The Developer reserves the right to get the area, plans, etc revised which will be subject to the approval of the competent authority/ies.

THE FOOD MAGIC

Most health-conscious people are familiar with the saying, "You are what you eat." Food is the best medicine, the longer your waist line, the shorter your life line." These are ancient sayings but today the nutritional scientists have confirmed that how true these are……

BY DR HARMOHAN DHAWAN

Humans are primates and all of them eat the natural vegetation. Today we have hundreds of research studies that show that most common ailments in the world today are the result of unhealthy foods we eat. Nutritional science have provided extensive information that a diet rich in micro nutrients, fibre, anti-oxidants and phytochemical obtained from a variety of plant foods, can affords us the ability to not only prevent but also reserve life style diseases naturally and live a HEALTHY LONG LIFE

Since food is the root cause of good and bad health. Let's understand the various foods and its composition which is responsible for weight gain, obesity and other life style diseases

There are two types of nutrients in foods we eat:-

A. Macro nutrients- These are the nutrients that supply us the calories which our body needs for energy. They are carbohydrates, protein and fat. All

the three are present in various combinations in the various type of foods we eat. One gram of fat supplies 9 calories whereas we get 4 calories each from 1 gram of carbohydrate and protein.

B. Micro nutrients-These are the nutrients which are present in very small amounts. They include 14 types of vitamins (A,B,D etc) and 16 essential minerals (calcium, potassium, magnesium etc). All these are essential for assimilation, elimination and growth. Both vitamins and minerals were discovered in the 1940's. In the last decade or so the nutrition scientists have discovered thousands of phytochemical which play a much more important role even more than the vitamins and minerals do. The micro nutrients have no calories.

We must understand that both macro and micro nutrients are important for optimal health. Excess or deficiency of any of these nutrients will result in overweight, obesity and other related medical conditions.

We at Dhawans Nature Cure based on Gender, Age, Height and Weight and Medical conditions design an individualized menu. In our therapy the major stress is laid on micronutrients, which are primarily responsible for assimilation,

elimination and growth. For optimal health, micronutrients rich diet along with physical activity like yoga, swimming, cycling, brisk walk, hiking etc are of paramount importance.

When you eat a micronutrient rich diet, you cab expert a significant drop in Blood pressure, decrease in cholesterol and reversal of heart disease and also significant relief from headache, constipation, diabetes, heart disease and bad breath. Nutritional excellence can enable you to reverse diabetes, heart disease, various types of cancers and it also help us to get rid of calories and dieting, through this therapy you can achieve optimal HEALTHY LONG LIFE free of the fear of heart attack, stroke, diabetes and various types of cancers. To achieve nutritional balance for optimal health, we have designed the DHAWANS FOOD PYRAMID which has taken into consideration the various recommendations of the World Health Organization (WHO), the Indian Council of Medical Research (ICMR's). "Nutrient requirements and Recommended Dietary Allowances (RDA) for Indian" and also own experience with hundreds of patients at DHAWANS NATURE CURE.

*For optimal health we recommend that all animal products like (chicken, meat, egg, milk, butter, gee, panner) should be avoided. In the Dhawan food pyramid we have shown Fish and eggs which is for the meat addicts only.

Now let's understand the individual nutrients in various foods and there functions in our body.

Human life span is 100 plus years. Our grandparents have lived more than 100 healthy years the reason for that was that they were leading a simple life, eating natural foods and also used to do hard work. With the recent life style changes we have gone away from the nature and depending upon the processed foods and not natural foods which have resulted in our reduced life span. Every second person is suffering from one disease or the other like:- Diabetes, Obesity, Breast cancer, Colon cancer, Heart diseases, Stroke, Childhood Asthma, Constipation, Lipid profile (high blood pressure, cholesterol, triglycerides),

Acidity, Heartburn.

Why people are suffering from the above diseases?

Scores of research study the world over has established that it is the wrong foods, over eating habits, Stress and sedentary life style primarily responsible for these diseases.

WHAT TO EAT

Most foods in their natural form are considered to be "good foods" and all those foods which have been processed are "bad foods" as they have been devolved of the vital vitamins, minerals and fibre. During processing various preservatives, additives, sodium and sugar etc. are added to increase the shelf life of the products which are harmful to your health.

HEALTHY FOODS

All foods in their natural form are healthy foods including whole grains, Brown rice, Whole pulses, Fruits, Vegetables, Soya milk, Tofu, Fish, Eggs, Nuts, Seeds and Olive oil as cooking medium. The daily consumption of a variety of these foods provides you all the macro and micro nutrients to maintain good health.

UN HEALTHY FOODS

All processed foods including sugar, white flour (Maida) polished rice, washed pulses, red meat, milk, butter, ghee, cheese, ice-creams, cola, candy, bakery products and hydrogenated oils are considered bad foods. Regular consumption of these foods is the route cause of many diseases. To remain healthy our body needs six macro and micro nutrients that is protein, carbohydrates ,fats, vitamins, minerals, fiber and of course water.

The above nutrients are found in various types of food used to eat but their quantity varies in various foods. It is the important that we must eat a variety of food so that our body gets all the above nutrients to remain healthy. If there is deficiency of any of the above in our eating plan we will attract one or the other disease. To give an example grows two plants of equal size in two different pots. Give fertilizer and water to one pot and only water to second pot after a few days you will see the pot with fertilizer & water has a healthy growth where as the other one because of lack of the nutrients has a retarded growth.

(The author is Naturopathist and Ex Civil Aviation Minister, Govt of India)

Is it under diagnosed or over treated?

Gastro- Esophageal Reflux (GER) is a common but under-diagnosed condition in children. There is a low awareness about GER in children in India although the available data indicates that prevalence of GERD symptoms among Indian infants are almost the same as in Western infants. There are fundamental differences in the pathophysiology, clinical features, diagnostic evaluation and treatment in children and adults…….

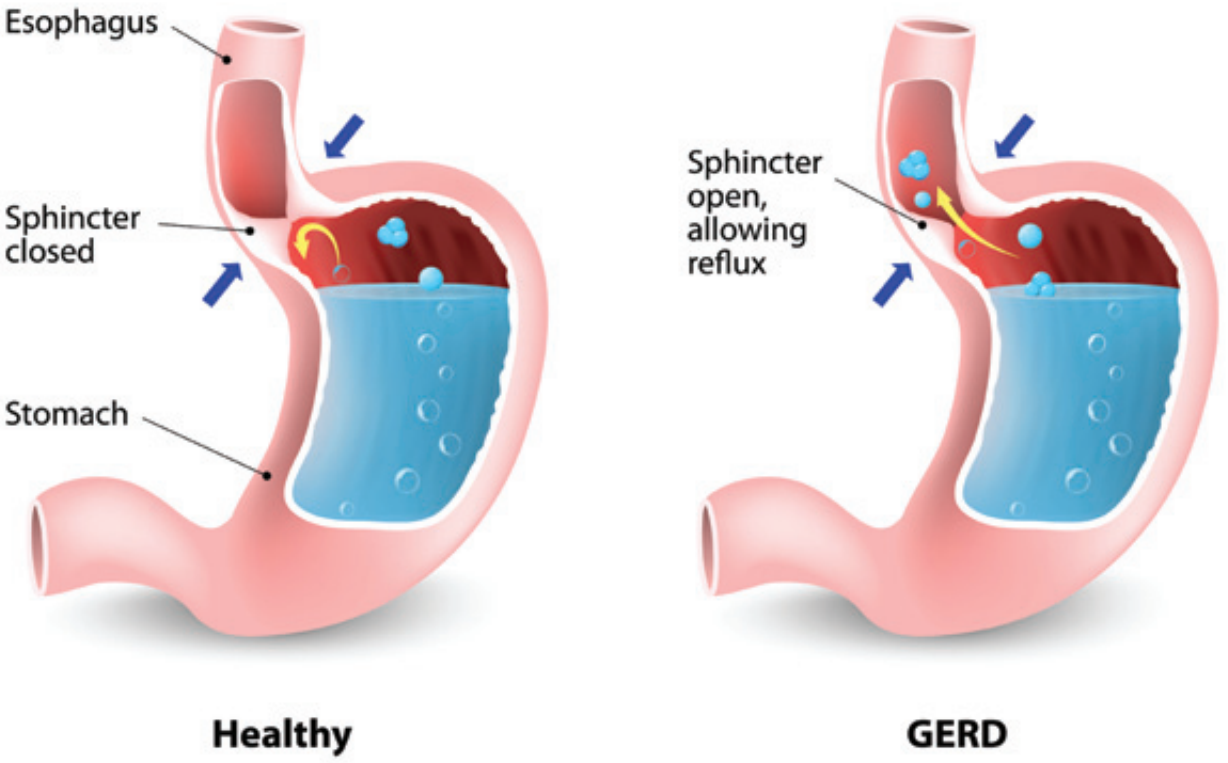
BY DR. NEELAM MOHAN

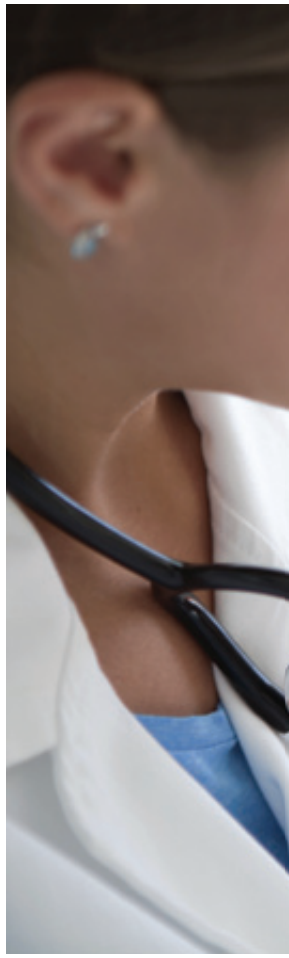
Reflux is a physiological phenomenon occurring in every individual. Hence it is important to distinguish a benign and developmentally normal physiological event from a possible pathological GER. Most of neurologically normal children with GER have an excellent prognosis. Only children with 'red flag 'signs require intervention.

DEFINITIONS

Regurgitation (spitting-up) is passage of refluxed gastric contents into the oral pharynx and mouth. Vomiting is defined as expulsion of the refluxed gastric content from mouth. Rumination is characterized by the voluntary, habitual regurgitation of recently ingested food that is subsequently spitted up or re-swallowed. Gastro-esophageal reflux is defined as involuntary passage of gastric contents in the esophagus. Gastro-esophageal reflux disease (GERD)-is defined by presence of reflux esophagitis and / or when it causes reflux symptoms that is sufficient to impair and/ or when it is associated with a risk of long term complications.

Clinical features vary according to age of the children. In general, older children manifest gastro esophageal reflux disease similar to the adults. If regurgitation is associated with any 'red flag 'signs like growth failure, acute life threatening events , apnea, stridor, recurrent pneumonia then they need evaluation and treatment. Older children usually present with heartburn, abdominal pain, regurgitation, dysphagia and complications such as Barrett's





esophagus, stricture. Their symptoms can be episodic with intermittent apparent disease free period.

DIAGNOSTIC EVALUATION

As most infants and children with symptoms of GER are thriving and healthy, they require no diagnostic or therapeutic maneuvers other than a careful history and physical examination, with appropriate reassurance to the parents if anxiety is present. Infants and older children who have significant neurologic deficits or psychomotor retardation often have significant GER and may suffer from serious sequelae secondary to GER.

In most adolescents with regurgitation and heartburn, a good history and physical examination are usually sufficient to diagnose GERD, recognize complications, and initiate treatment. Further diagnostic testing is required only in patients with symptoms of odynophagia, dysphagia, upper gastrointestinal bleeding,

CLINICAL PRESENTATIONS

TABLE – I SYMPTOMS RELATED TO REFLUX ESOPHAGITIS

- Epigastric pain
- Heartburn
- Non-cardiac chest pain
- Dysphagia
- Hematemesis /melena/ Anemia
- Excessive crying/ irritability

TABLE –II : EXTRA-ESOPHAGEAL SYMPTOMS

Otorhinolaryngeal	Pulmonary	Others
Chronic otitis media Chronic rhino-sinusitis Hoarseness Globus sensation Persistent cough	Asthma Recurrent pneumonias Persistent respiratory symptoms	Acute life threatening events Bradycardia Abnormal posturing/Sandifier's syndrome Dental erosions/ water brush

weight loss, atypical chest pain, respiratory disease or an inadequate response to empiric therapy. Patient with these alarm signs require endoscopic evaluation or evaluation directed at exclusion of other causes of these symptoms.

DIAGNOSIS

A good history is mandatory for the diagnosis of GERD. There is no role of barium swallow in diagnosis of GERD. Technetium Scan is usually done in infancy. It has a sensitivity of 55%-80% and is good to pick up pulmonary aspiration. UGI endoscopy and biopsy is indicated for persist end symptoms and is also useful in ruling out other differentiate diagnosis such as allergic enteropathy. 24 hrs impedance pH metry is the gold standard and is ideal for atypical symptoms.

PHARMACOLOGIC MANAGEMENT:

If conservative measures fail and other differential diagnosis have been considered and excluded, pharmacological therapy is warranted. One algorithm allows for a trial of medical therapy before any diagnostic evaluation is performed. If the patient improves with the use of medications, no further evaluation is necessary. However, if no improvement occurs, a diagnostic work-up should be performed. It is debatable whether medical therapy should be initiated before diagnostic evaluation or vice-versa. The pharmacological therapy includes prokinetics and antacids and agents that suppress gastric and production like H2 receptor antagonists and proton pump inhibitors.

Histamine-2 receptor antagonists (H2RAs) decrease acid secretion by inhibiting histamine-2 receptors on gastric parietal cells. Gastric pH begins to increase within 30 minutes of administration and the effect lasts for 6 hours.. Advantage of H2RAs is its quick action and its causes partial block in acid secretion. It's best for mild to moderate cases. However tachyphylaxis, or diminution of the response and escape from its acid-inhibitory effect have been observed after 6 weeks

PPIs inhibit acid secretion by blocking Na–K- ATPase, the final common pathway of parietal cell acid secretion, often called the proton pump. PPIs produce higher and faster healing rates for erosive esophagitis than H2RAs. The superior efficacy of PPIs is largely because of their ability to maintain intragastric pH at or above 4 for longer periods and to inhibit meal-induced acid secretion, a characteristic not shared by H2RAs. The most common side effects include headache and diarrhea, rarely decrease in serum vitamin B12 levels. Unnecessary use of PPI should be avoided as long term renal concerns are with reported in the recent time.

Surgery: An alternative treatment in patients who have chronic reflux with recalcitrant symptoms includes antireflux surgery, including open and laparoscopic versions of Nissen fundoplication. Some of the common indications for surgery are failed medical management, patient preference for surgery despite successful medical management, complications of GERD, medical complications attributable to a large hiatal hernia, or atypical symptoms with reflux documented on 24-hour pH monitoring . Candidates for surgery should normal esophageal motility by manometry. Postsurgical complications are common like 10% having solid food dysphagia and 7 to 10% of patients have gas bloating but these are manageable.

(The author is Director and HOD, Department of Pediatric Gastroenterology, Hepatology & Liver Transplantation, Medanta Superspeciality Hospital, Gurgaon)

Glimpses of Double Helical State Health Awards 2017 for Haryana, Punjab and Himachal Pradesh chapter


Double He


Double Helical


Double Heli


Double He


Double Helica


ouble Helical


Double Helical


Double Helical


Double Helical

SAVIOUR

GAURS
ur own world

GAURS

हम साथ साथ हैं

LIMITED PERIOD OFFER

GST पर 100% छूट

+ एक साल के लिए मुफ्त मेंटेनेंस* + मुफ्त कार पार्किंग*
+ मुफ्त क्लब मेम्बरशिप* + सिक्यूरिटी गेट मुफ्त (केवल मेन गेट पर)*
+ पंखे और फैंसी लाइट्स मुफ्त* + किचन में मुफ्त RO*

VALID ON APARTMENTS
ASSURED RENTAL FOR 2 YEARS
AFTER POSSESSION

GAUR YAMUNA CITY

AN INTEGRATED TOWNSHIP AT YAMUNA EXPRESSWAY

कीमतें टेक ऑफ करने से पहले बुक करें अपना घर

CLOSE TO UPCOMING
NOIDA INTERNATIONAL AIRPORT

PLOT	APARTMENTS	SHOPS
₹26.05 LACS ONWARDS ALL INCLUSIVE	₹30.22 LACS ONWARDS ALL INCLUSIVE	₹26.54 LACS ONWARDS ALL INCLUSIVE

ACTUAL IMAGES


YAMUNA DWAR (ENTRANCE)


VILLA NO. 14


16TH PARKVIEW APARTMENTS

CELEBRATE THIS NAVRATRAS WITH GAURS GROUP

FACILITY PLOTS ALSO AVAILABLE FOR
• GROUP HOUSING • SCHOOL • HOSPITAL • COMMUNITY CENTER
• RELIGIOUS BUILDING • CONVENIENT SHOPPING CENTER

www.up-rera.in ≫ 2ND PARKVIEW : UPRERAPRJ4464 • 32ND PARKVIEW : UPRERAPRJ4193 • 16TH PARKVIEW : UPRERAPRJ6801 • GYC GALLERIA : UPRERAPRJ4602

✆ +91 92122 88887

GAURS GROUP | Corp. Off.: Gaur Biz Park, Plot No-1, Abhay Khand II, Indirapuram, Ghaziabad-201014 | Site. Off.: GYC, Sec-19, Sports City East, Yamuna Expressway, Distt.- Gautam Budh Nagar (U.P.) | CREDAI | GAURS CARE

Loan available from leading banks and financial institutions.

#GAURSFORU | 22 YEARS OF COMMITMENT | 44 SUCCESSFUL PROJECTS | 35000+ DELIVERED UNITS | RECORD HOLDER FOR MAXIMUM DELIVERED UNITS IN A SINGLE YEAR (NDTV)

sayahomes.in

SAYA
RELATIONSHIPS FOREVER

TALLEST TOWERS AT
THE BEST LOCATION
OF INDIRAPURAM

STRUCTURE COMPLETED OF 3 TOWERS
100% ALL INCLUSIVE
2 BHK ₹ 63* LACS

- Wow location close to proposed lane NH-24
- Widening of National Highway 24 in progress
- Only 5 minutes drive from Delhi
- Surrounded by most happening operational shopping malls
- Quality construction with Modern Korean Technology
- Earthquake resistant structure approved by IIT Mumbai
- Semi furnished 2/3/4 BHK residences
- Possessions starting from December, 2018
- Option to flexible payment plans

Desire Residency — TIMELY DELIVERED

SAYA Z — DELIVERED BEFORE TIME

SAYA ZION — TIMELY OFFERED FOR POSSESSION

SAYA GOLD AVENUE
AN ASSET FOREVER
INDIRAPURAM

COMING SOON... • COMMERCIAL • EDUCATION

LOADS OF AMENITIES

SEMI-OLYMPIC SIZE SWIMMING POOL | HEALTH SPA WITH STEAM, SAUNA & JACUZZI | GYM & INDOOR GAMES AREA | ACTIVE SPORTS LAWN
THREE TIER SECURITY | CAR PARKING IN THREE BASEMENTS & STILT LEVEL | SUFFICIENT NO. OF LATEST ELEVATORS | WATER SOFTENING PLANT
100% POWER BACK UP | PROVISION FOR PNG | FIRE FIGHTING SYSTEM | RAIN WATER HARVESTING

eightowls.in

* Terms & Conditions Apply

Call **9999955678**

Home Loans Available From

YES BANK | HDFC | ICICI Bank Home Loans | Bank of Baroda | pnb Housing | AXIS BANK | Allahabad Bank

SAYA HOMES PVT. LTD.
Corp. & Site Office : Pot 10/1, 10, Vaibhav Khand, Opposite Shipra Mall, Indirapuram, Ghaziabad-201014 I Tel : 0120-4656200 I Email : info@sayahomes.in CIN NO. U70101DL2010PTC211055
Registered Office : B-7/45, Safdurjung Enclave Extension, New Delhi- 110029 I www.youtube.com/sayahomes I www.facebook.com/saya.homes

RERA COMPLIANT PROJECT
PHASE 1 : UPRERAPRJ6548
PHASE 2 : UPRERAPRJ6678

Disclaimer: Map sanctioned & approved by GHAZIABAD DEVELOPMENT AUTHORITY vide map sanctioned letter no."41/191/Zone - 6/12-13", dated 22-6-2015, Transfer Deed executed & registered on 05-05-2015, in the office of sub-registrar-IV, Ghaziabad, mentioned in Bahi no. 1, Jild no. 29584. Page no. 145-182, Registration no. 8688. *Terms & conditions apply. 1sq mtr. = 10.764 sq. Ft.