

# Double Helical

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## STANDING BY SENIORS

The increasing elderly population deserves an integrated approach to their multiple needs



# CAHOCON 2020



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### Look after your breasts!

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# Preserving Dignity in Sunset Years

Dear Readers,

**T**hank you for your continuous support in the ceaseless journey of Double Helical!

India has close to 115 million elderly people with multiple physical, social, psychological and economic problems. By 2050, India is estimated to have 20% of inhabitants as geriatric population.

The geriatric/elderly care has not been on formal agenda of government as well as private healthcare providers, to the extent it deserves. As per statistics, 3.7 million suffer from dementia, and 1.6 million have stroke cases; 1 out of 3 senior citizens suffers from arthritis, hypertension, and 1 out of 4 suffer from depression and 1 in 5 has diabetes.

Considering that healthcare of elderly people cannot be achieved unless we address their total health in a coordinated and structured manner, Double Helical, in alliance with Association of Healthcare Providers (India) and Consortium of Accredited Hospitals, is organizing Health Conclave and National Health Awards on 17th February 2020 in hotel Lalit, New Delhi.

The conclave will incorporate a workshop which will be addressed by government officials, senior doctors, who have rich experience in the domain as well as social activists who would bring out the other side of subject. Finally, the conclave will culminate in conferring of awards to caregivers and institutions, who have significantly contributed to making a difference in the lives of older people.

Keeping in view the significance of the issue, we focus on geriatric care as cover story this time. The problems of the elderly in India were not massive in the past because their numbers were small and they were provided with social protection by their family members. But owing to relatively recent socio-economic changes, ageing of the population is emerging as a problem that requires urgent attention before it becomes critical.

Various health problems adversely affect an individual's way of life during old age. Arthritis, hypertension, hearing impairment, defective vision, diabetes and varicose veins are among the usual diseases faced by the elderly. These chronic diseases tend to occur more in women and increase with age. Tobacco and alcohol abuse is common among the urban slum dwellers; illiteracy and poverty leads to chronic diseases like tuberculosis, HIV/AIDS, dengue fevers etc. Most of the poor old people also suffer from nutritional deficiencies that include iron deficiency, calcium deficiency and vitamin-A deficiency eventually leading to blindness if not treated.

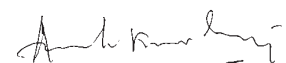
The aged people are often financially bankrupt since their assets, properties and wealth are usually transferred to their children. So, most elderly people do not have an emergency fund available to meet their basic needs leaving them dependent on their children or other family members, resulting often in elderly abuse. For raising awareness regarding this, 15th June every year is commemorated as the World Elder Abuse Awareness Day (WEAAD) by the United Nations.

We can significantly enhance efficacy of healthcare to the elderly by judiciously reducing our dependence on symptomatic relief offered by modern medicine with the time-tested wisdom of various harmless drug-free modalities of officially recognized traditional systems of health to reverse the effects of aging and arrest, or even cure various diseases attributable to the process of aging. The National Programme for the Health Care of Elderly (NPHCE) has made seminal contribution to the delivery of promotional, preventive, curative and rehabilitative services to the elderly people so that they can age with security and dignity and continue to participate in the life of the nation with full vigour.

As you are aware, China is in the grip of an outbreak of novel coronavirus (nCoV) and cases have been reported from other countries too. Our special story takes stock of the state of preparedness in India for the control and management of the dreaded infection.

Till now the death toll from the coronavirus epidemic that originated in the central Chinese city of Wuhan, at the end of 2019 has mounted to more than 700 with more than 3000 people in a serious condition. As for India, three cases of novel coronavirus, with travel history to Wuhan, were reported in Kerala. The patients had tested positive for novel coronavirus and are in isolation in the hospital. They are stable but are being closely monitored. There are many more engaging and thought-provoking stories to savour in this issue. So, happy reading!

Thanks and regards



**Amresh K Tiwary,**  
Editor-in-Chief

# CAHOCON 2020

6<sup>th</sup> International  
Conference of Consortium of Accredited  
Healthcare Organizations

**THEME**

## **BUILDING CULTURE OF SAFETY IN HEALTHCARE**

CONFERENCE:  
18<sup>th</sup> & 19<sup>th</sup> APRIL, 2020

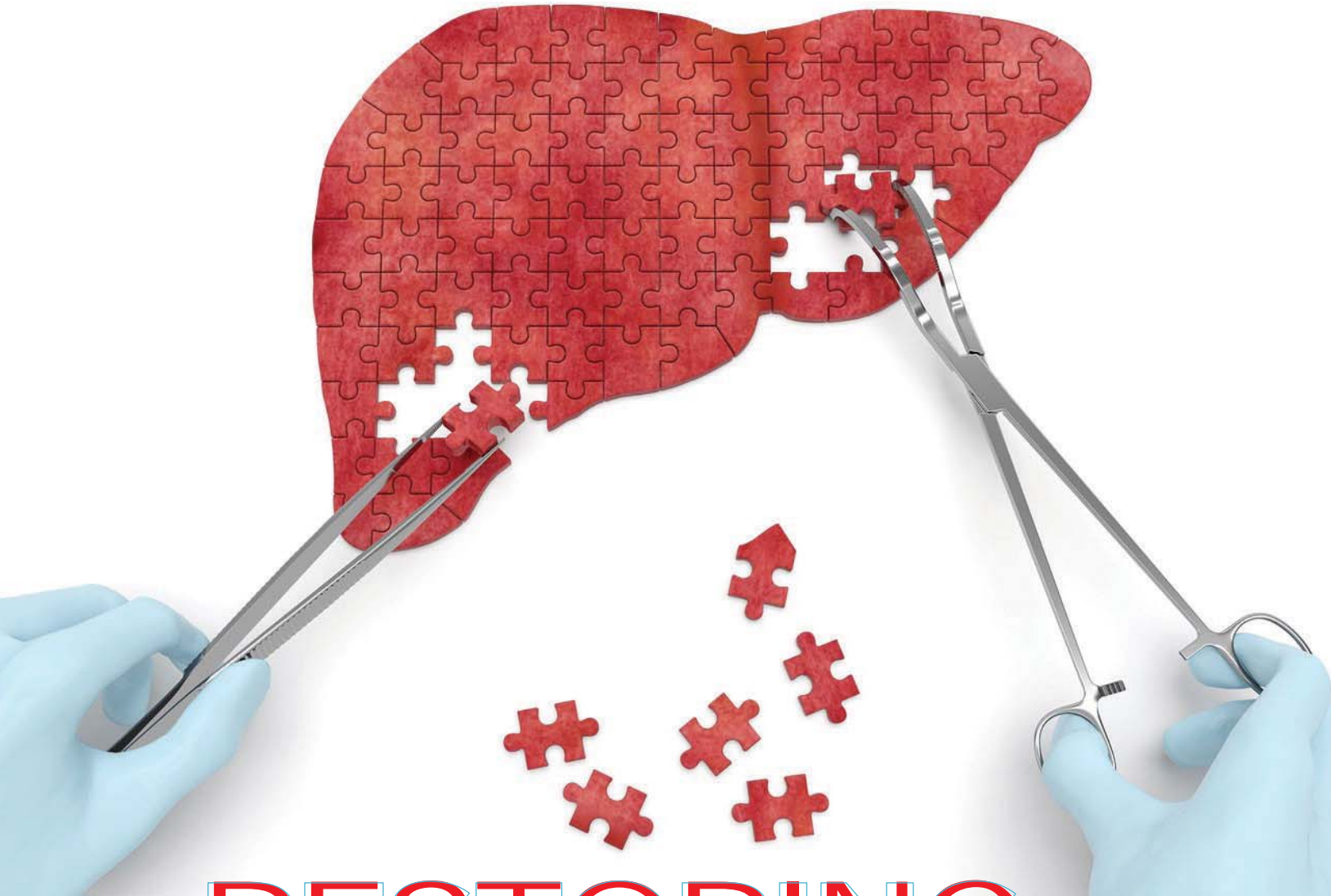
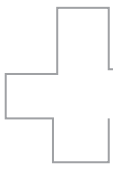
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# RESTORING YOUNG LIVES

Living related pediatric liver transplantation has gained popularity in Eastern countries such as Japan, Korea and India but the procedure is quite challenging and requires specialized care...

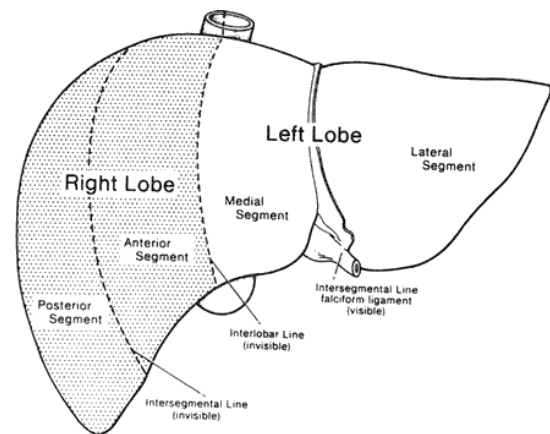
**BY DR NEELAM MOHAN**



- predicted life expectancy under 1 year
- Acute liver failure (ALF)
  - Unresectable localized hepatic tumours
  - Liver-based metabolic defects

Other indications include growth failure, intractable pruritus or bone density loss from cholestatic disorders, intractable seizures from metabolic liver disease, and liver tumours in the absence of significant extrahepatic disease. Biliary atresia is the leading diagnose of pediatric liver transplant recipients across the globe.

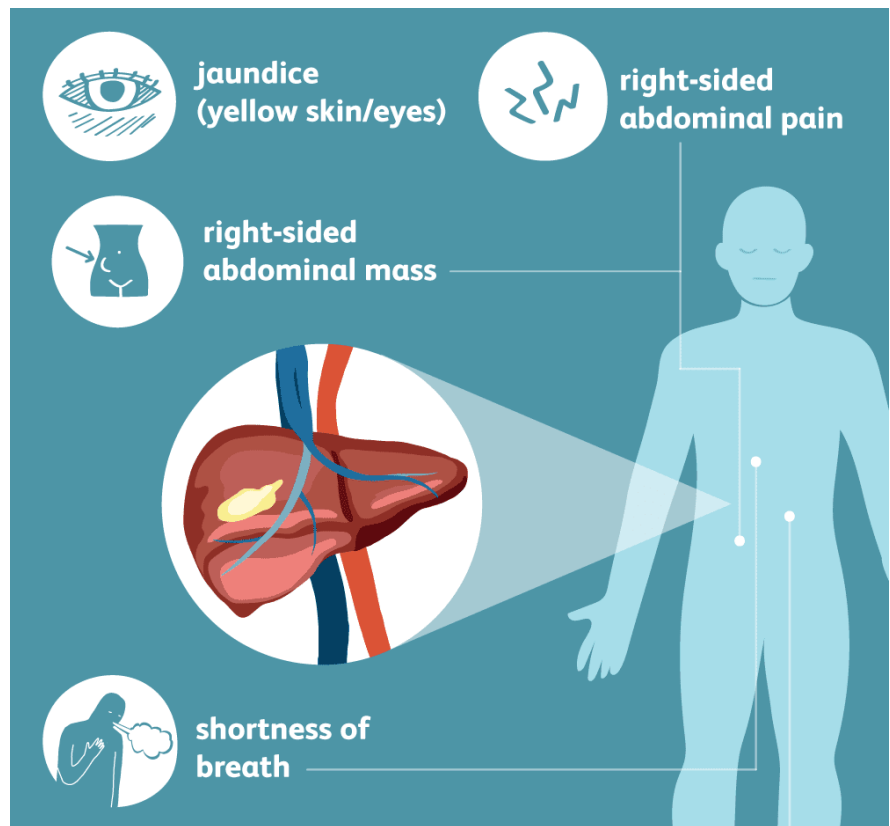
In liver failure, the decision to proceed with



**L**iver transplantation or hepatic transplantation is the replacement of a diseased liver with a healthy liver allograft. The most commonly used technique is orthotopic transplantation, in which the native liver is removed and the donor organ is placed in the same anatomic location as the original liver. The history of pediatric liver transplantation (LT) starts with the first human attempt at transplantation by Dr. Starzl in 1963. Since then, new advances and techniques in both surgical and medical management have increased the incidence and improved the outcomes of LTs to >90% survival.

### Indications for LT in children

- The indications for LT in children have traditionally been
- End-stage liver disease with a



**jaundice (yellow skin/eyes)**

**right-sided abdominal pain**

**right-sided abdominal mass**

**shortness of breath**



transplantation should be made at a point when there is no clinically significant evidence of liver regeneration or recovery of function. Selection of FHF candidates for transplantation is difficult. The King's College Hospital criteria have been extensively used and are acknowledged to have a high degree of specificity but have been criticized for lack of sensitivity. More recent recommendation from the same group is to use an INR > 4 or factor V concentration < 25% as the best available criteria for listing for LT. Although these various criteria are

helpful, careful observation for progression and clinical change is most rewarding and emergency referral to a transplant centre is of paramount importance.

### Liver transplant surgery

The graft is either a cadaveric liver or a living related.

In cadaveric liver transplantation, the liver of a brain dead person is used for transplantation. Cadaveric transplants could be:

- Whole graft: The entire graft is transplanted in the recipient.
- Reduced graft : When only a

part of the cadaveric liver (i.e. right/ left/left lateral part) is used for the recipient

- Split graft: The shortage of suitable organs for young children led to development of split livers. The liver of the cadaveric donor is divided and used for two patients usually the right lobe for adults and left lobe for children.

### LIVING RELATED LIVER TRANSPLANTATION:

This has been a further step to answer the shortage of organs for children. In living related liver transplantation, a part of the liver from a living related donor is used in the child. This procedure is more popular in Eastern countries like Japan, Korea and India where cadaveric liver transplantation has not been possible until recently.

### BLOOD GROUP COMPATIBLE:

Mostly blood compatible transplants are done. However in living related liver transplant scenarios recently ABO incompatible transplants are also being done with pre-operative use of





plasmapheresis and modified immunosuppression.

**IMMUNOSUPPRESSION:** Following liver transplant, the patient requires immunosuppression usually for whole life according to the present consensus. The most common immunosuppressive drugs used following liver transplantation are tacrolimus, mycophenolate mofetil and steroids. Few centres use steroids sparing induction regimen with Basiliximab. Newer drugs like OKT3, sirolimus and everolimus are used in occasional patients.

### POSTOPERATIVE COMPLICATIONS

**EARLY POSTOPERATIVE COMPLICATION** includes primary graft non-function, surgical complications, vascular thrombosis, and venous outflow obstruction, rejection, biliary complications sepsis.

Late complications post-transplant fall into two general categories: (1) Complication related to allograft itself and (2) those related to immunosuppressive drugs. They

include chronic rejection, CMV and EBV infection, late biliary strictures, hepatic artery or portal vein thrombosis, post-transplant lymphoproliferative disease (PTLD), De novo auto immune hepatitis, graft fibrosis, Nephrotoxicity and hyperlipidemia secondary to immunosuppressive drugs.


### OUTCOME

Outcome of paediatric liver transplantation has shown incremental improvements from the 1980s to late 1990s. Better management of immunosuppression have not only increased survival rates that are currently reported as 95% at 1 year and 80-90% at 10 years but have also improved quality of life after transplant.

### QUALITY OF LIFE

It is now anticipated that children who survive liver transplant will achieve a normal lifestyle despite the necessity for continuous monitoring of immunosuppressive treatment. An important aspect of long term survival is the development of puberty.

### SCENARIOS OF LIVER TRANSPLANT IN INDIA

In India, predominantly living related liver transplants are carried out. India needs approximately 22/million liver transplants while one per million liver transplants (approx... 1750 transplant in 2017) are being done. The paediatric liver transplants especially of small babies are definitely quite challenging and require specialised care. There are limited dedicated paediatric liver transplant centres available in India with good outcome. Cost of paediatric liver transplant is approximately Rs 15-18 lakh. For those who belong to disadvantaged sections, support group and funds are arranged. 

**(The author is Director, Department of Pediatric Gastroenterology, Hepatology and Liver Transplantation, Medanta Medicity, Gurgaon)**

### AUTHOR'S PROFILE:

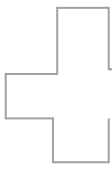
Our team has performed 300 paediatric liver transplants of the total 3000 living related liver transplants, 45% indications were cholestasis, 23% of acute liver failure and 31% for metabolic. 195 were male and age ranged from 2.1 kg to 66 kg and mean follow up was 46 (1 month - 14 years). Overall surgical success rate was 95% and 5 years actuarial survival is 90%. Our team is credited with the following:

### GLOBAL LEVEL CREDITS

- World's successful liver transplant in lightest baby of 2.1kg (2016).
- World's first chain of 3 pediatric living-related liver transplants with 2 donors (2011)
- World's first living related liver transplant that cured a baby with factor VII deficiency (2010)
- World's youngest domino liver transplant (2009)

### NATIONAL LEVEL CREDITS:

- India's first successful pediatric cadaveric reduced liver transplant (2003)
- India's first successful survival of liver transplant in a fulminant liver failure (2004)
- South Asia's first successful combined liver and kidney transplant from two live donors (2007)
- India's first successful pediatric liver transplantation with very severe hepatopulmonary syndrome (2016).
- India's first swap liver transplantation (2009)
- India's first ABO-incompatible liver transplant in a child. (2012)



# TOWARD UBIQUITOUS HEALTHCARE

Social media has become a key tool to disseminate relevant medical information to the widest audience possible. It's important to take advantage of the flexibility and communicative power of social media channels for dialogue and genuine connection between the doctor and the patient. Healthcare professionals can utilize social media to empower patients with accurate medical information and services...

**DR LALLU JOSEPH/J. ADEL**

**S**ocial media as we know today is the outcome of rapid advances in technology in the 20th century. The birth of internet by the efforts of engineers to develop ways to create networks between computers can be described as the defining moment for communications in future. However, even the brains behind the internet had not imagined the sophistication and maturity of social media in a very short span.

Desire to interact with friends and family has been a natural impulse with all humans for centuries. Humans have dreamt of plenty of creative solutions to overcome situations when face-to-face discussions are not possible. It is this element that has accelerated the growth of social media. Social media is a web-based form of communication. Social media



**Dr Lallu Joseph**



platforms allow users to have conversations, share information and create web content.

Today, there is a tremendous variety of social networking sites and an environment where users can reach the maximum number of people with unparalleled speed and ease. We can only imagine about the future of social networking but it seems clear that it will only play increasingly crucial role in times to come.

### ROLE OF SOCIAL MEDIA IN HEALTHCARE

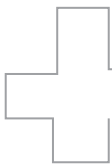
It is now evident that there isn't an area where social media has not had an impact. India is well on its way to become a trillion dollar digital economy due to expanding digital infrastructure,



J. Adel

rapidly growing consumers, widespread adoption of emerging technologies and data explosion. It is predicted that by 2022, the number of Indian internet users will double with most penetration happening in rural areas. As per a World Economic Forum study, two times rise in internet penetration leads to 12 times increase in per capita GDP growth. These numbers indicate that India is right on the track to become a digital superpower.

Today, though millennials are highly focussed on healthy living, a good number of them do not easily turn to doctors and hospitals for prevention or treatment of illness. They tend to reach out to the social media for immediate solutions. This approach fits their cost-conscious, convenience-seeking lifestyle. Many are using social media to get healthcare advice and support either from



'experts' or peers who may be experiencing the same health-related concerns. This raises several issues like authenticity, accuracy and validity of data.

Healthcare communication has especially empowered the end users on a scale that was unimaginable just a decade or two ago. Healthcare providers are turning to social networks to educate patients, increase engagement, promote awareness and share correct health messaging with full HIPAA compliance.

Popularity of social media in the healthcare industry can be attributed to the following factors:

- The widespread use of social media tools
- The increasing need for patients to connect with each other

From a generation where face to face consultation was the norm and only option, shift in this scenario is striking. While most patients still prefer face-to-face consultation with their healthcare providers, social media networks are a valuable supplementary tool in their journey to wellness. Social media is one of the most powerful disruptions to digital marketing impacting the healthcare industry. Role of social media has to be ascertained for a generation that is more likely to search for medical queries online than consult a doctor. The rate at which reliance on online information is increasing is also because of integration of new technologies like Artificial Intelligence (AI) and its application to core domain of medical knowledge.

A study by Mediabistro reveals that more than 40 percent of customers agree that the information found on social media impacts the way they handle their healthcare. Another study reveals that almost 90 percent of net users trust healthcare information shared by others on social media. The youth in particular are dominating the social media landscape. This presents an excellent opportunity to connect with them and make them trust your medical expertise. Note that nearly 80



percent of millennials are keen to share their medical information online. As a healthcare provider, it is essential for one to share valuable information that informs and engages them.

Another study found that nearly 41 percent of users said social media influenced their choice of a particular doctor, facility or medical practice. People use social networks to discuss their experiences with doctors and medical practices. Social media is regarded as a vehicle for people to have their voice heard – whether they appreciate you with positive comments or hurt your reputation by writing negative feedback about your practice. Number of patients posting health-related experiences on the net is increasing by the day. It is important to engage with patients and caregivers on social media to ensure that they are getting the greatest care possible.

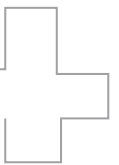
The internet users' numbers in India may not match the US statistics where nearly one-third of the population is using social media to research and share symptoms, and reading the opinions of doctors, looking up treatment options and finalizing health plans. However, the trend is catching up fast especially in metro cities. This makes a compelling case for one to

strengthen online presence and become part of the conversation so that one can engage current and potential patients. Although a number of caregivers are sceptical about the value of social media in improving healthcare delivery, yet in a study nearly 60 percent of doctors admitted that social media improves the quality of care provided to patients. This shows doctors have faith in the transparency and authenticity brought by social media in improving the quality of care provided to patients. Online medical communities and the ability to interact with patients in real time are the main catalysts in making the medical landscape increasingly interactive.

### **ADVERTISING IS NOT SOCIAL MEDIA COMMUNICATION**


*"No doctor can make high claims about any procedure."*

In accordance with Medical Council of India (MCI) Code of Ethics Regulations, 2002 as well as Drugs and Magic Remedies (Objectionable Advertisements) Act, 1954, the Indian Medical Association (IMA) issued a press release warning its 2.5 lakh members against advertising in 2016.



**social spotlight media**

## THE DO'S AND DON'TS OF SOCIAL MEDIA for HEALTHCARE



**DO**

- Have a STRATEGY** in place
- Create SHARABLE CONTENT**
- Serve as a resource** to your patients and followers by **LISTENING & RESPONDING** to questions
- BUILD RELATIONSHIPS** with patients via social media
- ANALYZE** what types of content are resonating with your audience
- Be authentic by CREATING A VOICE** and personality for the organization

**DONT**

- DISREGARD** negative feedback from patients. Neglect will increase negative feelings
- VIOLATE PRIVACY** HIPAA still applies
- IGNORE** the patients that are engaging
- TAKE SHORTCUTS** by buying followers to build your community
- BE OVERLY PROMOTIONAL** Simply touting your business isn't social

publicity in the letterhead or on sign board of the consulting room is considered as unethical conduct on the part of the physician.

A paid advertisement promoting the activities of a physician or practice must be clearly identified as advertising. It is not ethical to compensate the communication media in any way for publicity in a news item. If a television infomercial is used to inform the public of services available, it should be very clear at all times that this is paid advertising and not part of a news programme. Terms such as "world-class," or even "pioneer," usually are misleading and designed to take patients for a ride.

However, as health care markets became more competitive in the early 1990s, many academic medical centers began to seek new sources of revenue by increasingly using marketing strategies (including advertising) in an effort to attract patients. The most common advertising strategy used are appealing to emotions, highlighting institution's prestige, and lectures or discussion on a symptom or disease.

However, a medical practitioner is permitted by MCI to advertise regarding the following: starting practice, change of type of practice, changing address, temporary absence from duty, resumption of another practice, succeeding to another practice, public declaration of charges.

### HEALTHCARE COMMUNICATION & SOCIAL MEDIA

It consists of three main types of communication

1. Health communication to the public
2. Communication and indirect marketing of healthcare services.
3. Communication within hospital or enterprise social networking

#### 1. Health communication to the public:

Health communication can be defined as "the art and technique of

The Tamil Nadu Medical Council, in May 2016 too passed a resolution warning doctors against advertising online. The Council has asked all doctors to withdraw their names from online registries, and remove any advertisements with their names, photographs, specialty and contact details, as this violates the Medical Council of India's Code of Ethics Regulations, 2002.

According to Article 6.1 of the Code

of Medical Ethics Regulations, 2002 issued by Medical Council of India, soliciting of patients by physicians or institutions is unethical. This includes publicity through any mode of his professional position, skill, qualification, achievements, attainments, specialties, appointments, associations, affiliations or honours. Art.6.1.2 of this code says that printing of self-photograph, or any such material of



informing, influencing, and motivating individual, institutional, and public audiences about important health issues."

Effective use of communication and technology by health care and public health professionals can bring about an age of patient, public-centered health information and services, improve health care quality and safety, increase the efficiency of health care delivery.

Social media can prove to be beneficial in healthcare in the following ways:

During crisis situations, general awareness and medical information, extensive reach by the practitioner, peer support, cost effective, more available shared and tailored information, increase accessibility and widening access, public health surveillance, potential to influence the health policy.

- **Case 1: Social Media and Health Education during Ebola Outbreak in Nigeria**

Nigeria had Ebola outbreak in 2014, which caused a global scare. Effective management of the crisis required massive education of both health workers and the public. The success of the exercise through digital media by Nigeria with the help of the global community resulted in number of deaths being only 20 compared to nearly 8,000 and 7,700 in Sierra Leone and Liberia.

Targeted social media campaigns were done to disseminate accurate disease information and also to correct hoax messaging. Twitter handles were established for sharing regular information. Army of U reporters using the young volunteers by UNICEF, organized campaign on Facebook for information monitoring, reporting and sharing information with relatives and friends. WHO and CDC provided appropriate information both nationally and internationally to assist in making messages on the virus go 'viral'. Influential national bloggers and celebrities joined in the campaign.

Another device used for the response was Ebola Alert, a technology-based organisation of volunteer doctors established to provide information on specific aspects of the outbreak and virus 24/7. Countless SMS platforms were used to send information on the signs and symptoms of Ebola and International Federation of the Red Cross (IFRC) sent two million text messages each month about Ebola. Overall, the deployment of social media for accelerated and extensive information dissemination has been singled out as instrumental to the containment of the outbreak.

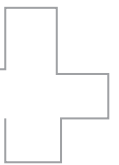
- **Case 2: Mobile Phones for Polio Campaign in Somalia**

Somalia, was certified polio free in 2006, but new cases of wild polio virus were detected in 2013, necessitating an intense social mobilisation campaign for its eradication. Oxfam, UNICEF and Hijra, a local NGO decided to experiment with the use of mobile phone technology for polio health promotion for two main reasons. First, the political situation has continued to make most of the population hard-to-reach due to insecurity. Nonetheless, the country is experiencing an increasing penetration of mobile phones, making targeted information sharing much easier.

The initiative involved the use of pre-emptive community education through mobile phones. The education component comprises four interactive daily SMS sessions intended to reach 100,000 people in 17 districts. It also includes distribution of non-food items as an incentive scheme for promoting adherence to immunization schedule through an mVoucher mobile system. An evaluation of the project concluded that the polio education component reached 104,358 people, much higher than the expected target.

Apart from communication on diseases, prevention, health education etc., social media is widely used by hospitals and health professionals to inform their clientele of the services provided in the hospital, to collect feedback on the services provided, to





triage them to book the appointment to the right specialist, and to provide information on the tariff about speciality services.

## 2. Communication and indirect marketing of health services:

Social media has become the main channel of communication among health professionals. The various ways by which health professionals use the media are as follows

- Many healthcare organizations have started utilizing social media channels for their training. Trainees are encouraged to use hashtags on Twitter/FB to engage with one another and to make the sessions interactive. Live questions through tools like Kahoot enhance learning and help the faculty to understand the impact of training provided.
- Platforms like Slideshare help as a repository of presentations and materials, which could be downloaded and used by anywhere. Also, this acts as a great tool to enhance the stand of the healthcare professional and organization to create a niche for themselves in the area as an expert. These presentations and material could help many readers.
- The training videos of the hospitals and pictures are updated in social media channels to market their facilities indirectly and also exemplifying their training process.
- Through social media, healthcare professionals have the ability to provide live procedures to fellow doctors, students and also patients. Hospitals create a buzz with these live presentations, creating public awareness of the organization to attract patients and health professionals.
- Gone are the days when

conferences, workshop brochures were printed and sent to healthcare professionals for enrolment. Social media plays a major role in publicizing conferences and workshops and to also have a wider reach.

- Sourcing of right professionals for the job using sites like LinkedIn and also portals like Naukri, Monster etc.
- Communication through social media during crisis to provide minute to minute information on hospital capacity, operation

problems. Enterprise social networking includes the use of in-house intranet software as well as third-party social media platforms like Yammer and Socialcast to improve communication and collaboration between employees. Hospitals use tools like WhatsApp, Messenger, and Telegram to have groups connected to work for a common cause. The most common groups noted are

- Engineering and facility groups to inform the team members of possible repairs with pictures and ensuring that the right



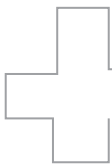
status and emergency access has beautifully been demonstrated during the floods in Kerala and Chennai.

## 3. Communication within hospital for patient and hospital management

Enterprise social networking is an organization's use of social media internally, to connect individuals who share similar interests or activities. Internally, social tools can help employees to access the knowledge and resources they need to work together effectively and solve

person addresses them.

- Administration with department heads to send information on policy changes, receive feedback on changes and also as a tool to connect with the heads
  - Doctors and nurses with their team members to share information about patients admitted, problems, sharing images, reports for quick and consultative decision making
  - Official intranet to communicate with all staff in the organization
- These tools have enhanced



communication between healthcare professionals, brought out multidisciplinary approach and also ensuring that information is shared appropriately between professional in the organization.

### CONNECTING WITH THE DIGITAL CONSUMER

From using Instagram to research products to chatting with customer support on messaging apps, social media has become the heart of all digital customer touchpoints. Though it is necessary for healthcare professionals to have a presence online, they fail to see it as a fundamental tool to reach, engage and attract empowered consumers effectively and efficiently. It is advisable to follow the LENS rule to have an effective conversation with your patients online.

#### • Listen

Social media is an open platform for users to post and share. To properly shape what you want them to discuss about your hospital, you'll have to follow 'Social listening'. Social listening reflects your hospital's maturity and reputation. It is required to gather information of what your digital customer is talking about and how they feel about your hospital.

#### • Engage

You could engage directly or indirectly with your customer. Engaging directly would mean that you have a direct conversation with your patient online to solve an issue or acknowledge his opinion. But you could also engage with online influencers, who're already operating in the digital space and could you help earn the trust of your patients.

An influencer is someone with a large online following. Engaging with your customers directly is always a pain-staking long process but it's always worth the effort. Your genuine engagement with your patient online will create an exceedingly strong bond for years to come and sometimes, may pass on for generations too.



#### • Nurture

It is very easy for anyone to be fooled in the social media. Especially, during a crisis, when rumours and misinformation are doing the rounds, one needs to be very careful of what they listen to. That is when your social media channels shall be of great use to your patients.

If you've created a reputation of delivering genuine content, then your followers are prone to turn to you for advice at the time of crisis. Your social media handles becomes a key method to disseminate relevant medical information to the widest audience possible at a very low cost. Users do appreciate genuine content from hospitals on issues that they have no knowledge about as they tend to get wary of fake news.

#### • Support


Several practising doctors use social media to provide necessary support to their patients. Today, doctors are exploring several apps that help them maintain health records, conduct research, make clinical decisions and network with each other. This is just the beginning. Social media is more effective when there's a dialogue between the patient and the doctor. Both doctors and patients are open to platforms which facilitate two-way communication that helps doctors proactively manage relationships with patients. It's

important to take advantage of the flexibility and communicative power of social media, creating channels for dialogue and genuine connection between the doctor and the patient.

### CONCLUSION

It is now evident that social media as a whole is becoming increasingly prevalent in our society and continues to impact the ways in which people interact and communicate with each other. We cannot be sure where social media is heading but we can agree that the constant evolution of digital consumers, with new formats and platforms is in the offing, which is being enhanced by technology. So, where does this rapid and exploding use of social media leave us?

Though there no easy answers to this, the one thing which is clear is that hospitals need to continue to innovate and excite users while demonstrating the value of using social media in their life.

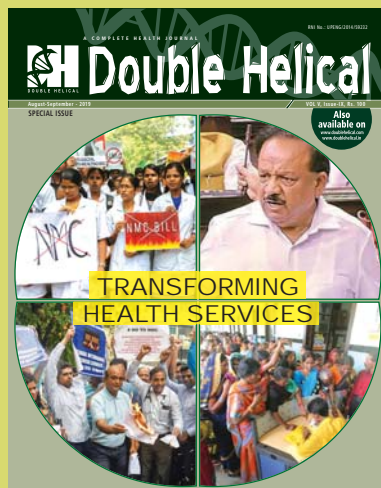
Many healthcare professionals are working towards effectively utilizing social media to engage patients and consumers. Through effective marketing and communication tactics, organizations are able to move away from traditional advertising techniques, and use the internet to connect with consumers in the healthcare field. Consumers heavily rely on information found online and use the internet to gather healthcare information and connect with other patients to garner support and learn about similar conditions. There is a variety of ways that healthcare professionals can utilize social media to enhance their services and empower patients with accurate medical information and services. 

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**Quality Manager, Christian Medical College Vellore and Secretary General, Consortium of Accredited Healthcare Organizations/General Manager - Operations, Meenakshi Mission Hospital & Research Centre Madurai.**



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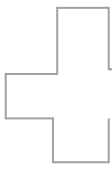
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# CHOKING LIFE FORCE

China is in the grip of an outbreak of novel coronavirus (nCoV) and cases have been reported from other countries too. In India, three students from Kerala have been infected and are placed in isolation. **AMRESH K TIWARY** takes stock of the state of preparedness in the country for the control and management of the dreaded infection....



**A**t the time of going to the press, the death toll from the coronavirus epidemic that originated in the central Chinese city of Wuhan, at the end of 2019 had mounted to more than 700 with more than 3000 people in a serious condition. Scientists from the University of Hong Kong have warned more than 75,000 people could have battled the infection in the city Wuhan, the epicentre of the outbreak. Also, the people who have had close contact with infected people were being closely monitored.

The strain has infected people in every region of mainland China, as well as crossing national borders into 22 other countries. With the virus

reaching as far as the US, UK and Australia, the World Health Organization declared it a “global emergency”.

As for India, three positive cases of novel coronavirus patient, of students studying in the Wuhan University, were reported in Kerala. The patients had tested positive for novel coronavirus and were in isolation in the hospital. The patient were stable and were being closely monitored.

#### What's coronavirus?

The nCoV illness ranges from common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS)-CoV and Severe Acute Respiratory Syndrome (SARS-CoV).

Corona virus is a virus that causes infection in the upper throat, nose, and sinuses. This virus belongs to the family of common cold and viruses (SARS and MERS). Hundreds of people have been infected by this virus in China. And the virus is spreading in other countries as well.

Coronaviruses were first identified in the 1960s, but we don't know where they come from. They get their name from their crown-like shape. Sometimes, but not often, a corona virus can infect both animals and humans. Most corona viruses spread the same way other cold-causing viruses do: through infected people coughing and sneezing, by touching an infected person's hands or face, or by touching things such as doorknobs



coronavirus epidemic that originated in the central Chinese city of Wuhan, at the end of 2019 had mounted to more than 700 with more than 3000 people in a serious condition. Scientists from the University of Hong Kong have warned more than 75,000 people could have battled the infection in Wuhan, the epicentre of the outbreak

that infected people have touched.

In early 2020, following a recent outbreak in China, the World Health Organization (WHO) identified a new type, 2019 novel coronavirus (2019-nCoV). Often a corona virus causes upper respiratory infection symptoms like a stuffy nose, cough, and sore throat. You can treat it with rest and over-the-counter medication. The coronavirus can also cause middle ear infections in children.

Almost everyone gets a coronavirus infection at least once in their life, most likely as a young child. In the United States, corona viruses are more common in the fall and winter, but anyone can come down with a coronavirus infection at any time.

#### What are the common symptoms of coronavirus?

Pneumonia, upper respiratory tract illness, runny nose, cough, sore throat, possibly a headache and maybe a fever. The symptoms of most coronaviruses are similar to any other upper respiratory infection, including runny nose, coughing, sore throat, and sometimes a fever. In most cases, you won't know whether you have a coronavirus or a different cold-causing virus, such as rhinovirus.

#### Possible Treatment

There is no specific treatment available as of now; symptoms may go away on their own. One must take care of self, rest and avoid over exertion.

Drink enough water. Avoid smoking and smoky areas. Take acetaminophen, ibuprofen or naproxen to reduce pain and fever. And use a clean humidifier or cool mist vaporizer.

#### How you can prevent it?

If you have recently travelled to China (within last 14 days) or had possible contact with an nCoV-infected person, it is advised to:

- Sleep in a separate room
- Stay in home isolation for 14 days after your return
- Limit contact with other family members and avoid visitors
- Cover nose and mouth when coughing and sneezing



have already been issued by the Health Ministry to all the states/UTs and regular monitoring on the status of preparedness is being taken place at the highest level. He reviewed the preparedness status of all the states/UTs regarding the following:

**Airports** - States/UTs reported that the thermal and symptomatic screening has been initiated at all identified airports. Thermal screening sensors are operational and few more such equipment is being procured. The immigration and other staff members at the airports have been sensitized and dedicated ambulances are placed at the airports. Deployment of medical & para-medical staff is also being done for round-the-clock service. Self-declaration forms are available and signages are being placed at prominent places at all airports. Seven central teams have visited the respective states and helped to strengthen the preparedness too.

**Hospitals** - States/UTs reported that isolation wards have been identified and readied to face any contingency. Personal Protection Equipment and masks are available in adequate quantity in all the states/UTs. States need to regularly assess requirement of personal protection equipment, masks etc., and undertake necessary procurement to ensure sufficient supply. Tertiary hospitals are also identified for these airports and the protocols for contact tracing are followed and timely collection and transportation of samples from suspected cases to NIV, Pune is being done.

States bordering Nepal reported that adequate steps have been taken at the land check posts, and people contacts & meetings have been organised at villages in the bordering areas. Awareness is being enhanced through signages in local language, miking and other media channels. Gram panchayats are being organised to make people more aware regarding the symptoms, precautions and

- Avoid close contact with anyone with cold or flu like symptoms (maintain a distance of at least 1 meter from any individual)
- Avoid going near a sick person, wash your hands frequently for 20 seconds, cover your mouth and nose when you sneeze, eat cooked food especially meat, eggs etc, eat healthy and stay healthy.

**Measures taken to prevent outbreak of coronavirus**

Sanjeeva Kumar, Special Secretary

(HFW) chaired a video conference (VC) with along with the Airport Health Organization Officers (APHOs), Health Secretaries of the states bordering Nepal (Uttarakhand, Uttar Pradesh, Bihar, West Bengal and Sikkim) and other states/UTs. He reviewed their preparedness for prevention and management of coronavirus. Dr Rajiv Garg, DGHS and senior officials from the Ministry of Health & Family Welfare and NCDC were also present during the recent VC.

Special Secretary (H) informed that various advisories, and guidelines



measures taken by the state governments regarding prevention and management for novel coronavirus.

According to Sanjeeva Kumar, Spl. Secretary (HFW), states need to take pro-active preventive measures by creating awareness among the people through local media. Adequate in-flight announcements need to be undertaken to make passengers aware about the symptoms and equipping them to "Help you to help us". Call centre/helpline numbers need to get popularized through TV, radio, press releases, social media and other channels.

Spl. Secretary (H) assured states of all support from the Health Ministry, including orientation of medical personnel/staff and other agencies through regular video conferencing. High level review meetings on preparedness for novel Coronavirus are regularly being held by the Union Health Minister, Cabinet Secretary and Health Secretary.

Cabinet Secretary has held several review meetings so far. He reviewed the preparedness with the concerned ministries of Health & Family Welfare, External Affairs, Defence, Home Affairs, Civil Aviation, Information & Broadcasting, Labour & Employment, and Shipping. A video conference with the chief secretaries of the states and UTs was also taken by the Cabinet Secretary.

Following steps have so far been taken by Union Health and Family Welfare Ministry to prevent the spread of coronavirus in India:

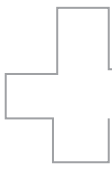
- All those who have come from China after 15th January, 2020 are being tested as there in an incubation period for the virus.
- The Cabinet Secretary has stressed upon the need for 14 days' home isolation for all those who have returned from China.
- It is also advised that trip to China should be avoided.
- It was also decided to augment the lab facilities. Following labs have started functioning: (1) NIV



- Bengaluru Unit, (2) Victoria Hospital Campus, KR Road, Fort, Bengaluru (3), AIIMS, New Delhi (4), NCDC, Delhi (5) Kasturba Hospital for infectious diseases, Mumbai, (6) NIV – Kerala Unit, (7) ICMR – NICED, Kolkata (8) GMC, Secunderabad (9) KGMU, Lucknow (10) SMS, Jaipur (11) IGGMC, Nagpur, and (12) KIPMR, Chennai.
- National Institute of Virology, Pune is fully geared up to test samples of nCoV.
- Adequate lab reagents are

available with NIV, Pune to test 5000 samples.

- 49 samples have been referred to NIV for testing. 48 have tested as negative.
- Discharge portal for patients have been prepared by DGHS.
- Check-posts have been set up in relevant tourist locations for better surveillance.
- Gram panchayats are being organised to make people more aware regarding the symptoms, precautions and measures taken by the state governments



regarding prevention and management for novel coronavirus in villages bordering Nepal.

- States have also been advised to open control rooms, appoint a nodal officer and popularize the control room number.
- IEC material is to be prepared in local language by the concerned states.

“We are on alert & our preparedness is sturdy”. This was stated by Preeti Sudan, Secretary, Health & Family Welfare, Government of India while updating on the preparedness measures taken by the Ministry on novel Coronavirus reported in China. She also stated that passengers travelling from China are being requested to report to the nearest public health facility in case they feel any symptoms.

As part of the measures taken by the Ministries of Health & Family Welfare, and Civil Aviation, a travel advisory has been issued and posted on the Health Ministry’s website. It has also

been shared on Twitter handle for wider circulation.

Health Ministry has instructed airport health organizations at Delhi, Mumbai, Kolkata, Chennai, Bangalore, Hyderabad and Cochin for screening of passengers coming from mainland China at these seven international airports. Signages have been put up at prominent locations in these airports for encouraging public about self-reporting of illness. Immigration officers manning the counters have been sensitized at these airports. Close coordination is being maintained with Ministry of Civil Aviation to coordinate the screening effort and dissemination of information to inbound passengers through in-flight announcements.

The Health Ministry is constantly reviewing the evolving scenario working closely with the Ministry of Civil Aviation, the Ministry of External Affairs, Deptt of Health Research and the Indian Embassy in China. The WHO is being consulted for updates on technical inputs. Series of meetings have been taken to review the

preparedness in terms of disease surveillance, laboratory support infection prevention & control, logistics, risk communication and in particular, hospital preparedness and the need for coordination and collaboration with other ministries.

The Ministry has also approached all states/UTs to review their preparedness, identify gaps and strengthen core capacities needed to prepare for, detect and respond to possible outbreaks. Integrated Disease Surveillance Programme has issued advisory to all states/UT to pick up any travel related case reported in the community and follow up contacts of suspect/confirmed cases. National Institute of Virology, Pune is fully geared up to test samples of nCoV. Several other laboratories under Indian Council of Medical Research’s Viral Research and Diagnostics Laboratories network are also equipped to test such samples, if a need arises. Adequate stock of personal protection equipment is being maintained by medical stores.

Dr Harsh Vardhan, Union Minister of



Health & Family Welfare held a high level review meeting with senior officers of the Health Ministry, ICMR and NCDC, to analyse the situation, preparedness and steps being taken for prevention and management of nCoV in India. "The situation is being closely monitored at the highest level for adequate preparedness. All the officials of my ministry, concerned departments and states/UTs have been put on high alert for novel coronavirus. We are taking all required possible precautions to manage all possible scenarios", Dr Harsh Vardhan stated.

The Union Health Minister is personally reviewing and monitoring the preparedness on a daily basis. He is also in regular contact with Dr Poonam Khetrapal Singh, Regional Director, WHO SEARO for technical support and guidance in the matter.

Dr Harsh Vardhan has spoken to Chief Minister of Uttarakhand and assured all support for screening at the border with Nepal, where a confirmed nCoV case has been reported. He has also written to the chief ministers of states requesting for

their personal intervention to review the state preparedness for control and management of nCoV.

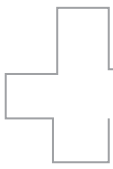
The Union Health Minister has formed multidisciplinary central teams and sent them to the seven states where thermal screening is being done at the seven designated airports (New Delhi, Kolkata, Mumbai, Chennai, Bengaluru, Hyderabad and Kochi). The central team consists of a public health expert, a clinician and a microbiologist. They are reviewing the end-to-end preparedness for management and control of nCoV in the states including at the airports, for thermal screening and transferring of patients to hospitals for isolation. They have also visited the tertiary hospitals attached to the airports for reviewing the isolation wards and availability of Personal Protective Equipment (PPE) and masks etc. They are strictly reviewing whether the infection control, surveillance and other guidelines are being followed. The teams are coordinating with the state health secretaries to explore all avenues for further supporting and

strengthening the states' preparedness.

Under directions by Dr Harsh Vardhan, a 24x7 NCDC Call Centre (+91-11-23978046) has been made operational. The said call centre is monitoring the list of contacts furnished by MEA; providing details of district and state surveillance officers to those who seek them; and in case of any clinical query, directing the concerned to the relevant Integrated Disease Surveillance Programme (IDSP) officer. The Union Health Minister has urged the passengers who have a travel history to China since 1st January 2020 to come forward for self-reporting to the nearest health facility if they experience any symptoms such as fever, cough, respiratory distress etc., and also inform their treating doctor.

Dr Harsh Vardhan stated that eleven persons have been put under observation; out of samples taken from these individuals, samples of four passengers have been confirmed to be negative for nCoV by the ICMR-NIV Pune lab. He added that timely measures and promptness of the officials of Union Health Ministry has resulted into preventive actions. He also commended the media for creating awareness among the people.

Dr Harsh Vardhan said that various steps have been taken up and continual efforts are being made by the health ministry in close coordination with the Ministry of Civil Aviation, MEA, state governments and WHO. Close monitoring is being undertaken for all the passengers who are arriving from China and Hong Kong. All the passengers are undergoing thermal screening. Advisory has also been issued to all states/UTs for Severe Acute Respiratory Infection surveillance to pick up any travel related case reported in the community and follow up contacts of suspect/confirmed cases. He added that the ministry has issued guidelines for surveillance and contact tracing; infection control; lab sample testing and clinical care. 







# NEEDED A MULTIDISCIPLINARY- APPROACH

As the proportion of the elderly population increases, social policies and government programmes must address their special needs. Coordinated and comprehensive services for the elderly need to be expanded as the old people face multiple challenges in their sunset years...

**BY DR SUNEELA GARG/DR EKTA ARORA**



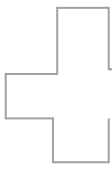
**T**he share of older persons, those aged 60 years or above, in India's population is projected to increase to nearly 20 per cent in 2050; older people will outnumber children under the age of 14 years. As the elderly population will face problems such as deteriorating healthcare status, loneliness, and economic constraints, these factors may affect their psychosocial status and health-seeking behaviour. Elder abuse is another challenge which includes physical, psychological, and financial abuse and also includes the violation

of an individual's rights, or social abuse.

Due to lack of jobs, financial insecurity can be another challenge faced by the elderly. And due to cultural misconceptions, older people can be targets of ridicule and stereotypes. Also, aging population poses an economic challenge for the country as it leads to increased government spending on pension, healthcare and social benefit programmes for the elderly.

**Problem Statement:**

According to a study by Lena et.al in Karnataka around 48% of the



challenges faced by elderly resulted out of caregiver exhaustion and their abandonment by individuals and institutions. As the proportion of the elderly population in this country increases, social policies and programme development must reflect these concerns. Experts in fields such as gerontology, geriatric medicine, psychiatry, nursing, and social work must make recommendations for changes in the medical and social service delivery systems. Coordinated and comprehensive services for the elderly need to be expanded emphasizing the need to reinforce the growth of geriatric treatment centres that can provide medical, psychiatric, social, and residential care through the concept of a continuum of care. A multidisciplinary team of geriatric specialists needs to be employed and outreach as well as treatment services should be provided.



Preventive services such as tobacco cessation campaigns among the elderly should also get priority. Health in old age is associated with health in earlier years of life. For example, intrauterine growth retardation tends to increase the risk of diabetes and cardiac diseases in later life. At the same time, obese children are at a major risk of developing chronic diseases such as circulatory disease, cancer, respiratory and musculo-skeletal disorders. The changing lifestyle has made aging as one of the major challenges of this era.

elderly were not happy in life. A majority of them had health problems such as hypertension followed by arthritis, diabetes, asthma, cataract, and anemia. About 68% of the patients said that the attitude of people towards them was that of neglect.


Another study from rural coastal Karnataka reported that about 75.8% of the respondents were either partially or completely financially dependent on someone else. Majority of those hospitalized depended on their children to pay for healthcare (66.9%), whereas 16.9% had availed government insurance schemes and 14.6% paid out of pocket expenses.

Another important paradigm of old age is living alone, which was found to be higher in the rural area (11.76%)

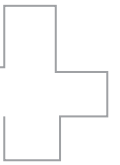
compared with the urban area (4.43%). This may be due to reverse migration of elders from urban to rural areas, after they lose their jobs due to age.

### Possible Solutions & Recommendations

To deal with the abovementioned challenges, there is a big need to reinforce the significance of thorough physical and social assessment of the elderly. It is not easy to resolve the

Hence, addressing the challenges of the elderly requires a multidisciplinary approach, i.e., not only the physical indicators need to be looked for, attention must be paid to the social, family, and sexual and psychological history of the patient. Only then a paradigm shift from basic to comprehensive geriatric care can be achieved. 

**(The author are Director Professor/ Senior Resident, Department of Community Medicine, Maulana Azad Medical College)**



# CARING FOR THE AGING SPINE

With rapid developments in medical and surgical fields, spine ailments can be successfully managed using medications, injections or surgery. But healthy lifestyle and proper spine care are also necessary to prevent or mitigate spine complications in the elderly...

**BY DR H S CHHABRA**

**A**ccording to Population Census 2011, there are nearly 104 million elderly persons (aged 60 years or above) in India of which 53 million are females and 51 million males. A report released by the United Nations Population Fund and Help Age India suggests that the number

of elderly persons is expected to grow to 173 million by 2026. It is expected to lead to greater challenges for medical care in terms of care delivery, cost, and maintaining quality of life for aging individuals.

Orthopaedic surgeons shall face unique challenges in caring for this aging population. In particular, spine surgeons have





to face the challenges of treating the growing numbers of patients with traumatic or insufficiency spine fractures as well as degenerative deformities and instabilities. The goal of the surgeon should be to enable the elderly to perform their usual activities of daily living independently or with minimal dependence on the family or care takers.

Attention must be given to each aspect and probable degenerative condition of aging in order to assist the aging population in this goal. Care of the aging spine and pain management are some areas where particular focus has to be given.

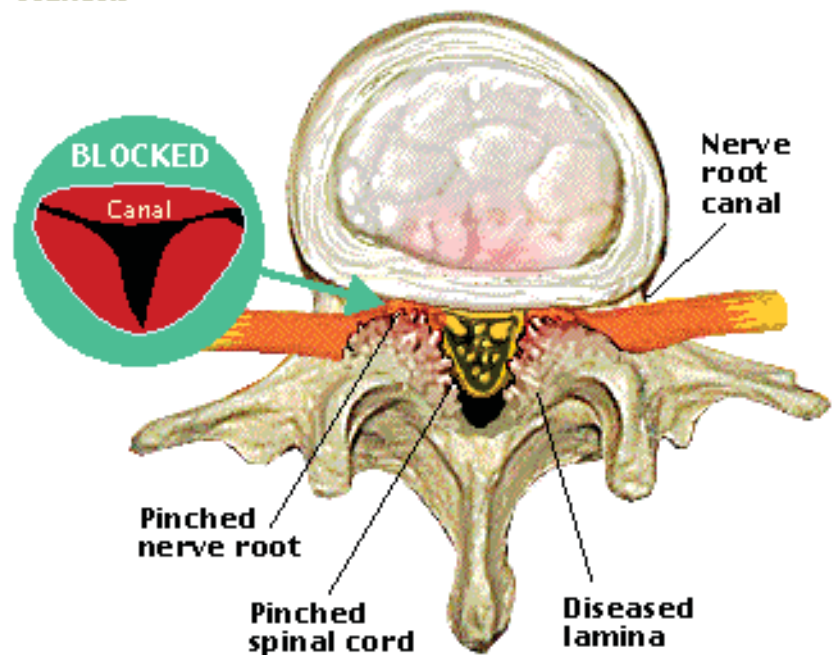
Significant degeneration of the spine begins in the third decade of life, eventually leading to progressive disc height loss and ligamentous/capsular hypertrophy, or thickening. As degeneration progresses, bony and soft tissue failure can develop, leading to a variety of spinal conditions.

**What are the most common spine conditions affecting the elderly?**

In older adults who have isolated low back and/or neck pain, more than half are due to degenerative facet joint arthritis. This is a type of osteoarthritis that affects the parallel column of joints that connect the individual vertebra of the spine behind the spinal canal. Other common causes of back/neck pain are also largely a result of the aging process, with degenerative spine changes including spinal stenosis (narrowing of the central tube housing the spinal cord and spinal nerves), spondylolisthesis (misalignment of one vertebra over another), and/or neural foraminal stenosis (narrowing of the tunnels where the spinal nerves exit the spine). In spinal stenosis, the typical symptom is claudication in which the individual has pain in the leg which increases as the individual walks and ultimately needs to sit or lie down to relieve the pain. This distance gradually reduces with time and can cause major disability. Any or all of



**Stenosis**  
Top view after stenosis



A figure showing how the degenerative changes in spine cause pinching of the spinal cord and nerve root and symptoms such as pain

these conditions can cause pain, which may also radiate to the arms or legs due to irritation or compression of the spinal nerves.

Genetics and family history, obesity, smoking, certain occupations (excessive driving, lifting, or sitting in front of a computer), or a history of previous trauma are also reasons for the acceleration of the degenerative process.

There are other common causes of back pain in the elderly. Sudden, sharp back pain can be a result of a vertebral compression fracture, especially in those who have advanced

osteoporosis.

Osteoporosis is a large problem for the growing population of older adults as it leads to decreased bone strength and, thus, bone fractures including spinal fractures. After reaching a peak between the ages of 16-25 years, bone mass slowly but continuously decreases at a rate of 0.5% per year in women and 0.3% per year in men. By the time they reach the age of 60, elderly men would have lost ~30% and elderly women ~50% of their total bone mineral density. It is estimated that as many as 61 million Indians have osteoporosis and approximately 80% of the urban



Indian population is vitamin D deficient. Fractures can be the first sign of weak bones from osteoporosis. According to one report, vertebral fractures are present in about 25% of postmenopausal women, with rates increasing dramatically with age.

Another less common cause can be a spinal tumour, whether primary or metastatic. Infection, especially if the patient has recently had a spine procedure, is another possible condition that necessitates prompt diagnosis and treatment.

These conditions can be diagnosed and evaluated with x-rays and magnetic resonance imaging, and PET scan if required.

**How can these conditions be treated?**

The treatment for degenerative changes of the spine leading to pain starts with lifestyle and ergonomic adjustments such as sleep positions, appropriate desk and chair height, and proper lifting technique. Then anti-inflammatory medications and physical therapy are utilized. Neurotropic medications may be required for claudication symptoms. The next steps include interventional pain management techniques, such as facet joint nerve blocks for facet

arthritis or epidural steroid injections for sciatic-like pain.

The majority of patients will have tolerable pain after a series of these conservative treatments, but some may require surgery for relief. Most conditions can be treated with same-day, minimally invasive surgery, although some may require much more extensive surgery. Certain conditions, such as spinal stenosis or sciatic-like pain (radiculopathy), are more easily treated with surgery, while others, such as facet osteoarthritis, are not.

Vertebral compression fractures can most often be treated conservatively. This involves management of the pain and management of osteoporosis. Osteoporosis management involves



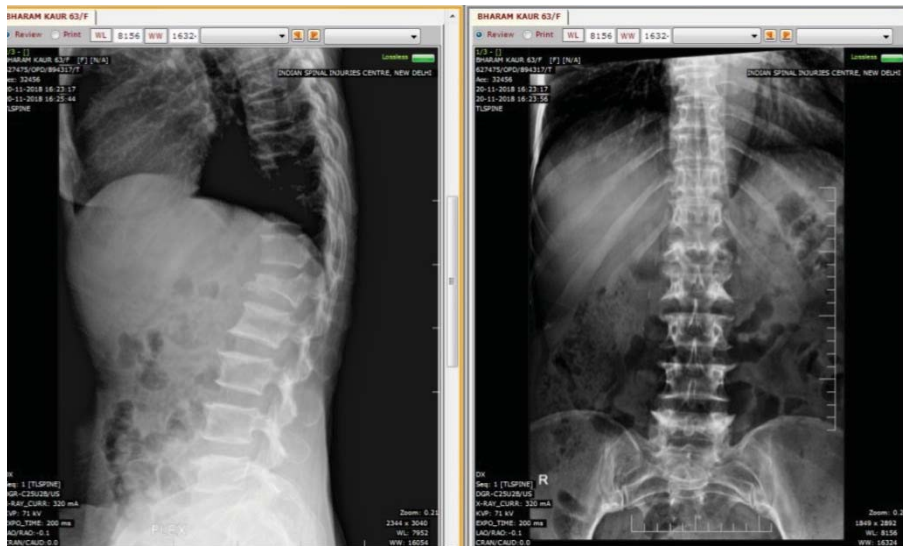
An illustration showing the procedure of kyphoplasty. A balloon device is inserted into the vertebra and expanded to restore the height of the vertebra. Cement is then injected to maintain the height

pharmacological management (generally oral or intravenous bisphosphonates or denosumab injection and teriparatide injections for severe osteoporosis), calcium supplementation, general conditioning exercises like walks and dietary/fall prevention counselling. If pain doesn't respond or if there are signs of spinal cord/nerve compression, surgery may be required. Kyphoplasty is a minimally invasive, same-day procedure where cement is injected into the fractured vertebral body, which, in almost all cases, relieves pain and stabilizes the bone from further collapse (avoiding the dangerous "hunchback" shape of the spine). In case of instability or nerve/spinal cord deficit, stabilization with pedicle screws along with decompression by removal of pressure from nerves/spinal cord may be required. In severe osteoporosis, cement augmentation may be required for stable pedicle screw fixation.

Spinal tumours, whether primary or metastatic, need to be evaluated by an oncologist as soon as they are detected. Standard interventional pain management techniques may help with the pain symptoms, but treatment using a complement of chemotherapy, radiation, and surgery will likely be recommended to address the tumours directly.

Infection of the spine, if not treated promptly, can lead to the obliteration of the spinal canal or nerves and/or septic shock. Fortunately, an extensive course of antibiotics and removal of spinal hardware (if applicable) are able to treat most infections.

The age of the patient is not a contraindication for spine surgery. The benefits of spine surgery for older patients, including less-invasive operations, outweigh the risks associated with those procedures wherever it is indicated. Also, spine surgery has seen rapid advancements in operative techniques, implants and biologics, and equipment such as computer assisted navigation and



An X-ray showing an osteoporotic wedge collapse of the T12 thoracic vertebra. It can cause back pain or rarely neurological deficiency

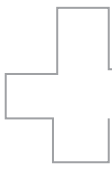


Image courtesy: Medtronics

An image showing the latest advancement for safe spine surgery, the robotics. Navigation helps the surgeon in guiding the screw through the vertebra.

surgical robotics increasing the safety and accuracy of surgery.

**What conditions can complicate the treatment?**

Other conditions involving the spine can accelerate the development or complicate the treatment of these conditions. Some of these include ankylosing spondylitis, idiopathic scoliosis, rheumatoid arthritis, previous spine surgery, and cancer.

Medical conditions unrelated to the spine can also complicate treatment. Osteoporosis, for example, can cause or accelerate many of the above conditions, so proper treatment through a primary care provider or endocrinologist can help prevent progression of these conditions. Obesity also makes treatment of these conditions difficult, so proper dieting and appropriate exercise can help immensely. Smoking is well known to exacerbate all pain syndromes, so cessation is highly recommended.

**How can we reduce the incidence of spine conditions?**

Ergonomics at home and work are extremely important and go a long way

in helping to prevent or reduce back or neck aches. When sitting at a computer desk, avoid slouching of the back and stooping of the neck. Make efforts to raise the computer monitor to eye level and adjust seat height to facilitate optimal positioning. When lifting heavy objects, be sure to bend at the knees and not at the waist, and push rather than pull as much as possible.


Proper sleep bedding and positions are important as well. A firm mattress and a pillow that allows your neck to lie in a neutral position are very important for neck and back stability. Also, sleeping with a pillow under the knees when lying supine or with a pillow between the knees when on the side can help reduce stress on the lower back.

Walking alone can improve flexibility, strength, and blood flow to the spine and intervertebral discs, which can help prevent injury. A morning or evening walk for 45 minutes can easily be incorporated into a daily routine, before or after meals. For those whose mobility is limited, staying out of bed as much as possible is the main priority.

A strong core is essential to preventing spine injury, so static exercises that strengthen and tone the abdominal, lower back, and neck muscles are also effective. Yoga and pilates (within reasonable limits) can also be helpful in creating and maintaining flexibility and strength of the spine and core.

Thanks to smart phones and mobile apps, our lives have become much easier. Mobile health is emerging as the most convenient way to deliver services remotely, and collect outcomes in real time, thus contributing to disease management by transferring care from hospital to home. Nowadays, there are mobile apps like Snapcare which are meant to help people with back pain and to teach them self-care of the back.

Globally, there have been rapid developments in prevention, diagnosis and comprehensive management of various spinal ailments in both medical and surgical fields. Prompt diagnoses such as vertebral fractures and infections can significantly reduce pain and even save lives. Older adults with sudden severe back pain and/or fever should be taken to urgent or emergent care as soon as possible. Timely intervention is crucial in better and efficient management of spine-related conditions affecting the elderly.

To summarize, prevention is better than cure. Healthy lifestyle and spine care are necessary to escape the agony of spine problems. Early diagnosis and timely intervention is necessary to prevent complications in the management of spine conditions. With advancements in management of spine ailments, they can be successfully managed using medications, injections or surgery. Spine surgery is safe in the elderly and can give excellent results in expert hands. 

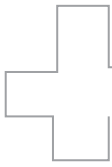
**(The author is Chief of Spine Service and Medical Director, Indian Spinal Injuries Centre, New Delhi)**



# STANDING BEHIND SENIORS

Injuries resulting from falls in old people – resulting in recurrent pain, functional impairment, disability, and even death – are a major public-health concern. Specialized geriatric health services need to be developed to provide preventive, curative and rehabilitative care to this vulnerable population...

**DR SUNEELA GARG/ DR SAMAR HOSSAIN/ DR DIVYA GUPTA**



India as the second most populous country in the world has 76.6 million people at or over the age of 60, constituting above 7.7% of total population.

The problems faced by this segment of the population are numerous owing to the social and cultural changes that are taking place within the country. The major area of concern is the health of the elderly with multiple medical and psychological problems.

Certain problems of the health or disease of the patients over 50 years of age warrant special consideration. Injuries in the elderly population have more alarming consequences (more difficult treatment, higher costs) than in the younger population. The majority of the injuries are caused by traffic accidents and falls, for which it is important to devise preventive strategies.

### Epidemiological Data

A study by Dionyssiotis Y on the problem of falls among older people, found that more than 30% of people over the age of 65 years fall each year and in half of the cases falls are recurrent. About one in ten falls results in serious injuries such as hip fracture, subdural hematoma, other fractures or even traumatic brain injury.

It was found in a study conducted in the Eastern Mediterranean region that 30%–40% of adults older than 65 years residing in the community fall each year. The rates were higher in hospitalized patients and nursing home residents. In Qatar, the prevalence of falls among the elderly in 2008 was 34% (119 of 355 attendees); out of this figure, 47% of elderly individuals suffered a fall while 53% experienced recurrent falls. In the United States, national estimates of the incidence and direct medical costs associated with fall-related injuries in mature patients aged  $\geq 65$  in 2000, showed that 10,300 were fatal. Furthermore, an additional 2.6 million nonfatal fall-related injuries were



reported. The estimated total cost of medical treatment for these injuries was \$0.2 billion for fatal falls and \$19 billion for nonfatal falls.

In a multi-centric community study evaluating health problems in the elderly (Year 2003), in ten states across India, covering a total population of 10,200 elderly with equal rural and urban distribution, the incidence of falls was found to be 14%.

Assessment of the morbidity profile and its determinants will help in the application of interventions, both medical and social, to improve the health status and thus the quality of life of the elderly in northern India. The distribution of history of fall among elderly people over 60 years old shows that, out of the total sample population, 103 (51.5%) subjects had fallen. Fracture was reported in 21.3%, and other injuries occurred in 79.6% of those who had fallen. Fractures among females (26.4%) were reported more frequently compared with males (16%) and fracture was seen more in urban

subjects (29.4%) compared with rural subjects (13.4%).

### Causes

Injuries resulting from falls in elderly people are a major public-health concern, representing one of the main causes of longstanding pain, functional impairment, disability, and death in this population. The problem is going to worsen, since the rates of such injuries seem to be rising in many areas, as is the number of elderly people in both the developed and developing world.

The most common mechanism of injury in the elderly population is due to fall. About 30%–50% of falls in the elderly result in minor injuries, including bruises, abrasions, and lacerations, but an estimated 10% of all falls in seniors cause major injuries, including intracranial injuries (ICIs) and fractures.

Falls are the most common cause of injuries among senior citizens and the top reason for a hospital admission for





trauma. They constitute the second leading cause of unintentional deaths after road traffic accidents. Advanced age substantially increases the likelihood of hospitalization after a fall. Falls account for 87% of all fractures among people aged 65 years or older.

#### Risk Factors for falls-

The risk factors can be intrinsic or extrinsic.

The intrinsic risk factors include the following-

- Recurrent falls
- Increase in falls with an increase in the age
- Females fall more often than males and are more likely to suffer from fractures when they fall
- A solitary lifestyle
- The use of benzodiazepines in the elderly population leads to an increase in the risk of hip fracture by 44%

- Underlying medical conditions like vascular diseases, COPD, depression and arthritis
- Immobility
- Others like cognitive disorders, attenuated vision, ulcers and deformed feet

#### The extrinsic risk factors include-

- Poor lighting
- Slippery floors
- Uneven surfaces

#### Conclusion

Falls are potentially preventable and hence much interest is being shown in the evaluation of falls and identifying the risk factors, which help in falls prevention programmes. As the population ages, the problems related to falls and fractures are expected to grow and pose an even greater challenge to the healthcare systems. Meeting these challenges requires a clear understanding of the prevalence and nature of falls, innovative planning to develop prevention programmes, systems and structures which will support falls prevention initiatives, and substantial reforms and policies at the local and national levels.

A majority of falls are predictable and therefore preventable. Community-based falls registries and surveillance systems should be set up to better understand the prevalence,


nature, and the trends of unintentional injuries at the population level in India.

#### Interventions

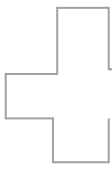
Population based interventions or interventions aimed at specific groups at high risk of falling should be undertaken. Simple interventions can be planned to reduce a single risk factor or multifactorial interventions, environmental modifications, mobility aids and educational programs. There is a need for developing a comprehensive care of providing preventive, curative and rehabilitative services to the elderly.

#### Recommendations

India and other developing countries face the major challenges of prevention, pre-hospital care and rehabilitation in their rapidly changing environments to reduce the burden of fall-related injuries. There is a need for developing a comprehensive care of providing preventive, curative and rehabilitative services to the elderly. Unlike developed countries, India does not have well-structured health services for the elderly, leading to a relatively ad hoc system of healthcare delivery to this vulnerable population. Specialized geriatric health services have to be developed, to educate, develop and maintain healthy lifestyles and to provide comprehensive healthcare.

Protective factors for falls in older age are related to behavioural change and environmental modification. Behavioural change to healthy lifestyle is a key ingredient to encourage healthy ageing and avoid falls. Non-smoking, moderate alcohol consumption, maintaining weight within normal range in mid to older age, playing an acceptable level of sport protect older people from falling. 

**(The authors are Director Professor/Senior Resident Doctors, Department of Community Medicine, Maulana Azad Medical College, New Delhi)**



# BRINGING SMILES TO SENIORS

The National Programme for the Health Care of Elderly (NPHCE) has made seminal contribution to the delivery of promotional, preventive, curative and rehabilitative services to senior citizens so that they can age with security and dignity and continue to participate in the life of the nation with full vigour...

**BY DR GOWRI NAMBIAR SENGUPTA**

**L**aunched by the Ministry of Health & Family Welfare during 2010-11, National Programme for the Health Care of Elderly (NPHCE) addresses various health-related problems of elderly people. The programme is an articulation of the international and national commitments of the government as envisaged under the UN Convention on the Rights of Persons with Disabilities (UNCRPD), National Policy on Older Persons (NPOP) adopted by the Government of India in 1999 & Section 20 of "The Maintenance and Welfare of Parents and Senior Citizens Act, 2007" dealing with provisions for comprehensive care of senior citizens. The basic thrust of the programme is to provide dedicated health care facilities to the senior citizens (>60 year of age) at various level of primary, secondary and tertiary health care.

promotional, preventive, curative and rehabilitative services to the elderly through community-based primary health care approach

- To identify health problems in the elderly and provide appropriate health interventions in the community with a strong referral backup support.
- To build capacity of the medical and paramedical professionals as well as the care-takers within the family for providing health care to the elderly.
- To provide referral services to the elderly patients through district hospitals, regional medical institutions
- Convergence with National Rural Health Mission, AYUSH and other line departments like Ministry of Social Justice and Empowerment.

**Objectives of NPHCE:**

- To provide an easy access to

**Components of the Program:**





**National Rural Health Mission**



I. National Health Mission (NHM) Component: Primary & Secondary care service delivery through District Hospitals (DH), Community Health Centres (CHC), Primary Health Centres (PHC), Sub-Centre/Health & Wellness Centres.

II. Tertiary Component: These services are being provided through Regional Geriatric Centres (RGCs) located at 19 medical colleges in 18 states of India and two National Centres of Aging (NCAs) one in AIIMS, Ansari Nagar, New Delhi and another in Madras Medical College, Chennai.

III. Central Component

(i) Research: A Longitudinal Ageing Study in India (LASI) project: The LASI, a nationally representative survey of older persons in India, is being undertaken through International Institute of Population Sciences (IIPS), Mumbai with emphasis on their health, social factor and economic situation. It involves 61000 non-institutionalized Indian residents aged 45 and older and their spouses (irrespective of age) in 30 states and 6 union territories covering 640 districts. The first wave of LASI has recently completed and the report shall be disseminated shortly.

(ii) Monitoring & Evaluation: Regular monitoring through quarterly and annual progress reports analysis is carried out along with regional and national level review meetings. A web-based MIS has been developed for real time monitoring purpose.

(iii) IEC: Various Audio/Video spots, print material-folder, posters etc. have been developed. However, a comprehensive IEC package including an action plan is yet to be prepared.

**Progress in Operationalization of the NPHCE activities**

As on date, geriatric care services of OPD, IPD, physiotherapy and laboratory have been sanctioned for 713 districts, including for 114 districts sanctioned in 2019-20. The

regional geriatric centres which provide tertiary level of geriatric care services along with training, research have been established in 18 out of the 19 sanctioned medical colleges. The two national centres for aging at AIIMS Delhi and MMC Chennai are in the process of development. MMC Chennai is in the advanced stage of construction while AIIMS Delhi is in the initial stage of construction.

### Physical Progress

- Geriatric OPD services are being provided in 525 DH, 1936 CHCs and 5368 PHCs along with special OPDs in 18 RGCs.
- Inpatient services are being provided in 463 DH, along with 16 RGCs.
- Physiotherapy services are being provided in 414 DH, 732 CHCs along with 14 RGCs.
- Laboratory services are being provided in 494 DHs, 1735 CHCs, along with 13 RGCs.
- Geriatric patients have been provided following health care services: 92.73 lakhs OPD, 3.63 lakhs indoor admissions, 4.69 lakhs rehabilitation and 31.34 lakhs lab services respectively by all the operational DHs. In addition, 8.82 lakhs of elderly people were provided health screening, 0.76 lakhs home based care and 0.18 lakhs of elderly provided supportive



accompanied with new challenges:

i. With increasing age, burden of morbidity (disease and disability) will increase straining the existing healthcare system for curative & rehabilitative services.

ii. There will be an increase in the number of people with depression, dementia such as Alzheimer's disease, as people who live longer need long-term care as well as respite care mechanisms at their doorstep.

iii. Many older people are at risk of maltreatment. In emergency situation, older people can be especially vulnerable.

iv. However, another paradigm that needs reflection is the chunk of active, enthusiastic and experienced elderly population mostly the young olds (60-70 yrs) who have preventive and minimal curative healthcare needs but are an exuberant peer influencer and a veritable non formal workforce

v. Multisectoral policies are the need of the hour with the right spirit of implementation. However coordinated efforts are required from various stakeholders like other non-health sectors and ministries with respect to elder care and ultimately healthy aging.

### Background

1. As per 2011 census, the population of India is 1.21 billion. The elderly population in India is 10.39 (8.6%) crores. The projected elderly population by 2050 in India is 32.43 (20.6%) crores. It is also projected that older people aged 75 years and above shall increase by 340%.

2. As population ages, the sex ratio (No. of females per 1000 males) also increases. The ageing index was 22.7 in 2000 and is projected to increase to 105 by 2050, dependency ratio will increase to 22.6% and potential support ratio will decline to 4.4 persons aged 15-64 years per elderly person. Many a time, elderly are alone at home, as the children move away to make livelihood.

3. It is estimated that during twenty-first century, the growth in population ageing will be even much faster. The projected percentage of aged population is expected to increase by 11 points from 10 – 21 percent. The developing regions will also reach this mark very fast. Thus, the challenge for the future is 'to ensure that people everywhere will be enabled to age with security and dignity and continue to participate in their societies as citizens with full right'.

4. Information available in the literature indicate elderly face dual burden of disease both communicable and non-communicable. Approximately 75.68% of the older people have one or other disease, 40% one or the other disability and 25% of older people have mental health related issues. Also 8% of the elderly people are bed ridden and need home-





based care. This reinforces the need for long term care systems which need to be developed.

**Achievements:**



State level Training of Master Trainers (Medical Officers) for Comprehensive Geriatric Care at Raipur, Chhattisgarh

**I. Modules:** Three sets of training modules for medical officers, nurses and community-based workers to deliver comprehensive geriatric care have been developed in 2018. Training



State level Training of Master Trainers (Medical Officers) for Comprehensive Geriatric Care at Shillong, Meghalaya



State level Training of Master Trainers (Medical Officers) for Comprehensive Geriatric Care at Panchkula, Haryana



State level Training of Master Trainers (Medical Officers) for Comprehensive Geriatric Care at Mohali, Punjab

of Trainers (ToT) to identify state level master trainers and facilitate district level trainings is being conducted. State level ToT of medical officers for comprehensive geriatric care has already been conducted at Chhattisgarh, Meghalaya, Haryana and Punjab, Maharashtra generating approx 250 master trainers.

**II. NPHCE Website:** - An interactive and dynamic website cum MIS of the NPHCE programme ([www.nphce.nhp.gov.in](http://www.nphce.nhp.gov.in)) has been initiated through Centre for Health Informatics (CHI) to provide comprehensive information along with data regarding geriatric facilities and services available throughout the country.

**III. IEC:** Audio/video spots on different topics of elder care, print material-folder, posters etc. have been developed. The regional language



Regional Review Meeting of NPHCE, East Zone, Bhubaneswar, Odisha




Principle Secretary at Inaugural session of Regional Review Meeting of NPHCE, West Zone, Bhopal, M.P.

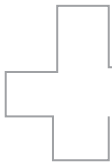


Health Minister Kerala Inaugurating the Regional Review Meeting of NPHCE, South Zone, Thiruvananthapuram, Kerala

version of IEC material is being developed.

**IV. Regional Review cum capacity building Workshop:** Four Regional Review Workshops (West Zone, North East Zone, East Zone & South Zone) were conducted to review the functioning, physical & financial progress of RGC's & States/UT nodal officers. 

(The author is Assistant Director General (NPHCE & Public Health), Directorate General Health Services, Ministry of Health & Family Welfare, New Delhi)



# EMPOWERING THE ELDERLY

Over the years, there has been a steady rise in the population of the older people who are unfortunately the most ignored and neglected segment of society. To safeguard their needs of financial security, health care, shelter and welfare, including protection against abuse and exploitation, the Government runs multiple programmes and schemes, which aim at making a difference in the lives of senior citizens ...

**BY DR SUNEELA GARG/ DR DIVYA GUPTA/ DR SAMAR HOSSAIN**

India is gradually undergoing a demographic change. With the decline in fertility and mortality rates accompanied by an improvement in child survival and increased life expectancy. A significant feature of demographic change is the progressive increase in the number of elderly persons. The number of elderly persons has increased from 1.98 crore in 1951 to 7.6 crore in 2001, and 10.38 crore in 2011. The projections indicate that the number of 60+ in India will increase to 14.3 crore in 2021 and 17.3 crore in 2026. Continuous increase in life expectancy means that more people are now living longer. General improvement in the health care facilities over the years is one of the main reasons for continuing increase in proportion of population of senior citizens. The WHO has declared 2020-2030 as the decade of elderly. Ensuring that they not merely live longer, but lead a secure, dignified and productive life is a major challenge.

The problems of the elderly in India were not serious in the past because the numbers were small and the elderly were provided with social protection by their family members. But owing to relatively recent socio-

economic changes, ageing of the population is emerging as a problem that requires consideration before it becomes critical. Change in socio-economic status and various health problems adversely affect an individual's way of life during old age.

## ISSUES FACING THE ELDERLY IN INDIA

Arthritis, hypertension, hearing impairment, defective vision, diabetes and varicose veins are among the usual diseases faced by the elderly. These chronic diseases tend to occur more in women and tend to increase with age. Use of tobacco and alcohol is more among the urban slum dwellers. Illiteracy and poverty leads to more chronic diseases like tuberculosis, HIV/AIDS, dengue fever etc.

Most of the poor old age people also suffer from nutritional deficiencies that include iron deficiency, calcium deficiency and vitamin A deficiency eventually leading to blindness if not treated.

The aged people are often financially bankrupt since their assets, properties and wealth are legally transferred to their children. So, most elderly people do not have an emergency fund

available to meet their basic needs leaving them dependent on their children or other family members financially.

Elderly abuse is also a very important issue of the elderly. Violence on the elderly can be in various forms mainly - physical, sexual, emotional, neglect, abandonment and financial. For raising awareness regarding this, 15th June every year is set aside as World Elder Abuse Awareness Day (WEAAD) by the United Nations.

Finally, many elderly suffer from isolation and alienation from the society and their family members leading them into depression, loneliness and also psychological disorders.

## SCHEMES & POLICIES FOR THE ELDERLY

The Ministry of Social Justice and Empowerment & Ministry of Health and Family Welfare focus on formulating policies and programmes for the elderly in close collaboration with state governments, non-governmental organizations and civil societies. The programmes aim at their welfare and maintenance especially for indigent elderly. They are in tandem with the Global Strategy and



Action Plan for Ageing and Health adopted by the World Health Assembly.

### 1. National Policy for Older Persons (NPOP) 1999

The primary objectives of this policy are to:

- Ensure the well-being of the elderly so that they do not become marginalized, unprotected or ignored on any count.
- Encourage families to take care of their older family members by adopting mechanisms for improving intergenerational ties so as to make the elderly a part and parcel of families.
- Encourage individuals to make adequate provision for their own as well as their spouse's old age.
- Provide protection on various grounds like financial security, health care, shelter and welfare, including protection against abuse and exploitation.
- Enable and support voluntary and non-governmental

organizations to supplement the care provided by the family and recognizing the need for expansion of social and community services with universal accessibility.

- Provide care and protection to the vulnerable elderly people by ensuring for them an equitable share in the benefits of development.
- Provide adequate healthcare facility to the elderly.

**National Council for Older Persons (NCOP)** was constituted in 1999 under the chairpersonship of the Ministry of Social Justice and Empowerment to operationalize the National Policy on Older Persons. The NCOP is the highest body to advise the Government in the formulation and implementation of policy and programmes for the elderly.

### 2. Maintenance and Welfare of Parents and Senior Citizens Act, 2007

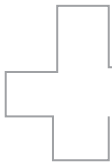
The objectives of the Act are:

- Revocation of transfer of property by senior citizens in case of negligence by relatives.
- Maintenance of parents/senior citizens by children/ relatives made obligatory and justiciable through Tribunals.
- Pension provision for the elderly.
- Adequate medical facilities and security for senior citizens.
- Establishment of old age homes for the indigent senior citizens.

The Act was enacted on 31st December 2007. It accords prime responsibility for the maintenance of parents on their children, grandchildren or even relatives who may possibly inherit the property of a senior citizen.

### 3. National Program for Health Care of Elderly, 2010

Keeping in view the recommendations made in the "National Policy on Older Persons" as well as the State's obligation under the "Maintenance & Welfare of Parents & Senior Citizens Act 2007", the Ministry



of Health & Family Welfare (MoHFW) launched the “National Programme for the Health Care of Elderly” (NPHCE) during the year 2010, to address various health related problems of elderly people. The NPHCE is sponsored and its implementation is monitored by the MoHFW. However, once the programme is fully implemented throughout the country, the responsibility of running it will lie with the state governments.

The beneficiaries of this programme are the elderly people (above 60 years) in the country.

Free, specialised health care facilities are provided exclusively for the elderly people through the state health delivery system viz:

- District hospitals with Geriatric Clinic (OPD) and 10 bedded Geriatric Ward
- Bi-weekly Geriatric Clinic at Community Health Centres
- Weekly Geriatric Clinic at Public Health Centres
- Domiciliary visits to the elderly persons by ANM/Male Health Workers posted under Sub-Centres and provision of callipers and supportive devices to make them ambulatory.
- Referral treatment at the Regional Geriatric Centres with 30 bedded Department of Geriatrics.
- The Centres of Excellence – National Centres for Ageing are – AIIMS, New Delhi and Madras Medical College, Chennai.

**Main Aims of NPHCE are –**

- Preventive and promotive health care services such as regular physical exercise, balanced diet, stress management, avoidance of smoking or tobacco products and prevention of fall, etc. are provided by expanding access to health practices through domiciliary visits by trained health workers. They impart health education to old persons as well as their family members



- entrusted with care of older persons.
- Dedicated outdoor and indoor patients services are developed at PHCs, CHCs, District Hospitals and Regional Geriatric Centres for management of chronic and disabling diseases.
- In service training is imparted to the health manpower using standard training modules prepared with the help of medical colleges and regional institutions to overcome the shortage of trained medical and para-medical professionals in geriatric medicine. The post-graduate courses in geriatric medicine have been introduced in Regional Geriatric Centres for which additional teaching and supportive faculties are provided to these institutions.
- Therapeutic modalities like therapeutic exercises, training in activities of daily life (ADL) & treatment of pain and inflammation through physiotherapy unit are arranged at CHC, district hospital and Regional Geriatric Centre levels.
- Health education programmes using mass media, folk media

and other communication channels are being promoted to reach out to the target community for promoting the concept of healthy ageing, importance of physical exercise, healthy habits, and reduction of stress. Camps for regular medical check-up are being organized at various levels.

**Some other initiatives -**

**• Integrated Program for Older Persons**

It is a scheme by Ministry of Social Justice and Empowerment since 1992 with the objective of improving the quality of life of senior citizens by providing basic amenities like shelter, food, medical care and entertainment opportunities and by encouraging productive and active ageing. Under this Scheme, financial assistance is provided to NGOs/voluntary organizations, Panchayati Raj institutions etc. for maintenance of old age homes, respite care homes and continuous care homes, multi-service centres, mobile medicare units, day care centres for Alzheimer’s disease/dementia patients, and physiotherapy clinics for older persons etc.







• **Indira Gandhi National Old Age Pension Scheme**

Indira Gandhi National Old Age Pension Scheme (IGNOAPS), earlier called as “National Old Age Pension Scheme (NOAPS)”, implemented by Ministry of Rural Development, is a social sector scheme and forms part of the National Social Assistance Programme (NSAP) which came into

effect from 15th August, 1995. Under IGNOAPS, central assistance of Rs. 200/- per month is provided to persons in the age group of 60-79 years and Rs. 500/- per month to persons of 80 years and above and belonging to below poverty line (BPL) household as per the criteria by Government of India. State/UTs have been requested to contribute at least

the same amount under the scheme.


• **Vayoshreshtha Sammans - A Scheme of National Award for Senior Citizens**

This scheme was launched in 2005 and is dedicated to senior citizens. It is funded by the Central government and is applicable for eminent senior citizens and institutes involved in rendering distinguished services for the cause of elderly persons.

• **Rashtriya Vayoshri Yojana**

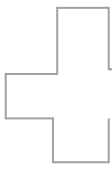
RVV is a scheme funded from the Senior Citizens Welfare Fund since 2016 for providing physical aids and assisted-living devices for senior citizens belonging to BPL category. The devices like walking sticks, elbow crutches, walkers/crutches, tripods/quadpods, hearing aids, wheelchair, artificial dentures and spectacles are distributed free of cost to the beneficiaries in camp mode. RVV is executed by Artificial Limbs Manufacturing Corporation of India (ALIMCO) under the Ministry of Social Justice and Empowerment.

• **The Pradhan Mantri Vaya Vandana Yojana**

It is a pension scheme announced by the Government of India exclusively for the senior citizens aged 60 years and above which is available from 4th May, 2017 to 31st March, 2020. The scheme will be operated by Life Insurance Corporation of India (LIC). On payment of initial lump sum amount ranging from ` 1.5 lakhs for a minimum pension of ` 1,000/month to a maximum of ` 15lakh for a maximum pension of ` 10,000/month for a policy term of 10 years, the beneficiary will get guaranteed rate assured pension based on return at 8% per annum. The sum is payable on monthly or quarterly or half yearly or annual basis. 



**(The authors are Director Professor/ Senior Residents Doctor, Department of Community Medicine, Maulana Azad Medical College, New Delhi)**



# “HOLISTIC MEDICINE CAN REVERSE THE BIOLOGICAL EFFECTS OF AGING”

It's a basic human instinct to live as long as possible. But according to **DR R K TULI, FOUNDER, SOCIETY FOR HOLISTIC ADVANCEMENT OF MEDICINE “SOHAM,”** it is important to not only live long, but live healthy, feel well, look good, be productive, and remain useful to others as long as we live....

**T**his phenomenon termed 'Positive Wellness' should be possible at any age with nil or easily manageable disability burden. Modern medicine does not offer any means to arrest or reverse the effects of biological ageing, or the resultant diseases attributable to aging. Dr Tuli provides the mantra of anti-aging by incorporating the ancient 'art' with modern 'science' in the form of an all-inclusive approach to health termed Holistic Medicine, which is highly useful for therapeutic tapping of subtle shifts in our physiology, generating biochemical communicators to mould the molecules that comprise cells, tissues, organs, systems, and the human being as a whole.

Dr Tuli elaborated on the efficacy Holistic Medicine at great length in a conversation with Double Helical.

The inbuilt natural technology inherent in every human individual can be easily harnessed to tap into natural reservoirs of unlimited universal energy, creativity and vitality; arrest, and effect reversal of any disease process, minimise morbidity due to biological aging, improve health at any age and restore Positive Health & Total Wellness.

According to WHO statistics, average life expectancy at birth in



India was 57 years in 1990, it increased to 61 years in 2000, and further improved to 65 years in 2009, in comparison to current global average of 68 years; whereas in Japan the same stood at 83 years. According to this trend, we are gaining an extra four years to live with the passage of each decade. In near future an increasing numbers of us in this country would live a hundred years or more. It's mandatory that increasing longevity must be supported with better health, minimal medication & good quality of life 'QOL'.

Increasing life span is attributed to increased affluence, better living conditions, higher education, more health awareness, healthier nutrition,

improved sanitation & hygiene, safer working conditions, prevention & cure of infectious diseases of the past, and better medical facilities. At the same time, we have to be aware of limitations of the system of modern medicine that does not fully address the emerging threat to our survival in the form of diseases attributable to lifestyle disorders, viral infections, or due to the impact of physical aging.

We can significantly enhance efficacy of health care in the elderly by judiciously reducing our dependence on symptomatic relief offered by modern medicine with the time-tested wisdom of various harmless drug-free modalities of officially recognised traditional systems of health to reverse the effects of aging and arrest, or even cure various diseases attributable to the process of aging.

All inclusive integrative drug-free modalities that are used as 'Holistic Medicine' therapy include meaningful lifestyle modifications along the path of 'yoga' including restful mind, positive thoughts, good sleep, stress elimination, breathing practices, healthy nutrition, initiation of regular physical exercise, panchakarma for detoxification and all modalities of acupuncture therapy, supported by psycho-hypnotherapy in chronic refractory diseases.



The traditional Indian as well as Chinese philosophy of health views each human being as a microcosmic whole of the universal macrocosm, creating magnificently organized networks of energy, information and intelligence, in dynamic exchange with our environment, infinitely capable of transformation and renewal, and continuously replacing all the old body tissues according to a predetermined cycle. We can minimize disease burden, improve our health and life by complementing conventional medical care with conscious awareness of this

phenomenon. It helps us to decelerate, arrest and even reverse to an appreciable extent the impact of ever moving clock of biological health.

Excerpts of a freewheeling interview with the **renowned practitioner of Holistic Medicine, Dr R K Tuli...**

### **Why Holistic Medicine?**

It's being increasingly recognised the world over that it would never be possible to meet all the health expectations of the humanity with the exclusive allopathy based conventional model of healthcare. The WHO

recommends and our National Health Policy too has promulgated integration of all the recognised systems of medicine.

### **What is Holistic Medicine?**

Holistic Medicine is the wholesome approach to Health where each individual is treated as a whole 'Body, Mind & Spirit' by a synergy of the evidence based 'science' of modern medicine with the highly complementary and reproducible time honoured 'art' of drug-free modalities of all the officially recognised traditional systems of health for elimination of all sickness and promote Positive Health and Total Wellness.

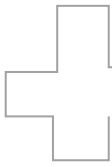
### **What are the benefits of holistic medicine?**

It treats the human being as a whole, body, mind & soul. It offers 'synergy' of drug-free modalities of all the recognised systems of Health. It's equally beneficial at all the levels of health, and at all ages. It helps to take care of all the ailments of an individual concurrently. No drugs, No interventions, No Dope, No iatrogenesis.

Holistic Medicine is highly reproducible, universally beneficial, and cost & time efficient. It's very simple and easily accessible; can be rendered anywhere & everywhere. It optimizes healthcare by complementing existing infrastructure at no extra cost. It tremendously enhances skills, leading to greater professional satisfaction of the practitioners and would restore old glory of the medical profession.

### **What are the basic steps to anti-aging?**

- ★ Change your perceptions of aging & escape conditioning to Reverse Biological Clock.
- ★ Start reversal of your biological age by Deep Rest: Restful Awareness & Restful Sleep.
- ★ Synchronize your biological rhythm with the rhythm of



- nature: "Early to Bed & Early . . .
- ★ Enhance Mind - Body integration by Breathing Consciously and daily YOGA.
  - ★ Do Aerobic Exercises regularly for stretching, strength and cardiovascular fitness.
  - ★ Intelligently nourish your body with healthy organic food and eating consciously.
  - ★ Eliminate Toxins from physical & emotional bodies: drink >2 liters of water daily.
  - ★ Create Flexibility & Creativity in Consciousness; Forgive & Forget; Help others.
  - ★ Make LOVE the most important thing of your life: Be Thankful & Appreciative.
  - ★ Maintain a Youthful Mind - be playful, laugh, be enthusiastic, and be light hearted.
  - ★ Accord priority to drug-free Natural Therapies in preference to medical interventions.
  - ★ Select a competent Holistic Physician as your Family Doctor for Care of your Health.

### **Why do you focus on integrative healing? Do you feel that allopathy in itself is not capable of curing ailments?**

Every system of medicine has its advantages, but none of the systems is perfect. The allopathy for all its initial advantages is today losing its glory due to loss of efficacy in controlling infections as the germs have mutated to become increasingly resistant to antibiotics and have been replaced by viral infections for which the allopathy has limited remedies. It's exposed to its grave deficiencies in that it only treats the proverbial 'tip of the iceberg', that is just the symptom without ever going to the root cause of sickness.

Due to break down of family system in our country and changed lifestyle, non-communicable diseases (NCDs) like anxiety, depression, insomnia, diabetes, hypertension, coronary artery disease, autoimmune disorders,



allergies, hormonal disturbances, poor fertility, cancer, drug abuse including dependence on tobacco and alcohol, have come to dominate the sickness pattern. Allopathy at best offers symptomatic relief merely at physical level of health from all these life-long diseases with inevitable side-effects and cumulative toxicity, besides progressive morbidity and unaffordable expenditure. According to WHO statistics, it's a major cause of mortality in the world and 4% population falls below poverty line due to its prohibitive expenditure annually.

Besides, it offers no cure to diseases attributable to aging and ever increasing population of the elderly. The maximum suffering due to sickness and expenditure on health is during the last years of one's life which invariably exceeds their entire savings.

Therefore, it's the clarion call of the day that we integrate strengths of the respective systems of health which helps to overcome their inherent deficiencies, viz., the support of allopathy is inevitable for surgical support, life-saving emergency situations and its application in

diagnostics. But, all the NCDs can be prevented, controlled and even cured only by following the dictums of Maharishi Charaka and Maharishi Patanjali, respectively.

The medical authorities have to understand that human being is not merely a body or its parts, but a complex of body, mind, senses and the soul. While prevention from disease remains the universal truth, for late comers human health can be improved at any stage and every disease is reversible with the dictum, "Earlier the Better", by optimum integration of all the systems of health termed Holistic Medicine.

### **Which modalities do you combine while treating patients? Which is the most effective modality in curing people completely, according to you?**

It may be highlighted that no one system of medicine is complete to take care of all kinds of sickness. Also, no two drug based systems can be prescribed simultaneously due to problems of drug-interactions. The people invariably ignore their health,



giving priority to everything else in life, and realise it only when struck with a serious ailment or an emergency. In that situation they must rush for allopathic care to save their life first, for which it's universally accepted to be the most advanced and scientifically endorsed system. It has come to dominate health care worldwide, and most people are dependent on it. However, even though it may save life in emergency situation, it never addresses to the root cause of the problem and creates dependence on medication for rest of the life. To

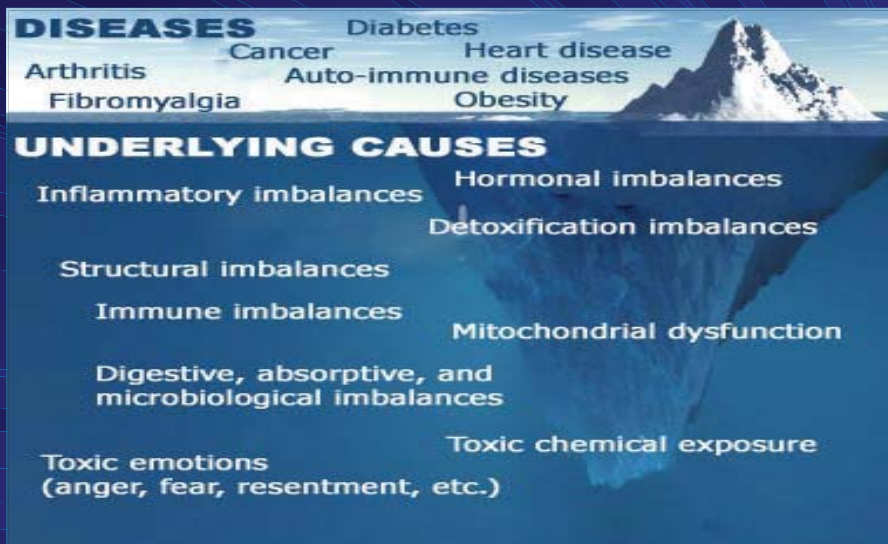
eliminate this evil we need to complement on-going medical management with drug-free modalities of traditional Indian & Chinese wisdom, including the New Age developments in health. This optimum harmony is termed Holistic Medicine.

I practice and support Holistic Medicare comprising lifestyle management, Ashtanga Yoga, Panchakarma, various modalities of acupuncture, and hypnotherapy. I classify New-Age modalities of healing techniques like Reiki, Pranic Healing, Mantra, Mudra, Chakra Balancing, etc.

as derivatives of Yoga. I treat the person as a whole, and all diseases get cured concurrently as revealed by testimonials in the Life Positive magazine every month consistently for over 22 years.

The picture below indicates white or the solar light as the source of all life representing its physical, mental, emotional and spiritual aspects of health. But, this white light in turn is made of seven different colours of the rainbow. Therefore, it's represented that even though allopathy represented by the colour red may be the backbone of health care delivery system, we need optimum integration of all the systems to give us positive health and total wellness 'Body, Mind & Spirit'.

## MODERN MEDICINE



**Holistic Medicine = Modern + Traditional Medicine**

**(Traditional = Indian & Chinese)**

[Conservative Medicine + Life-Style & Stress Management + Ashtanga Yoga + Acupuncture-Reflexology + Panchakarma-Detoxification + Counseling-Hypnotherapy- PLRT-NLP + Reiki-Pranic Healing-Chakra Balancing + Regenerative Medicine]

**Do you think it is possible to reverse ageing and stay young for as long as you want? If yes how?**

Yes, in a willing person it's absolutely possible to reverse the physical damage due to ageing by restoring positive Mind-Body balance and nurturing the spirit of the person. It's universally recognised that 'You are as old as you Think' or the age is what's in your mind. Our Yogis who have mastered the art of harmony of 'Body-Mind-Spirit' are its living example. They live a life of bliss which ends in healthy departure and not death as for the usual mortals.

The 'science' of evidence based modern medicine when complemented with the 'art' of time honoured wisdom of traditional systems of health is termed Holistic Medicine. It's a board certified specialty in the US, and is being increasingly recognised

## HOLISTIC MEDICINE

Optimum Synergy in Health

Body-Mind-Spirit

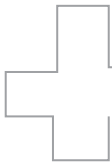
YOGA HARMONY

All Integrative



MANAGES / CURES ALL THE DISEASES OF AN INDIVIDUAL CONCURRENTLY

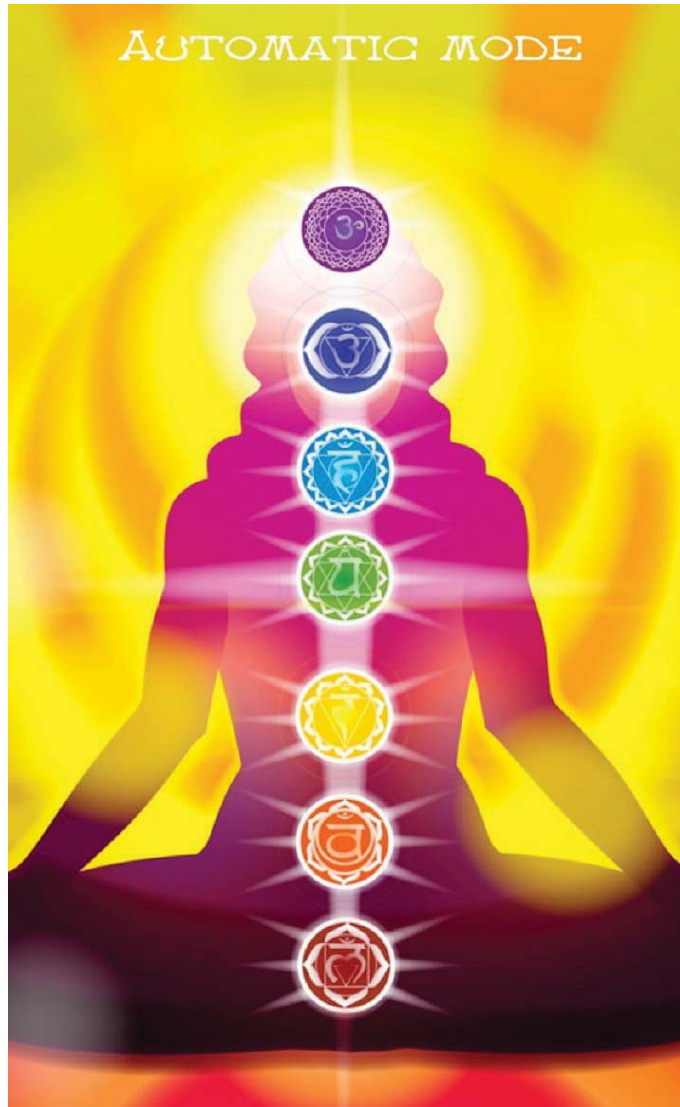
PATIENT-CENTRIC



worldwide as the emerging speciality of future. It offers an easily accessible, predictable, reproducible, sustainable and highly cost beneficial approach to health while infusing people to ever remain healthy, productive and young.

The process of aging commences as soon one is born. It's possible to remain ever young by creating awareness among the youth of the long term benefits of simple Vedic or Gurukul lifestyle including eating habits. As part of SKILL INDIA programme, we can broaden to include benefits of drug-free modalities of Yoga, Panchakarma and the system of Acupuncture to enhance performance of available primary healthcare workers and medical doctors. They should be trained to impart health and not merely treat sickness. Holistic Medicine as a speciality must grow and such physicians should be available at every tertiary care hospital to complement the best of medical care offered to enhance its efficacy. After a lifesaving event, each patient, instead of being subjected to more medication and life-long dependence on the hospital system, should as a protocol be offered secondary prevention to revert to positive health once again.

I am often questioned that why I do not train more doctors in my skills. Well, whatever juniors who have worked with me to acquire the skills have not been able to cut the ice due to lack of demand or I'd say awareness amongst people that with little help they can reverse their sickness and restore health by tapping on their self potential. All the people, including the medical profession, have been conditioned for long to think that only 'allo' or the external interventions can



treat their sickness. We have to kindle the awareness of infinite capability of the 'auto' or the self-healing, as part of the natural intelligence installed within each one of us, to prevent or even overcome any kind of sickness. Let the whole world wake up to know that no antibiotic would help without your own immune system, and no surgery in the world would be possible without patient's capacity to finally heal their own wounds.

**Our ancient culture has so many holistic ways to bring the human body to a state of harmony and balance. Why do you feel that medical science which is alien to our demography and requirements**

**became so popular in India?**

You are wrong to say "our ancient culture has so many holistic ways" as the nature has only one way and that's the nature's order - you disturb that and you invite disease. There is only one way to live a life of bliss & youth by following Patanjali's sutras. Many ways have been created by humans, like many gods, for their own selfish interests and created abundance of 'Quacks' ruining our heritage. The education system in our country had been corrupted by the aliens to subjugate to their business interests and that included practice of medicine whereby you all the time depend on external aids. Allopathy has its distinct advantages of quick relief and emergency care; the rest is our fault to let our life totally depend on it.

**What do you think is the future of medical treatment in the world?**

I always remember as prophetic the words of Dr. Prathap C. Reddy, the founder Chairman of Apollo group of hospitals, who stated in year 1995 that Holistic Medicine is the future of 21st century. This led to the establishment of the world's first ever department of its kind at Delhi's Indraprastha Hospitals. The likes of Dr Deepak Chopra have gained world fame propagating this concept. Most of the aware people talk about it in their social chats, but are driven to allopathy by the conditioning all around.

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# DEFEATING CANCER WITH CARE AND COMPASSION

Action Cancer Hospital organized an extremely vibrant and inspiring programme to commemorate the World Cancer Day

**A**ction Cancer Hospital, organized a lively programme on the occasion of World Cancer Day in its premises on February 4, 2020. The event saw keen participation of doctors, nurses, support staff as well as the patients who are leading a healthy life after receiving successful treatment of cancer at the hospital. It may be recalled that this commemorative programme is being

organized regularly in this hospital since 2015.

With her keen and active participation, Smt Shalu Agarwal represented the entire hospital management comprising, among others, Founder and Chairman, Lala Mange Ram Agarwal, Vice Chairman Nand Kishore Agrawal and President Rajkumar Gupta. Besides her, other notable attendees of the programme included Dr Asha Aggarwal, Medical Superintendent, Dr Anand Bansal,

Medical Director, Dr JB Sharma, Dr Sushant Mittal, Dr Samit Purohit, Dr Ajay Sharma, Dr Rajesh Jain, Dr Manish Pandey, Dr Harpreet Singh, Dr Shruti Bhatia, and Dr Atul Goswami.

There is no doubt that with the help and support of these personalities and other family members, the hospital is progressing rapidly and its credibility and fame is increasing day-by-day. The hospital offers all healthcare facilities along with highly





qualified doctors, nurses, support staff and state-of-the-art machines and equipment.

The program started with rendering of Ganesh Vandana and lighting of the lamp, followed by distribution of gifts to the people, including free coupons of mammography worth Rs 2500 each. There were also free arrangements for measurement of BP, sugar, and weight check at the venue. A








to save them from cervical cancer.

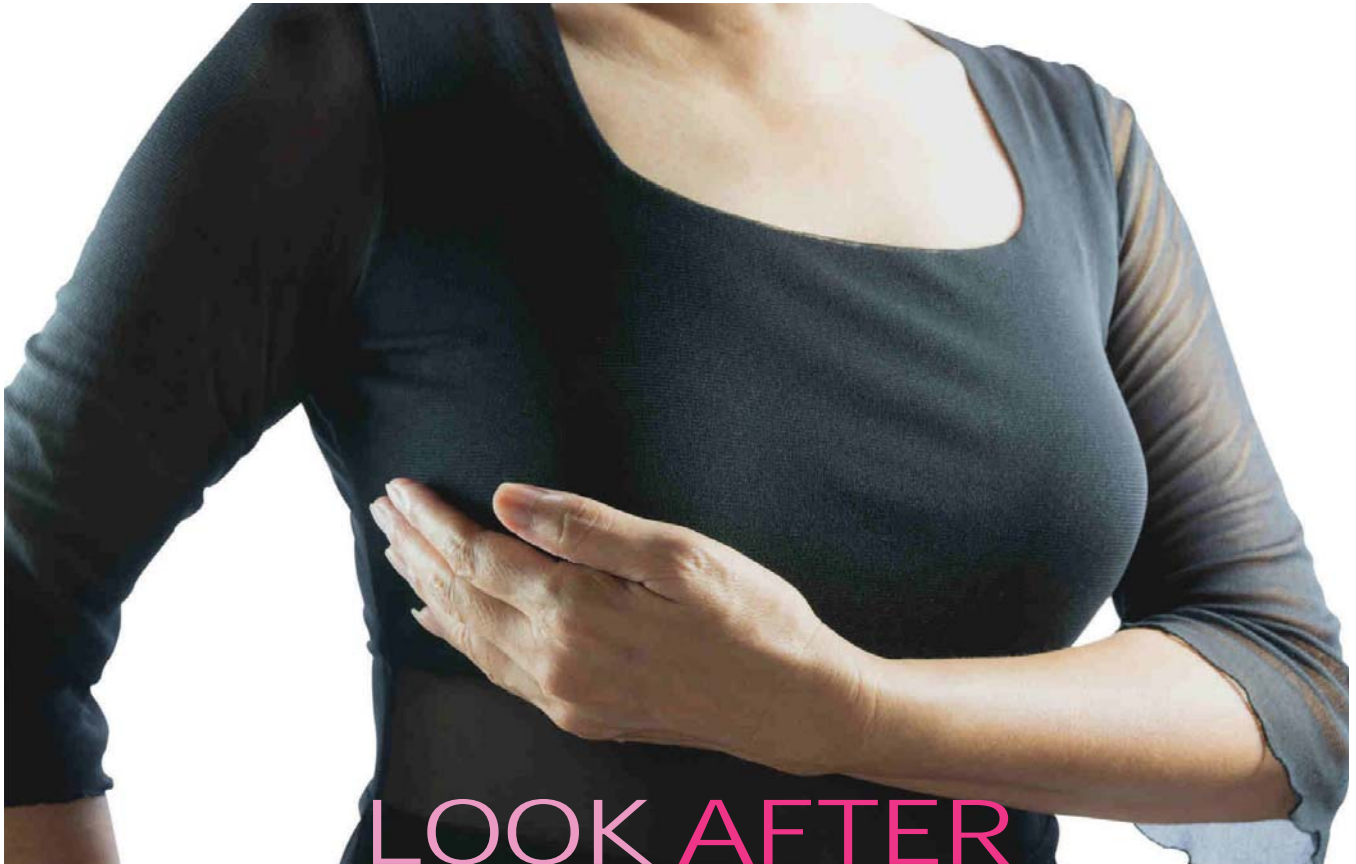
Shalu Aggarwal, in her address said that unwavering faith and ceaseless endeavours are the mantras that can rekindle hope of life in patients. Even in the case of last stage-patients, doctors and nurses keep up serving them every moment, which makes the attendants of the patients also believe that God can still show some miracle. She underscored the need for holding on to hope till the last moment,

because those who try never lose. She expressed her heartfelt gratitude to doctors, nurses and all staff for creating such positive vibes. She thanked all those who attended the programme and wished them a healthy life.

Sri Balaji Action Medical Institute and Action Cancer Hospital is a well-known, credible hospital that occupies a leading position in the list of top level hospitals in the country in many

ways. Spread over a wide area with attractive large lawns, the hospital is equipped with the latest facilities to treat all diseases at very low cost. The staff of this leading hospital are very friendly, cooperative and cheerful so that there is no inconvenience for the patients and their family members. **Nand Kishore Agarwal, Vice Chairman** of the hospital is a messiah of social service, with unmatched leadership abilities. 





# LOOK AFTER YOUR BREAST!

Breast problems in different ages require regular self-breast examination, follow-up, mammogram, additional imaging or a skin biopsy to confirm the diagnosis...

By Dr J B Sharma

**B**reast problems, such as breast lumps, breast pain or tenderness, nipple discharge or inversion, and changes in the skin of the breast, are common in women of all ages, from adolescents to older women. While it can be frightening to discover a new breast problem, most breast problems are not caused by breast cancer.

### Common Breast Problems:

The common breast problems are pain, lumps, infections, nipple discharge, skin changes, cysts and fibro adenomas and breast cancer which can occur in any age.

- Breast lump



- Breast pain
- Nipple discharge
- Nipple inversion
- Skin changes

More serious causes of skin changes on the breast can include less common forms of breast cancer, such as Paget disease or inflammatory breast cancer. Other, more common skin problems, such as rashes, moles, cysts, or skin infections can occur on the skin of the breast, as well. The evaluation of breast skin changes usually includes a breast examination and may include a mammogram. A skin biopsy may be needed to confirm the diagnosis.

**ABNORMAL MAMMOGRAM** — Many



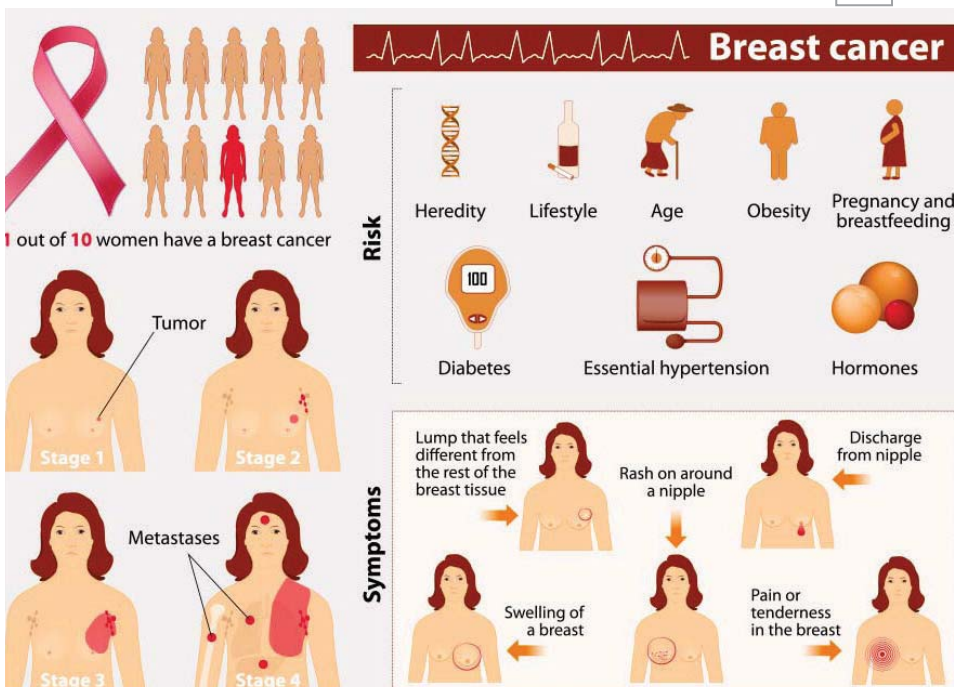
women have an abnormality diagnosed on screening mammogram and have no physical complaints or findings. The radiologist will indicate whether the abnormality requires follow-up, additional imaging or biopsy.

If the abnormality is a mass, an ultrasound is performed to see if the abnormality is cystic or solid. The radiologist can usually perform an aspiration for a cystic lesion or core biopsy of a solid lesion with ultrasound guidance. A clip should always be placed to guide any subsequent surgery that may be required if the biopsy is positive. The clip also provides confirmation that the proper area on the mammogram was targeted for biopsy.

**IN AGE 20s:** All above mentioned abnormalities can occur and treatment depends upon the condition. If any lump is detected before your menstrual period, you may be advised to have a repeat breast examination after your period has ended. In this age group, breast lumps are often caused by hormonal changes and will resolve after your menstrual cycle. Fibroadenoma and cysts are more common in this age group. If any lump is persisting, breast ultrasound should be done. Needle biopsy may be required to rule out cancer. Mammography is usually not done. If any abnormality is not diagnosed on ultrasound, a breast MRI may be required.

**IN AGE 30s:** All above mentioned abnormalities can occur and treatment depends upon the condition. Nipple discharge and infections are more common in this age group. Self breast examination should be done every three months to check any abnormality in the breast. If any lump is palpable, diagnostic mammography should be done along with breast ultrasound. Needle biopsy may be required to rule out cancer.

**IN AGE 40s:** All above mentioned abnormalities can occur and treatment depends upon the condition. Self breast examination should be done every three months to check any abnormality in the breast. If any lump is palpable,



**Breast cancer**

**Risk**

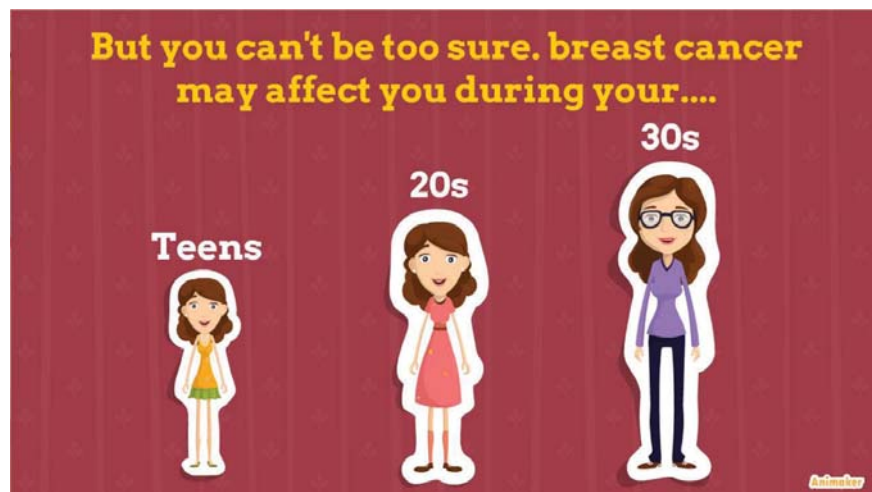
- Heredity
- Lifestyle
- Age
- Obesity
- Pregnancy and breastfeeding
- Diabetes
- Essential hypertension
- Hormones

**Symptoms**

- Lump that feels different from the rest of the breast tissue
- Rash on around a nipple
- Discharge from nipple
- Swelling of a breast
- Pain or tenderness in the breast

1 out of 10 women have a breast cancer

Stage 1, Stage 2, Stage 3, Stage 4



**But you can't be too sure. breast cancer may affect you during your....**

Teens, 20s, 30s

diagnostic mammography should be done along with breast ultrasound. Needle biopsy may be required to rule out cancer. Women who are at high risk of breast cancer sometimes need to begin screening at a young age. This might include women who:

- Carry genes that increase their risk of breast cancer, such as the "BRCA" genes
- Have close relatives who got breast cancer at a young age

Screening mammography can be done to detect any abnormality and repeated every year till the age of 50.

**IN AGE 50s ONWARDS**

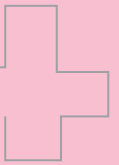
All above mentioned abnormalities

can occur and treatment depends upon the condition. Self breast examination should be done every three months to check any abnormality in the breast. If any lump is palpable, diagnostic mammography should be done along with breast ultrasound. Needle biopsy may be required to rule out cancer. Screening mammography should be done every one-two year depending upon the risk of patient to detect any abnormality

**(The author is Unit Head and Senior Consultant, Medical Oncology Sri Balaji Action Cancer Hospital, New Delhi)**



# ELIMINATING THE SCOURGE

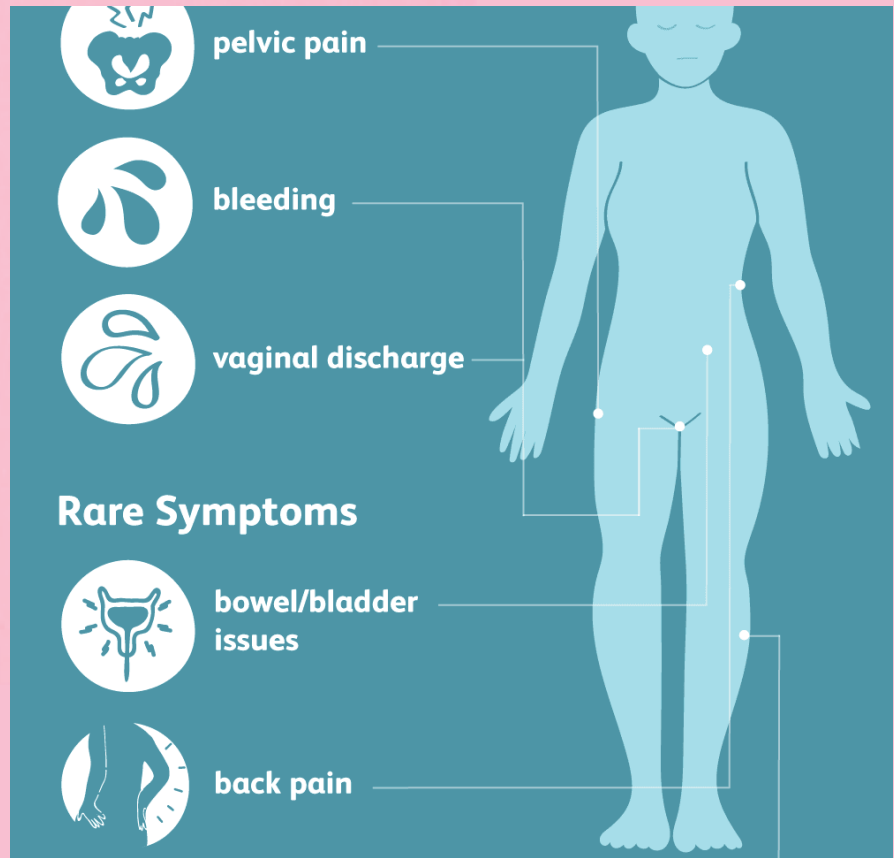
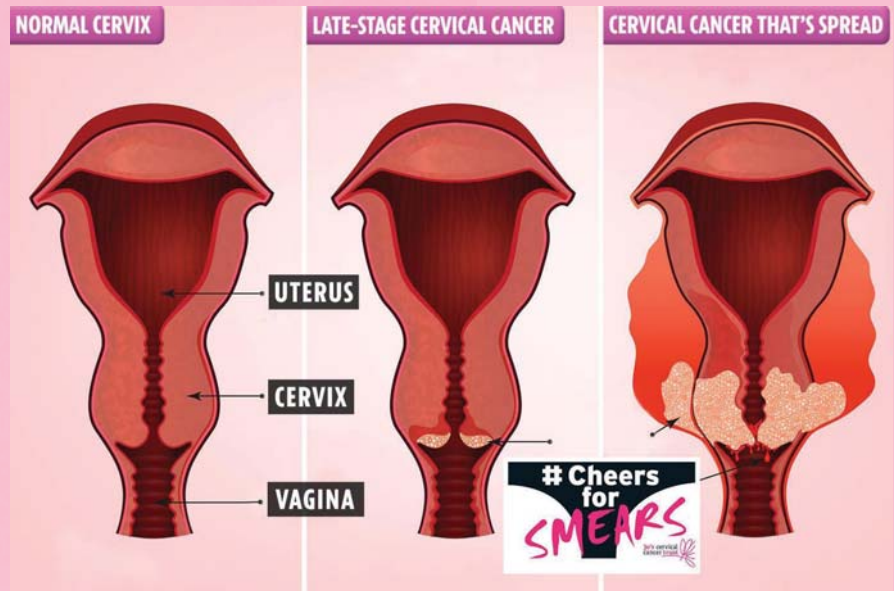


Successful global implementation of HPV vaccination and effective screening strategies offer the hope for eventually eradicating cervical cancer. It's the need of the hour to address myths related to the HPV vaccine...

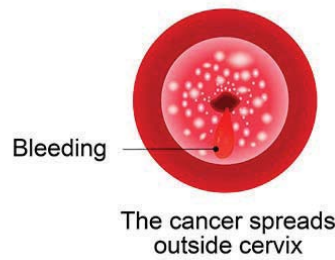
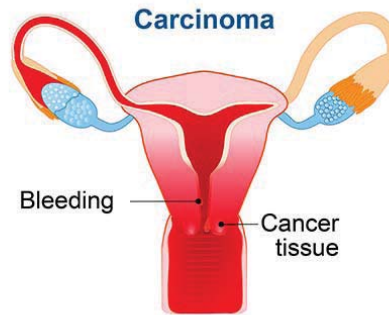
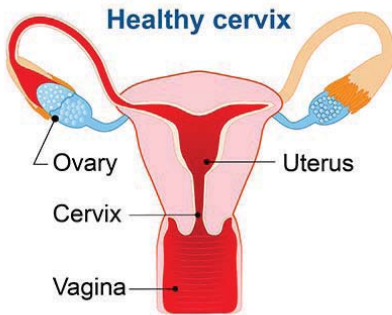
**By Dr Shruti Bhatia**

**C**ervical cancer is the second most common type of cancer found in women worldwide. In developing countries including India, it is the most common cancer causing death in women.

Every year 1,22,800 new cases of cervical cancer are diagnosed in India and almost half of them die from the disease. Human papilloma virus (HPV) is a well-established causative agent



## CERVICAL CANCER



females between ages 15 and 45. There is no need of any booster dose as the benefit lasts for a long time. Currently, vaccine is not recommended for pregnant woman, although a pregnancy test is not required before vaccination. If pregnancy occurs, it is recommended that reminder of the series is deferred until after delivery. Immunocompromised patients should follow a three-dose schedule irrespective of age when vaccination was initiated. Females who have been vaccinated should still have their screening through cytology or HPV testing.

Vaccination rates are currently low as it touches issues related to adolescent sexuality, parental barriers due to lack of knowledge and perceived need for vaccination and cost. Successful global implementation of HPV vaccination and effective screening strategies offer the hope for eventually eradicating cervical cancer. Hence, it's the need of the hour to

of cervical cancer. HPV are a group of more than 100 related viruses. Persistent infection with high risk strains such as 16,18 are responsible for cervical cancer cases worldwide. HPV is also associated with genital warts, cancers of vulva, vagina, anus, penis, and oropharynx.

More than 80% of HPV related cervical cancers can be prevented with vaccinations if given before a girl or woman is exposed to the virus in cervix – the lower part of the uterus that connects to the vagina. Vaccination and routine screening are necessary to prevent and eradicate the disease. Three vaccines have been approved worldwide:

**CERVARIX:** This bivalent vaccine targets HPV types 16 and 18.

**GARDASIL:** It is a quadrivalent vaccine as it targets HPV types 16,18 as well as 6 and 11, so not only providing prevention against cancers but also genital warts.

**GARDASIL 9:** This vaccine targets HPV types 6,11,16 and 18 along with 31,33,45,52,58 which are responsible for 90% cases of cervical cancer and

### 10 WARNING SIGNS OF CERVICAL CANCER

- Unusual vaginal discharge
- Abnormal vaginal bleeding
- Heavier & longer menstrual cycle
- Discomfort while urinating
- Loss of bladder control
- Pain during intercourse
- Constant fatigue
- Pelvic pain
- Unexplained weight loss
- Leg pain

most of the genital warts. Currently, Gardasil 9 is not available in India.

In females, HPV vaccination is recommended at age 11 or 12, but it can be given as early as age 9. Catch up vaccination is permitted upto the age of 45 years. In girls younger than 15, a 2-dose schedule is recommended. Three-dose schedule is necessary in

address myths related to the HPV vaccine and help everyone understand that vaccine is safe with no side effects.

(The author is Senior Consultant, Dept. of Gynae Oncology, Sri Balaji Action Cancer Hospital, New Delhi)





# TARGETING THE MALIGNANCY

IGRT (Image Guided Radiotherapy), with minimal radiation of surrounding structures under the guidance of real time imaging, has emerged as a high-end technique for treatment of prostate cancer...

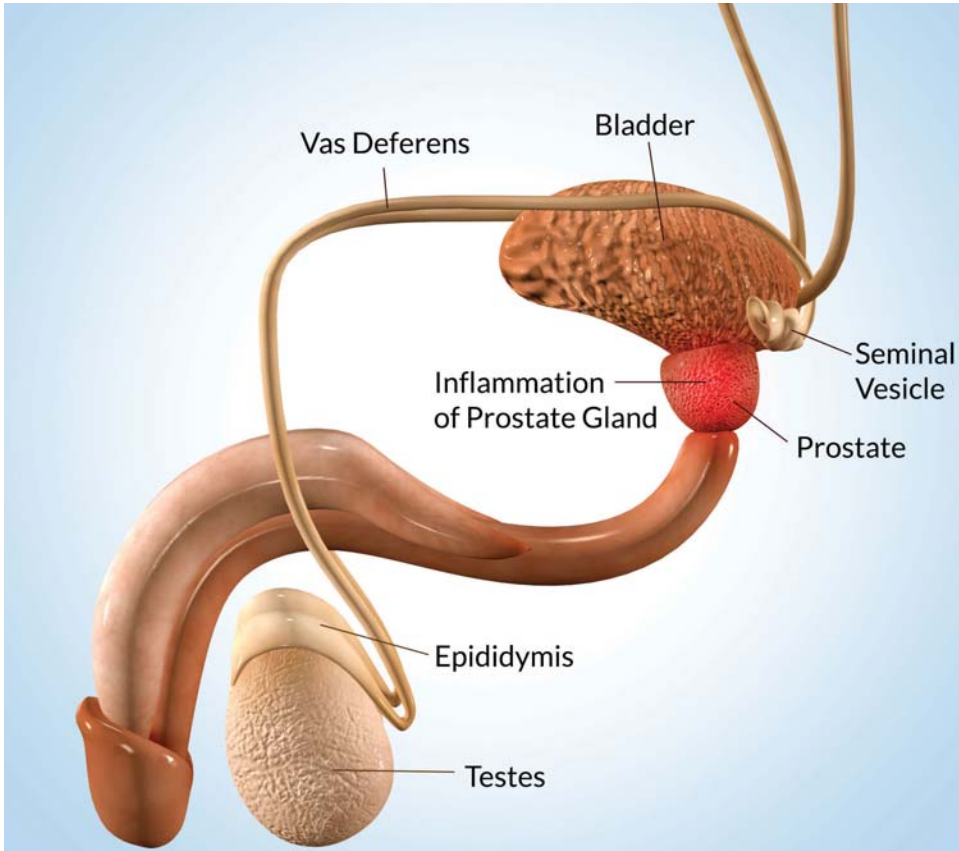
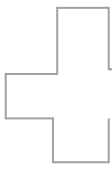
**By Dr Manish Pandey**

**P**rostate cancer usually affects males in their 6th to 7th decade of life. It usually presents as difficulty in passing urine or frequent passage of urine and closely mimics benign prostatic hyperplasia in symptoms. It is highly recommended to consult a urologist if these symptoms occur.

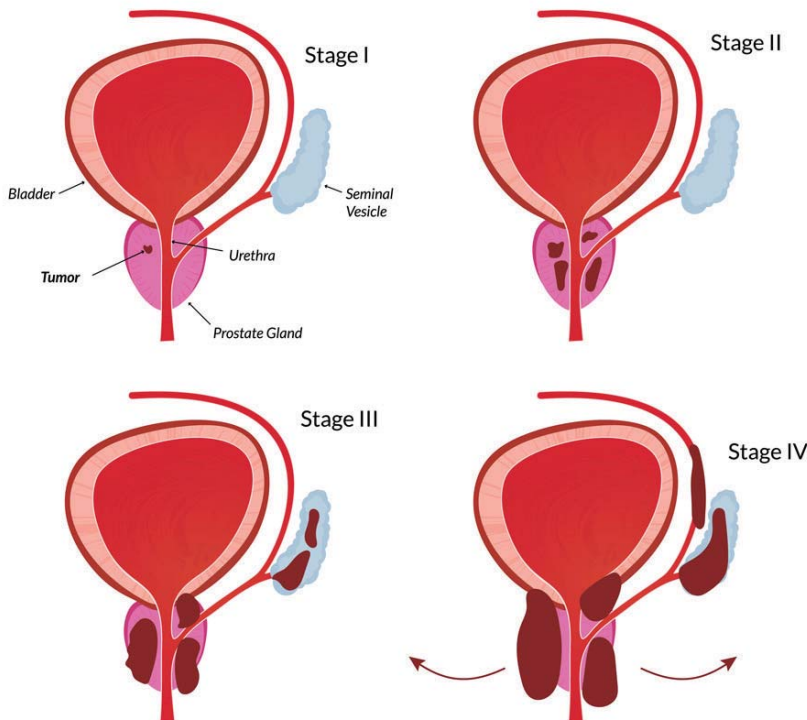
The main treatment of prostate



cancer is radiotherapy except in early stages where surgical resection might be an option. Radiotherapy for prostate cancer has undergone a tremendous change from 3DCRT to IMRT to IGRT. IGRT is the most advanced technique for treating prostatic cancer which starts with preparation of immobilization cast and radiotherapy planning CT scan. Adequate radiotherapy planning




**STAGES OF PROSTATE CANCER**



requires the urinary bladder to be full and rectum to be emptied (without stools and gas).

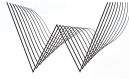
A contrasts enhanced CT scan is performed and then targets are drawn as per the stage of the patient. These basic steps remain same for all the techniques of radiotherapy but the difference lies in prescribing radiotherapy doses to the tumour and surrounding normal organs. IGRT (Image Guided Radiotherapy) refers to the treatment of prostate with minimal radiation of normal surrounding structures under the guidance of real time imaging.

A CT scan is attached to the treatment unit through which a scan is taken just before the actual treatment and is matched with the CT scan taken at the time of planning. Any changes are noted and corrected to ensure that the exact planned treatment is being delivered to the patient. It is a high-end technique of radiotherapy which needs qualified radiation oncologist, physicist and radiation technologists and an adequate treatment time on machine. Urinary bladder and rectum are the most important organ at risk during the radiation of prostate and IGRT helps in reducing toxicity to both the organs by keeping a check on their filling (bladder full, rectum empty) with the scan taken immediately before treatment.

Another feature of IGRT is placement of radio-opaque markers (usually gold) in the prostate which are tracked real time during the treatment with the X-ray tracker placed in the treatment unit. It is usually practised in the treatment of early stage prostate cancer where the target is only prostate. At Sri Balaji Action Cancer Hospital, IGRT is regularly practised with significant results thanks to high-end linear accelerator and dedicated staff. 

**(The author is Senior Consultant, Radiation Oncology, Sri Balaji Action Cancer Hospital, New Delhi)**

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