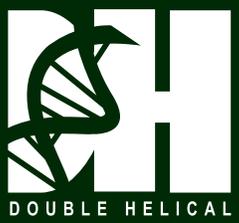


A COMPLETE HEALTH JOURNAL



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Exclusive interview with Double Helical Magazine

INDIAN MEDICAL ASSOCIATION

**ALL INDIA PROTEST DAY**  
2<sup>nd</sup> April, 2022

**JUSTICE FOR DR ARCHNA SHARMA**

STOP VIOLENCE AGAINST DOCTORS  
WE WANT JUSTICE  
ARREST OF ALL CULPRITS

Dr. Rakesh Desai, Prof. Praveen, India | Dr. Subangram Pal, Singh, National President | Dr. Jayashil Laha, Hosp. Secretary, Odisha

## VITAMIN AND ITS MARKET



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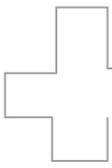
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# Is God dead???

Dear Readers,

**T**hank you for your continuous support. Double Helical has been making a difference in the lives of the socially and economically disadvantaged groups through raising awareness as well making voluntary contributions in the areas of education, health, human rights and social services. The magazine provides a platform to recognize innovation, people, products and services that are helping to transform the healthcare sector in the country and ushering in affordable, high quality and inclusive healthcare for masses.

Keeping this in mind, Double Helical once again organises Double Helical Health Conclave and National Health Awards 2021 on 2nd May, 2022 in New Delhi to paying homage to Covid-19 warriors who laid down their lives in line of duty. On the release of our special edition we shall also be giving awards to all those organizations who played pivotal role in providing COVID-19 care in difficult time.

In the current issue, we focus on current trends of Covid-19. As you know that the Covid-19 pandemic has turned into a seemingly unending cross country run with unexpected twists and turns. It started in Wuhan, China in December 2019. Overcoming all obstacles of lockdowns, social distancing and masks, the virus has spread from China to all parts of the globe. The initial pace has slowed down but for occasional bursts of speed. From a pandemic, the dynamics of the disease seems to be settling down to an endemic state, at least in countries like India, with high population density. Sprint is sharp and short.

A trotting pace is more suited for a cross country run. While the virus is likely to witness a fourth wave as predicted by Indian Institute of Technology, Kanpur, we can take time out to adjust our strategy according to this paradigm shift. Taking stock of the ruins left in the aftermath of the initial impact of this virus can enable us to calibrate our response better.

Apart from Covid-19 threat we must focus on Violence against Doctors as burning topic. for example the recent death of Dr. Archana Sharma, a well know gynaecologist, is not just a loss to the family but also a huge loss to the population of Dausa, Rajasthan where she was serving since years...

Today entire medical fraternity is in deep shock due to unprecedented loss of such a brilliant medical practitioner who always dedicates her life to save the millions of patients.

The recent incidents teach us violence against the doctors has become common in India. The causes are well known.

Lack of government facilities, rising costs, media hype, political interference, unusual expectation of patients etc. We as a society have failed to educate our public that “Doctors are not God.”

Common man has the impression of “Noble Profession” as a free service. Add to this the irresistible urge of politicians and media to exploit the situation. It is very easy to blame the doctors and earn the sympathy of the grieving relatives. In Dr. Archana Sharma’s case too, it was done.

Violent events can happen with anyone. The doctors are usually unprepared to face the episodes. There are many ways to reduce the potential for violence and total episodes. One of the most serious problems in worldwide healthcare needs to be addressed in channelized way.”

“Violence may stem from patient dissatisfaction with care; costs associated with insurance premiums, unrealistic expectations, and overworked and underpaid hospital staff, as well as the rising cost of health care due to the government’s inability to subsidize hospital operations. Lack of a third-party formal dispute resolution system in many hospitals has been suggested as a factor, and the acceptance of bribes or good-faith money in the form of red packets has been implicated. Media coverage, and a lack of health literacy amongst the population, who may often seek unnecessary high-level care, has also been implicated,

There are various types of healthcare violence like verbal abuse, mobbing, threats, psychological harassment, physical violence, vandalism and cyber trolling. The effects of healthcare violence lead to impossible to work under stress, families of doctors feel threatened and safe practices only.

The effects of healthcare violence lead to impossible to work under stress, families of doctors feel threatened and safe practices only. The government of India, ought to notify Standard Operating Procedure for police, in cases of alleged medical negligence as per the directives of the Hon Supreme Court of India,

There is more such interesting and thought-provoking stuff to savour in this issue. So, happy reading!

Thanks and regards

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



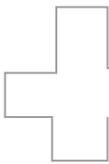
## E-Sanjeevani provides affordable and accessible health care

**U**nion Health Minister, **Dr Mansukh Mandaviya** chaired a meeting through video conference (VC) recently with the health ministers and senior officials of all the States and UTs to review the operationalisation status of Ayushman Bharat Health & Wellness Centres (HWCs), Tele-consultation services and physical and financial progress made under ECRP-II.

Union Health Minister also provided guidance on the preparation and invited suggestions from States/UTs for 4th anniversary celebrations of Ayushman Bharat -Health and Wellness Centres (AB-HWCs).

Appreciating the healthcare services





being provided through the digital platform of tele-consultation, Dr. Mandaviya noted that “E-Sanjeevani is providing affordable and accessible health care as envisioned by the Prime Minister. People in many states have been quick to recognise the benefits of e-sanjeevani and this has led to an encouraging trend of widespread rapid adoption of this digital modality of seeking health services. Patients consult with doctors and specialists on a daily basis using this innovative digital medium to seek health services.

According to Dr Mansukh Mandaviya, Union Health Minister, tele-consultation services are very crucial for people in remote areas and are helpful in making healthcare services accessible for all. States/UTs should mobilize all stakeholders in providing services at the spokes and efficiently connecting them with the hubs.”

He also advised States/UTs to promptly and proactively spread awareness regarding AB-HWCs health melas which is being organized. In addition Yoga sessions are also being organized on at all HWCs, so that citizens can actively participate in these health melas and become aware of the HWCs services provided in their regions.

Union Health Minister, said, “Yoga connects the body with mind and soul and is an integral part of our health and wellbeing. We should promote Yoga among the masses so that everyone benefits from this, he added. Highlighting the importance of working as Team India..”

“We as a government must take the “whole of government” and “whole of society approach” to serve our citizens in a better way and ensure good governance. The way the Government has worked in mission mode in providing quality medicines through Jan Aushadhi Kendras (Research Centres) is a prime example of this” he added.

About AB-HWCs and 4th Anniversary Celebrations:

According to **Dr Suneela Garg,**



**Professor of Excellence, Community Medicine, Sub Dean of Maulana Azad Medical College, New Delhi and Chair Programme Advisory Committee NHHFW,** translating the intent of the National Health Policy 2017 to achieve Universal Health Coverage into budgetary commitment, the Government of India announced the establishment of 1,50,000 Ayushman Bharat- Health and Wellness Centres (AB-HWCs) in February 2018.

Existing Sub-Health Centres and Primary Health Centres in rural and urban areas are being transformed to deliver comprehensive primary health care, to all citizens, free of cost, closer to homes. AB-HWCs are a major shift from selective to comprehensive primary health care inclusive of promotive, preventive, curative, rehabilitative and palliative care; from disease-centred to

wellness centred; and whole-of-society approach, institutionalizing intersectoral coordination in alignment with the emergent international ‘Health in All’ approach as a complement to ‘Health for All’.

The journey began with the inauguration of the first AB-HWC on 14th April 2018, at Jangla, a serene village in Bijapur District of Chhattisgarh. Since then, with every passing year, India is closer to fulfilling the dream of Universal Health Coverage through the AB-HWCs.

Celebration of 4th Anniversary of AB-HWC under ‘AzadiKaAmrit Mahotsav’-

Ayushman Bharat - Health and wellness Centres which was launched by the Hon’ble Prime Minister on 14th April, 2018 with an objective of providing “Health for All” which has recently been completed its 4th year Anniversary. In this regard the Union Health Ministry is organising a weeklong celebration under ‘Azadi ka Amrit Mahotsav’ to create awareness reading the AB-HWCs, telemedicine/ tele-consultation.

The Health Ministry in collaboration with all the States/UTs, key ministries such as WCD, I&B, Panchayati Raj, Ayush, Education etc will also be organising ‘Block level Health Melas’ at all the 1.17 lakh Ayushman Bharat - Health and wellness Centres across the country. These AB-HWCs are also being





eSanjeevaniOPD  
STAY HOME OPD



revolutionized by connecting them with E- sanjeevani Teleconsultation services, which is providing free and affordable health care to all

### A Weeklong Block Health Melas

Block Health Melas at AB-HWCs in at least one block in each district of the State/UT are being inaugurated across the country. Each Block Health Mela is being organised for a day to cover each block in the State/UT.

These Block Health Melas are envisaged to;

1. Build awareness about different national programmes like Ayushman-Bharat Health and Wellness centres, PradhanMantri- Jan ArogyaYojana (PM-JAY)
2. Facilitate creation of Unique Health ID under ABDM for attendees
3. Facilitate provision of Ayushman Bharat Card under AB-PM-JAY for eligible citizens
4. Increase health awareness of the population for prevention of various communicable and non-communicable diseases
5. Motivate the masses through innovative mass media and mid-media activities to adopt wellness behavior to stay healthy
6. Provide screening for early diagnosis, basic health care services with drugs and diagnostics, teleconsultation with relevant health specialists and referrals as needed

The key services at the Health Mela include:

- i. Consultation, testing and treatment for:
  - a. Reproductive Child Health related services - Maternal & Child Health; Family Planning IEC-Family Welfare; Reproductive Transmitted Illnesses/ Sexually Transmitted Illnesses/AIDS
  - b. NCD related: Screening for hypertension and diabetes; yoga, Meditation & Lifestyle counselling; counselling for Tobacco and alcohol cessation; Cancer prevention awareness
  - c. Communicable Diseases related: education and screening for TB, Leprosy, Skin care
  - d. Eye care: Screening Refractive error and Cataract screening
  - e. ENT Screening
  - f. Dental Consultation
- ii. General:
  - Ayushman Bharat Health Account Creation (Digital Health ID);
  - Issuance of Ayushman Bharat Card
  - General health check up;
  - Teleconsultation with specialists
  - Consultation with practitioners of Indian Systems of Medicine- Ayurveda, Yoga, Unani, Homeopathy
  - All relevant drugs and diagnostics made available free to patients attending the mela
  - Awareness activities: Exhibition - displaying all national programmes and citizen services;
  - Field Publicity – using local folk, art

and play

State Health Minister Dhan Singh Rawat (Uttarakhand), ShriBanna Gupta (Jharkhand), Mangal Pandey (Bihar), Rajesh Tope (Maharashtra), Brajesh Pathak (Uttar Pradesh), Dr.Prabhuram Choudhary (Madhya Pradesh), Dr K Sudhakar (Karnataka) were also present in the meeting. Rajesh Bhushan, Secretary, Health Ministry, Vikas Sheel, AS & MD, Vishal Chauhan, Joint Secy and other senior officials of the Union Health Ministry were present in the virtual review meeting along with NHM Mission Directors and other officials from States/UTs.

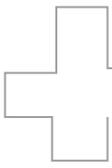
Union Minister of Health & Family Welfare Dr Mansukh Mandaviya.

“This facility was aimed at people living in remote villages who needed medical advice from health experts”, MansukhMandaviya, said.

Over one lakh health and wellness centers have been started in the country and out of these, tele-consultation begins in one lakh centres. This facility was aimed at people living in remote villages who needed medical advice from health experts, he noted.

The Minister chaired a meeting through videoconference with the health Ministers and senior officials of all the States and Union Territories to review the operationalisation status of Ayushman Bharat Health and Wellness Centres (AB-HWCs), teleconsultation services and physical and financial progress made under the Emergency Response and Health System Preparedness Package: Phase-II (ECRP-II package).

Dr.Mandaviya, stated that “E-Sanjeevani is providing affordable and accessible healthcare as envisioned by the Prime Minister. People in many States have been quick to recognise the benefits of e-Sanjeevani and this has led to an encouraging trend of widespread rapid adoption of this digital modality of seeking health services”. 



# VIOLENCE DOCTORS ONLY U BUT ILLE

**Violence against doctors and other medical practitioners in India has been reported as an increasing problem. The recent death of Dr Archana Sharma due to suicide is much more common in healthcare than in other industries..**

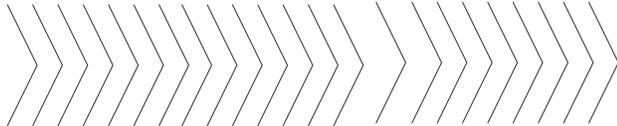
**BY TEAM  
DOUBLE  
HELICAL**

**A**s per report, Dr Archana Sharma was committed suicide by hanged herself in Dausa, Rajasthan just a day after an FIR was filed against her under Section 302 of the IPC. She stated in her suicide note that the patient died during a routine operation. According to eye witness, the family members of the pregnant lady protested outside the hospital which was being managed by Dr Archana and his husband, demanded urgent action against her.

The medical associations like World Medical Association, Indian Medical Association and The Federation of Resident Doctors' Association (FORDA)



# LE AGAINST ORS IS NOT UNJUSTIFIED GAL



healthcare needs to be addressed in channelized way.”

“Violence may stem from patient dissatisfaction with care; costs associated with insurance premiums, unrealistic expectations, and overworked and underpaid hospital staff, as well as the rising cost of health care due to the government’s inability to subsidize hospital operations. Lack of a third-party formal dispute resolution system in many hospitals has been suggested as a factor, and the acceptance of bribes or good-faith money in the form of red packets has been implicated. Media coverage, and a lack of health literacy amongst the population, who may often seek unnecessary high-level care, has also been implicated,” Dr Vinay Aggarwal, said.

**Dr A K Agarwal, former, Dean, Maulana Azad Medical College and currently, Medical Advisor, (Innovation and Clinical Research) Apollo Group**



have already written letters to Rajasthan Chief Minister Ashok Gehlot, and medical authorities for a thorough inquiry, the removal of the FIR, and compensation for the doctor’s family.

According to **Dr Suneela Garg, Advisor, ICMR (Indian Council for Medical Research)**, post-partum hemorrhage (PPH) is a well-known problem in pregnant women after delivery and that a doctor (Dr Archana Sharma) cannot be accused of medical negligence in any such incident, without proper investigation by an expert committee.

Even Parsadi Lal Meena, Rajasthan’s health minister, already said police should not have charged the doctor under Section 302 because the Supreme Court has already decided that doctors cannot be charged under that section.



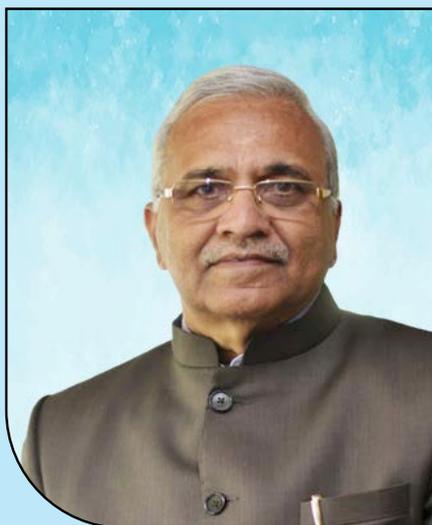
**Dr Vinay Aggarwal, Past National President, IMA**, said, “Violent events can happen with anyone. The doctors are usually unprepared to face the episodes. There are many ways to reduce the potential for violence and total episodes. One of the most serious problems in worldwide

# The effects of healthcare violence...

**D**r Girdhar Gyani, Director General, Association of Healthcare Providers India, said, “In my view there are various types of healthcare violence like verbal abuse, mobbing, threats, psychological harassment, physical violence, vandalism and cyber trolling. The effects of healthcare violence lead to impossible to work under stress, families of doctors feel threatened and safe practices only.

“In such case there are establishment amounts to following criminal offences which are punishable under the provisions of the Indian Penal Code, 1860, public nuisance under Section 268 & 269 IPC, any type of hurt under Section 319, 323 & 324 IPC while grievous hurt under Section 320, 325 & 326 IPC and endangering life or personal safety of others under Section 336, 337 & 338 IPC”, he added.

According to a study by the Indian Medical Association, over 75% of doctors have faced violence at work. A lady doctor was killed by the husband of a pregnant woman who was admitted in a serious condition. She was referred to another hospital but died before she could be shifted. The husband entered the consultation chamber

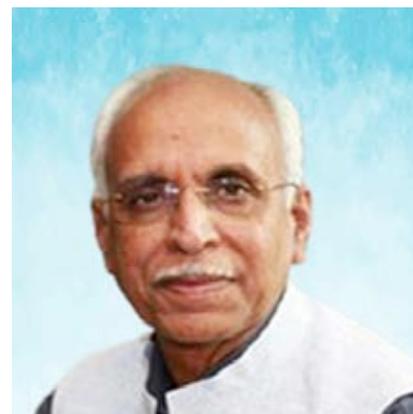


of the lady doctor with three accomplices and attacked her with a sword. In 2014, in Mansa district of Punjab a doctor’s clinic was burnt following death of a boy who was referred to a tertiary hospital but died. In recent past innumerable incidents of violence against doctors are reported nearly on a daily basis across India, some resulting in grievous injuries. Even top institutions like All India Institute of Medical Sciences, New Delhi, the premier medical institute of the country is not spared. Nineteen states of India have some kind of Medicare Service Persons and Medicare Service Institutions (Prevention of violence or damage or loss of property) Acts passed and already notified. . 

of Hospitals, New Delhi, said, “There is main reason behind violence is ignorance about disease and prognosis, lack of knowledge regarding medical science. Today mob mentality becomes very aggressive which makes the hospital work harder. Also, there is lack of communication and overworked leading to numerous patients and understaffing of doctors. So the government should very transparent with lack of institutional/organisational policies, and prepare action plans to deal with violence against doctors.”

**Dr Vijay Agarwal, President, Consortium of Accredited Hospitals (CAHO)**, said, “The big problem that has emerged is that every adverse outcome is being considered as medical negligence by the community. Recently a bright gynecologist Dr Archana Sharma was assaulted and a case under section 302 was filed against her following the death of a patient due to post-partum hemorrhage (PPH). She was shaken to a level that she committed suicide. The whole medical fraternity is angry. This is leading to disenchantment of bright young people in taking up medical profession.”

Dr Vijay Agarwal, said, “This kind of assault on the doctors and nurses should be condemned in strongest possible words. One can understand the anger and emotional turmoil of the family. The government, community and medical profession must come





together to find civilized ways to handle grievances. Healthcare delivery is a basic need of mankind and has been important since time immemorial. The evolution of modalities to deliver healthcare has been truly mind-boggling. Every invention and change was aimed at making life safer through quality healthcare.”

**CAUSES OF VIOLENCE AGAINST DOCTORS**

According to Dr Vinay Aggarwal, Past National President, IMA, there are many causes for the increase in violence against medical personnel, but not restricted to a general increase in aggression in society as evidenced by incidents of road rage and other acts of violence witnessed in schools and colleges across India. In India, doctors have traditionally been regarded highly by society. The present impression of private business-mindedness of some in the profession has led to a poor image of doctors. One of the factors that contribute to this poor image of doctors is the sensationalization of every news item, often ignoring information that would gloss over mundane details, exonerating a doctor in an incident of alleged medical negligence. As a hypothetical example, a television reporter shouting at the medical superintendent of a Delhi hospital reeling under a load of dengue patients as to why antimalarials were not given to a patient who died of dengue. This is done with an air of ‘knowledge’ that viewers would be convinced that not giving antimalarials to a patient of dengue in shock was medical negligence of the highest order.

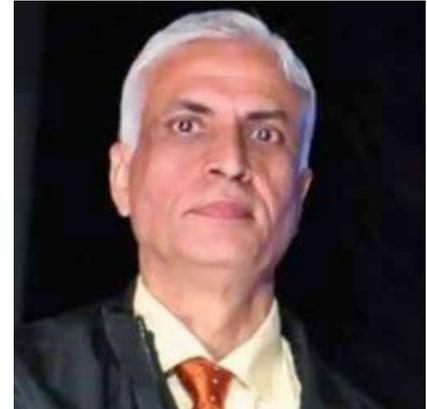
Among other causes of violence against doctors in India are the pathetic conditions in which patients are treated in government hospitals. There is overcrowding, long waiting time to meet doctors, absence of a



congenial environment, multiple visits to get investigations done as well as consult doctors, sharing a bed by two and sometimes three patients and poor hygiene and sanitation.

According to Dr.A.P.Setia, Medical Social Activist and Ex President IMA Haryana, the FIR against Dr.Archana Sharma and Dr.Suneet Upadhyia under IPC Section 302, is not only unjustified but illegal as well. It is a violation of provisions of IPC as well as Contempt of Hon Supreme Court directives in Jacob Mathew 2005 and subsequent judgments.”

The harrasment of Dr.Archana Sharma by certain social activists needs to be condemned. And all those



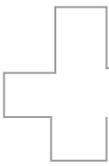
responsible for \*abetting suicide\* of Dr.Archana Sharma, need to be arrested immediately and cases need to be filed against them under appropriate sections of IPC like 306. It is not a case of suicide but \*cold blooded murder\* of a specialist dedicated professional.

Dr.A.P.Setia, said, “ The government of India, ought to notify Standard Operating Procedure for police, in cases of alleged medical Negligence as per the directives of the Hon Supreme Court of India, Jacob Mathew Case Judgment 2005. Medical professionals should be \*EXCLUDED\* from the \*Consumer Protection Act 2019\*, as per the discussion and comments in Parliament, by the then union minister Ram Vilas Paswan.

This shall be a vital step in \*preventing illegal extortion of money\* from doctors in alleged cases of medical Negligence by dissatisfied patients and their attendants, as well as the pressure tactics of self styled social activists on doctors.

“District Medical Board for Negligence\* cases need to be established and notified, as per Haryana Government notification dated 31st May 2017. These shall be a boon for medical professionals throughout the Nation. National Medical Commission too has suggested Establishment of similar boards, albeit with a different composition,” he added. 





DR. ARCHANA SHARMA



# MEDICAL PROFESSION UNDER FIRE

**T**oday entire medical fraternity is in deep shock due to unprecedented loss of such a brilliant medical practitioner who always dedicates her life to save the millions of patients.

Dr Archana Sharma par excellence, a gold medalist, always scoring above 90% in academics, etc is no more with us. The rural area, about 70 kilometres from Jaipur, was served with love and dedication by the ex-Associate Professor of Gandhinagar Medical College. Today it has lost a shining star.

The recent incidents teach us violence against the doctors has become common in India. The causes

**The recent death of Dr. Archana Sharma, a well know gynaecologist, is not just a loss to the family but also a huge loss to the population of Dausa, Rajasthan where she was serving since years.....**  
**BY DR VINAY AGGARWAL**





are well known. Lack of government facilities, rising costs, media hype, political interference, unusual expectation of patients etc. We as a society have failed to educate our public that “Doctors are not God.”

Common man has the impression of “Noble Profession” as a free service. Add to this the irresistible urge of politicians and media to exploit the situation. It is very easy to blame the doctors and earn the sympathy of the grieving relatives. In Dr. Archana Sharma’s case too, it was done.

The patient’s body was taken to her village by the consent of her relatives, because they refused the post-mortem examination. It has to be, because police was informed of the death (as is always done) and it allowed the body to be taken. The local politicians brought the body back to Dausa and sat on Dharna outside the hospital.

Media was called and the dharna (protest) grew. The local police officers first tried for “compromise” but then registered a case under section IPC 302 not only to satisfy the politicians but also to threaten the doctor totally ignoring the Supreme Court Judgement in Jacob Mathew vs State of Punjab and Ors: AIR(2005)SC



**INDIAN MEDICAL ASSOCIATION**

**ALL INDIA PROTEST DAY**  
2<sup>nd</sup> April, 2022

**JUSTICE FOR DR ARCHANA SHARMA**

**STOP VIOLENCE AGAINST DOCTORS**  
**WE WANT JUSTICE**  
**ARREST OF ALL CULPRITS**

Dr Ketan Desai  
Past President, WMA

Dr Sahajanand Pd. Singh  
National President

Dr Jayesh Lele  
Hony. Secretary General



3180, an FIR for negligence cannot be registered unless the police authorities obtain an expert opinion either from SMC or MCI or District Health Authorities.

This irresponsible and irrational decision taken by police affected Dr. Archana Sharma for being harassed absolutely wrongfully. Post partum haemorrhage is a known severe complication and so the Doctor shouldn't even be asked why it happened. Instead Dr. Archana was accused of committing murder, that took a pre-meditated murder.

Section 302 can be invoked only when there is a "clear intent to kill," and it involves planning before committing the crime. What intent would an established Doctor have to kill her patient? Can we say that it is calling as planned murder?

The Deputy Superintendent of Police Shankarlal Meena and SHO Ankesh Chaudhary should have the knowledge of Section 302. They should be asked,



on what basis did they determine that the Doctors had "planned and willfully killed" the victim.

They should also be asked, why didn't they solicit the opinion of a

senior Government employed Gynaecologist in this case, before.

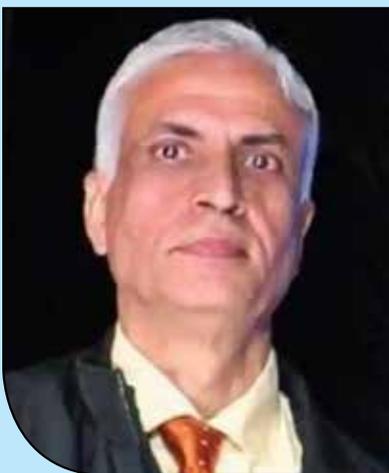
Are the officers of SHO and Deputy SP not aware of the Supreme Court judgment? Prima facie, it appears to be a infact gross "criminal negligence" by the local police. The police appear to have harassed the Doctor couple by invoking the charges of Murder. This charge is non-bailable offence and the imposition of 302 without any inquiry, without ascertaining any intent, without taking any expert opinion, the possibility of police using it for extraneous purposes cannot be ruled out.

The police personnel involved in the case should be removed from the force and a case of abetting the suicide of Dr. Archana Sharma should be filed against them. If they had indulged in other misdemeanors then those charges should be added. The politicians who instigated the dharna should be expelled by the political parties and prosecuted for abetment of suicide, along with other charges.

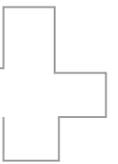
Dr. Archana Sharma's suicide (supreme sacrifice) has the nation boiling. A strict Central law for prevention of violence against Doctors



# What doctors say?



**A**ccording to Dr A K Agarwal, Former Dean, Maulana Azad Medical College, New Delhi and Currently Medical Advisor, Innovation and Clinical Research, Apollo Group of Hospitals), a basic knowledge of how judicial forums deal with the cases relating to medical negligence if it happened, is of absolute necessity for the doctors. The need for such knowledge is more now than before in light of higher premium being placed by the Indian forums on the value of human life and suffering, and perhaps rightly so.



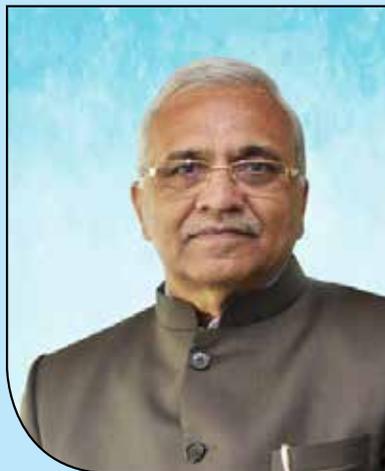
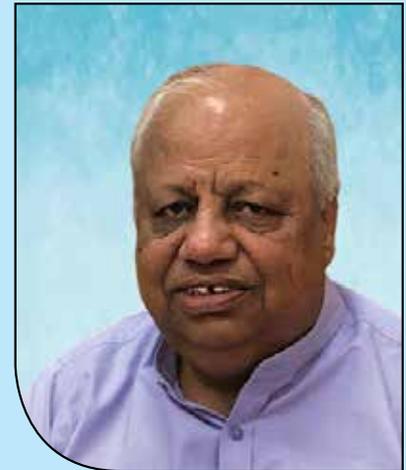
and medical facilities should immediately be passed by the Parliament. The patients should also demand protection for their Doctors. Otherwise the day is not far away when Doctors would become scarce. It's in the interest of the society to protect those whom they call 'second to God.'

IMA (Indian Medical Association) Dausa, IMA Rajasthan & IMA (HQ) have a big responsibility now to take this case further and bring justice for our colleague Dr Archana Sharma's family - and for the medical profession at large. 🙏

**(The author is Past National President Indian medical Association)**

# What doctors say?

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**D**r Girdhar Gyani, Director General, Association of Healthcare Providers India, said, "Judicial forums, while seeking to identify delinquents and delinquency in the cases of medical negligence, actually aim at striking a careful balance between the

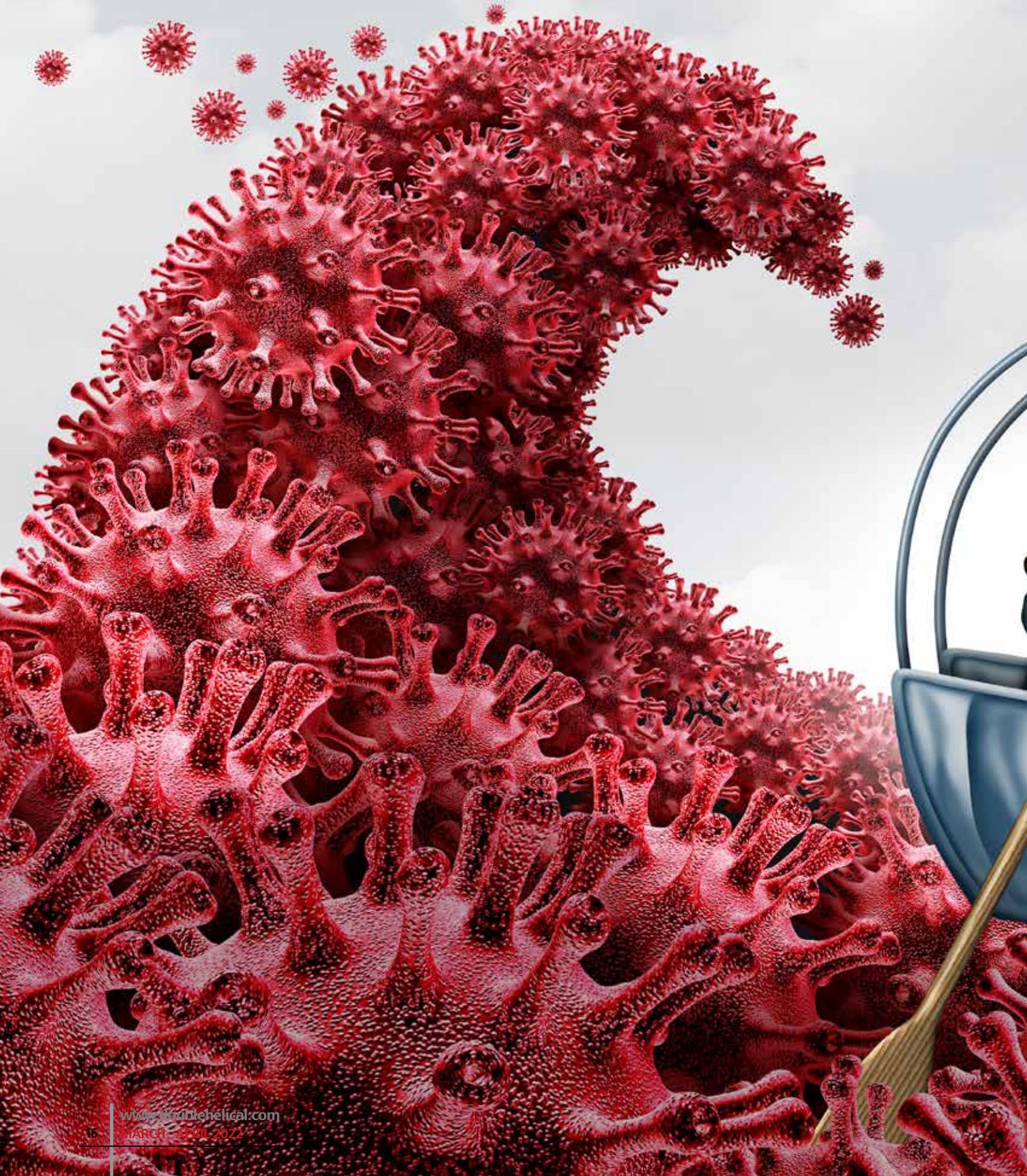
autonomy of a doctor to make judgments and the rights of a patient to be dealt with fairly.

In the process of adjudication, the judicial forums tend to give sufficient leeway to doctors and expressly recognize the complexity of the human body, inexactness of medical science, the inherent subjectivity of the process, genuine scope for error of judgment, and the importance of the autonomy of the doctors.

"The law does not prescribe the limits of high standards that can be adopted but only the minimum standard below which the patients cannot be dealt with. Judicial forums have also signaled an increased need of the doctors to engage with the patients during treatment, especially when the line of treatment is contested, has serious side effects and alternative treatments exist." he added.



**FOCUS** - DON'T BE LIABLE TO GET HURT

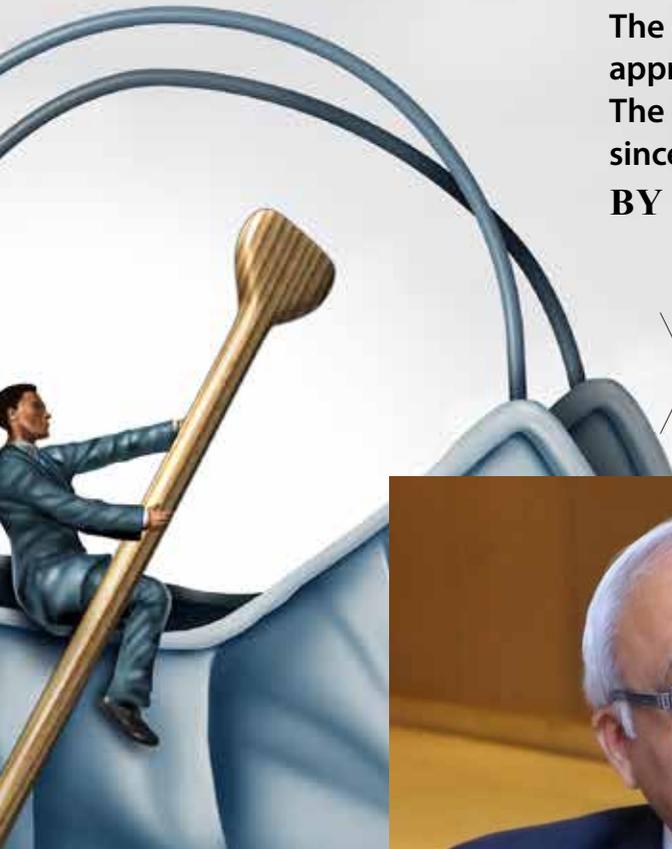




# DON'T BE LIABLE TO GET HURT

The creative mind can be a double edged sword. If used inappropriately it can cause immense harm instead of good. The present pandemic which has been a tragedy of errors since the beginning proves the point...

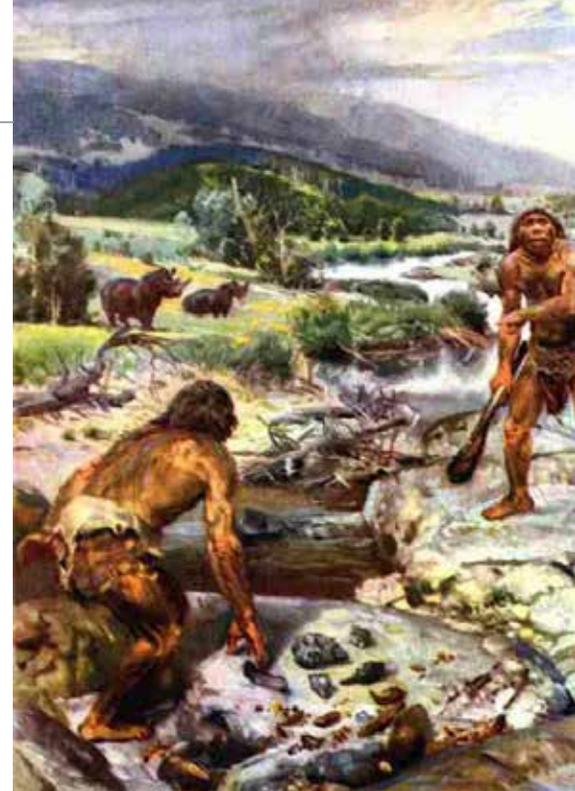
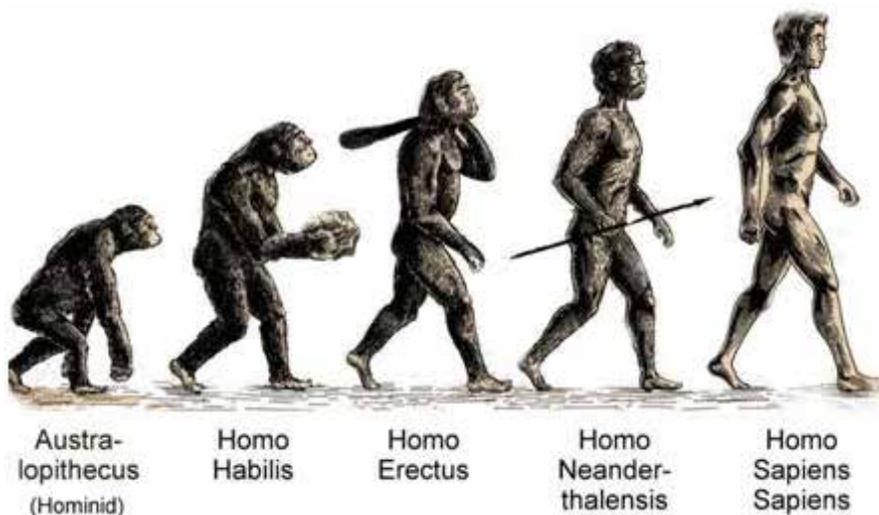
BY DR AMITAV BANERJEE



**A**s we know that the biological forces of nature evolved over billions of years to favour Homo sapiens. Human innovations amplified this survival advantage many times over. Ignoring the forces of nature and arrogantly assuming that these forces can be controlled by human intervention has been the bane from the beginning in the present pandemic.

Flowing with the forces of nature would have prevented the human misery due to collateral harm consequent to well meaning but clumsy efforts of chasing the novel corona virus.

In cricket, if a batsman removes his eyes from the ball and instinctively ducks on a short pitched bouncer, he is liable to get hurt. Similarly, the art of



public health lies in keeping a close eye on the biological forces of nature, evading harm when threatened and using these forces to advantage depending on the changing dynamics. Regrettably in practice, often panic prevails over prudence both in cricket and public health.

During the 1962 tour of West Indies, Nari Contractor, the Indian captain opened the batting for India. The legendary fast bowlers Wesley Hall and Charlie Griffith opened the bowling attack for Barbados. The formidable reputation of the famed speedsters may have led to panic prevailing over skills. Contractor removed his eyes from a delivery by Griffith and ducked into the short pitched ball sustaining a fractured skull. Fortunately, he survived after surgery.

Policy makers in country after country removed their eyes from the ball like Contractor incurring heavy collateral damages. The blind spot made them hope unrealistically that they can halt the pandemic in its tracks. While in the early stages the purported aim was to prevent overwhelming the hospital services, this goal turned more ambitious later - rolling out the vaccines before lifting the restrictions.

Had the policy makers kept their eyes on the ball they would have framed

**IN SPITE OF ALL MEASURES, THE VIRUS TRAVELLED FROM CHINA TO CHANDNI CHOWK! AFTER ITS SWIFT SPREAD ACROSS COUNTRIES, IT CONFERRED NATURAL IMMUNITY AMONG VAST SWATHES OF**

policy based on the data as the pandemic progressed. A few months into the pandemic, it was evident that severity and deaths from the virus were mostly confined to the elderly and people with co-morbidities. Young healthy people and children rarely suffered or succumbed. A good captain would have sheltered the vulnerable and permitted the young to continue with their regular activities. This focused protection as spelled out in "The Great Barrington Declaration," conceptualized by three eminent epidemiologists from Stanford, Harvard, and Oxford Universities would have avoided interruption of education and economic losses.

Regrettably, the harsh measures did not achieve the intended aim either, it only postponed the inevitable. Regions both at the national level (Kerala), and international level (Australia), which

did well initially due to these measures, trailed towards the end of the pandemic marathon. Countries like Sweden, Belarus and Japan, which did not impose these draconian measures did not fare worse in the long run. Sweden was one country which did not close schools either during the pandemic nor had mask mandates, an issue of heated debate currently. There were no adverse impact on Swedish children or adults as children were not found to be super-spreaders as erroneously believed.

After the bad start, mismanagement prevailed. Keeping an eye on the virus, would have made it evident that it is impossible to keep up with the pace of its movement across continents. In spite of all measures, the virus travelled from China to Chandni Chowk! After its swift spread across countries, it conferred natural immunity among vast swathes of the population, particularly in densely populated countries like India, Bangladesh and Pakistan. Bangladesh and Pakistan are having far less cases and deaths, compared to India, with far less vaccination.

Obviously, naturally acquired immunity is playing a greater role. The Delhi survey in September revealed that over 90% of the adults had immunity, some from the vaccine, and



most from natural infection. More importantly, 82% of children below 18 years had IgG antibodies, despite having not received any vaccine. Studies show that natural immunity is 13 times more robust than vaccine immunity.

Two years into the pandemic, the Centre for Disease Control, Atlanta, USA, have rather reluctantly conceded that natural immunity is better than vaccine derived immunity. In spite of this, people with natural immunity who have not taken the vaccine, continue to be stigmatized and are expected to get double jabbed for travel, job, education and shopping. Even a celebrity like the world number one tennis player was not spared this ignominy. Such an atmosphere of shaming against all logic and science lead to fractures in society.

The pandemic has been characterized by overreactions both in patients and in population policies. Majority of infections are asymptomatic or mild, while in few it leads to severe disease due to cytokine storm due to overreaction of immune responses.

The world too overreacted to the perceived threat initially and miscalculated later assuming vaccines to be the panacea. In the bargain, the agony of draconian measures got prolonged. The fractured society

suffered delayed reunion. The impact on mental health, society and livelihoods got overlooked.

Chasing the elusive virus at all costs proved disastrous in almost all countries. An estimated 500 million got pushed below the poverty line globally. Livelihoods were lost and lives endangered. Domestic violence against women and children escalated. And so did violence against the elderly, paradoxically the group to be protected from Covid-19.

Add life to years, is the goal in geriatric medicine. For the elderly, life is not about how long one lives but about quality. Physical activity, social bonding, and recreational activities add life to years. Restrictive measures rendered all these impossible. Social networks got dissolved adversely impacting the social and mental health of the elderly.

At the other age spectrum, children experienced negative effects. According to UNICEF they suffered more from interventions like school closures than the virus itself. Children to develop normally require company of friends. With closure of schools and playgrounds, they were deprived of social contacts. For years to come they have to cope with these social and educational handicaps which may jeopardize their capacity for earning and leading meaningful lives.

The pandemic also aggravated existing social inequities. The rich and privileged who could continue earning from home had fewer setbacks than the poor. The privileged could make the most of measures like lockdowns by bonding with their families while continuing their work without any layoffs. These are the minority but more articulate section of society influencing public policies. At the other extremes thousands of poor lost their jobs. These are the people without a voice. It has been said that lockdowns are not egalitarian [Broadbent et al]. These measures increase deaths in the developing world to prolong lives in the developed world. We are heading

towards a fractured society.

Healing the fracture will be a long and arduous task. We have to restore livelihoods, provide for social and mental health of the marginalized and the vulnerable such as the elderly and children. We need to reach out to workers in the unorganized sector who were affected the most. Failing in these endeavours would lead to social pathology in form of increase in crime, suicides, homicides, domestic violence, substance abuse and other ills threatening the fractured society. The societal costs would be many times more than the benefit of lives saved from Covid-19.

Lessons from the Bhagwad Gita, can provide a roadmap to recovery. The evolution of the pandemic passed through the three gunas, "Tamas, Rajas, and Sattva." For an exposition of gunas one should read Chapter 14, Verse 10, of the Bhagwad Gita. Tamas signifies darkness, destruction, and chaos, these prevailed in the early days of the pandemic. Ignorance led to panic resulting in deaths and destruction. Global chaos resulting from this panic were further fuelled by erroneous mathematical models predicting doom. This led to Rajas which means passion, action, and confusion. There was passion in career scientists to fight the virus at all costs leading to action, often inappropriate, by governments, and confusion due to contradictory messaging on social media and even experts. Now, with more information, the virus has to be seen in perspective, and the mass obsession with it should cease. We should move on to Sattva which advocates goodness, constructive action, and harmony. The virus in its latest avatar, the Omicron, has also become benign, to enable us to enter into a symbiotic relationship of co-existence of live and let live. 

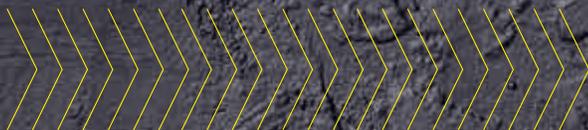
**(The author is Prof and Head,  
and Clinical Epidemiologist,  
Department of Community  
Medicine, Dr DY Patil Medical  
College, Pune.)**



# VITAMINS AND ITS MARKET

Once a person asked a question- how important is insulin? The answer was "You cannot live without it". After many years the same person asked how important are vitamins in life? Instant answer was repeated as cannot live without it".

BY PROF (DR) RAMESH K. GOYAL



**T**he above mentioned is highly common but seldom asked. In this article attempts have been made to provide answers to these questions.

### Can we live without vitamins?

To layman, vitamins provide strength, prevent fatigue and give feeling of being healthy. To little more educated non-medical person, vitamins give strength to bones and muscles (vitamin D) or increase redness in blood or prevent anaemia (vitamin B12) or required for women after adolescence (Iron with folic acid and vitamin B12) or for gums and tooth (vitamin C).

A nutritionist, who has not undergone specialized program in biochemistry, vitamins prevent ageing and illness (flavonoid having antioxidants

properties). A medical doctor normally feels it should be prescribed during any chronic illness. While writing prescription, a doctor often considers symptoms. Iron with or without vitamin C, folic acid and vitamin B12 are commonly prescribed by doctor in chronic illness. An orthopedic person often prescribes vitamin D and calcium for bones. Of late, it is very common to prescribe antioxidants like vitamin E, vitamin A and flavonoids. Similarly, there is a trend for practicing doctors to prescribe multivitamin tablets with or without minerals. Many a times, doctors prescribe vitamins or multivitamins to satisfy patients who often rather demand it.

If we consider the brand name then in one country the largest selling brand is "Centrum". However, in general,

vitamins don't come under prescription drugs, hence it is not uncommon that any superstore may have multivitamin available. Marketing tricks are employed to attract the customers. Centrum is available as centrum for males, centrum for females, centrum for kids. Centrum is available for more than 50 years of age and so on. I had a curiosity to compare the contents of two such products, one for man and another for woman. It was found that there is variation of  $\pm 5-10\%$  in content only for a few ingredients. Does such differences really makes any difference?The table 1 gives comparison of two Centrum brands.

### How important are vitamins in life?

Vitamins don't provide energy, like carbohydrates, proteins and fats, but it is utmost requirement to help the body



FAT-SOLUBLE VITAMINS CONSIST OF A, D, E AND K AND ARE STORED FOR UP TO SIX MONTHS IN YOUR VARIOUS FAT STORES.

Vitamin  
E

**Table 1: Difference in Centrum for Men and Women (on the basis of % composition)**

Ingredients	Centrum for Men (% Composition)	Centrum for Women (% Composition)
Lutein	1 mg	1 mg
Biotin	54 mcg	45 mcg
Lycopene	600mcg	300mcg
Iron	5 mg	10 mg
Pantothenic Acid	13.6 mg	11.9 mg
Vitamin A	1000 IU	2000 IU
Calcium	200 mg	250 mg
Vitamin D3	400 IU	400 IU
Chromium	35 mcg	35 mcg
Vitamin B1	4.6 mg	4.2 mg
Copper	0.5 mg	0.5 mg
Vitamin B2	4.6 mg	3.85 mg
Molybdenum	50 mcg	50 mcg
Iodine	150 mcg	150 mcg
Vitamin B6	6 mg	6 mg
Manganese	5 mg	5 mg
Vitamin B12	25 mcg	21.6mcg
Magnesium	84 mg	3 mg
Vitamin C	150 mg	120 mg
Niacinamide	16 mg	14 mg
Vitamin E	55 IU	50 IU
Selenium	55 mcg	55 mcg
Vitamin K1	50 mcg	50 mcg
Zinc	11 mg	8 mg
Folic acid	400 mcg	400 mcg

grow and function optimally and comes under category of essential compounds. There are almost thirteen essential vitamins that help to boost your immunity, strengthen your bones, heal wounds, bolster your eyesight and assist you in obtaining energy from food and multiple other functions. Without adequate vitamin intake, the person may feel lethargic, and more vulnerable to infection and develop other serious complications.

Vitamins may be categorized as fat-soluble and water-soluble, referring to where they are stored in the body. Fat-soluble vitamins consist of A, D, E and K and are stored for up to six months



in your various fat stores. Water-soluble vitamins circulate through your blood and include the B vitamins namely B6, B12, riboflavin, thiamine, niacin, pantothenic acid, biotin, folate and vitamin C.

Vitamins are 13 in numbers and have a specific function, however they work together for optimal good health state. Vitamin A facilitate the healthy eyesight, immune function, skin, bones and teeth. Vitamin C support absorption of the mineral iron and also to provide immune protection and encourage healthy tissue development. Vitamin D coupled with the mineral calcium, and enhances the bone health as well as a solid body defense system. Vitamin E facilitates your body's use of vitamin K, which helps in blood clotting and bone health, as well as promotes the formation of essential red blood cells. The eight vitamins B support a healthy metabolism, brain function, hormone production, and regular heart operations, functioning of the central nervous system and cell duties.

#### **Vitamin Deficiencies**

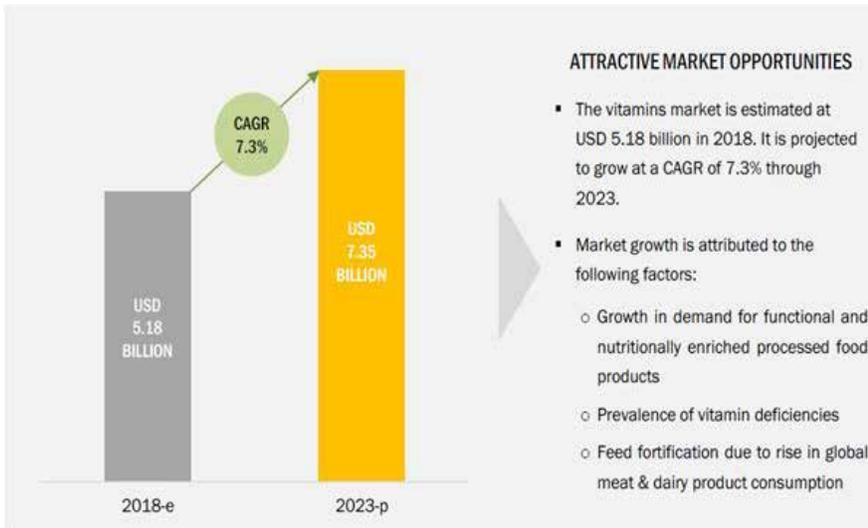
Insufficient amount of vitamin intakes increase risks of your health and more

vulnerable to heart disease, cancer and osteoporosis. If vitamin C level is too lower, then your body can't produce collagen, the primary tissue in the body. In severe cases of vitamin C deficiency, people experienced scurvy that may be characterized by muscle and joint pain, fatigue, spongy, swollen gums and red spots on the skin. Vitamin D deficiency is the main cause of rickets in children, which manifests as bone pain, deformations and poor growth and may contribute to poor bone health in adults as well as high blood pressure, some cancers and autoimmune diseases. The maximum amount of vitamin D that adults can safely obtain from supplements is 4,000 international units (IU) per day. If the limit is exceed with this limit, the excess vitamin D stays in blood and causing many adverse effects such as unintentional weight loss, anorexia and abnormal heart rhythms.

In an editorial in the journal *Annals of Internal Medicine* titled "Enough Is Enough: Stop Wasting Money on Vitamin and Mineral Supplements," Johns Hopkins researchers reviewed evidence about supplements, including three very recent studies:



**Growth in Demand for Functional and Nutritionally Enriched Processed Food Products to Drive the Demand for Vitamins**



Source: Market Research, Oct. 2018 report

- An analysis of research involving 450,000 people, who found that multivitamins, did not reduce risk for heart disease or cancer
- A study that tracked the mental functioning and multivitamin use of 5,947 men for 12 years found that multivitamins did not reduce risk for mental declines such as memory loss or slowed-down thinking.

A study of 1,708 heart attack survivors who took a high-dose multivitamin or placebo for up to 55 months. Rates of later heart attacks, heart surgeries and deaths were similar in the two groups.

The study revealed that multivitamins have no appreciable role to reduce the risk for vascular diseases, cancer, cognitive decline. Published reports concluded that vitamin E and beta-carotene supplements appear to be harmful especially at higher doses.

One of the study report published by Larry Appel, M.D., Director of the Johns Hopkins Welch Center for Prevention, Epidemiology and Clinical Research showed that "Pills are never a shortcut for getting good health state and prevention of chronic diseases".

Researchers also explored that there is one exception exist for supplemental folic acid in case of pregnant women. This may be explained that folic acid supports to rectify the neural tube defects in babies before and during early pregnancy. This is the very big reason for recommendations of multivitamins tablets for young women and the recommended dose should be 400 micrograms of folic acid daily. However, the presence of iron in a multivitamin may also very unique role in for women of child-bearing potential.

**Position of Vitamins Market:**

Vitamins are vital nutrient and most of the vitamins are used as supplements and ingredients in various food production industries. There are some important factors that play major role for increased demand of vitamins market such as health awareness and disorders caused by vitamin deficiencies, enhanced demand for fortified food. Health awareness among the consumers for consumed products will definitely upgrade the vitamins growth in the market in near future.

The vitamins market had valued at

USD 4.85 billion in 2017 and it will grow around USD 7.35 billion at 2023, with the 7.3% CAGR rate during the forecast period.

The global vitamins market may be classified on various category given below:

- Type of vitamin: Vitamin B, Vitamin E, Vitamin D, Vitamin C, Vitamin A, and Vitamin K
- Type of form in which they consumed: Healthcare products, Food & beverages, Feed, and Personal care products

Just 3 years ago, the most dominated vitamins is Vitamin B in market and higher growth of vitamin B may be due to food and consumed products having specific types of vitamins B namely vitamin B6 and vitamin B3. The main reason may be the easy availability of vitamin B that has enhanced the demand of Vitamin B in market. It is assumed that in near future, vitamin C market will drastically increase in the period of from 2018 to 2023 with highest CAGR. it can be explained on the basis of unique property of Vitamin C such as antioxidants that ultimately helps to absorb iron.. Other benefits may be considered for its increased market popularity such as faster healing of wounds, skin, eye and immune system maintainer

The form of consumed food products may be one important factor for popularity of vitamins. The researchers explored that various health care products such as dietary supplements and pharmaceutical products are added to the food of health-conscious consumers on preventive healthcare.

The vitamins market, is segmented into synthetic and natural and synthetic vitamins has dominated in 2018 due to its lower cost of production of synthetic vitamins then natural vitamins.

Asia Pacific is the most prevalent region that dominated the vitamins market in 2018 and enhanced CAGR at a very higher rate. Other driving force also take part to rise vitamins market



such as higher incomes, increase purchasing power, with consumer demand for nutritional & healthy foods. Further, the vitamins market in Asia Pacific is also experienced growth in the feed industry

Today's markets is filled up of various synthetic vitamins and its higher demand owing to its easy availability and lower cost associated with its production . The main source for synthetic vitamins are petroleum extracts or coal tar derivatives that is very cheaper raw materials. Additionally, natural vitamins associated with higher production cost and constrained supply of raw materials for natural vitamins that restrains the market growth for natural vitamins.

**Elements which are essential for vitamin's market progress?**

There are five key elements in healthy living which enthused an improved attentiveness and a number of products associated through it.

**1. An aging population**

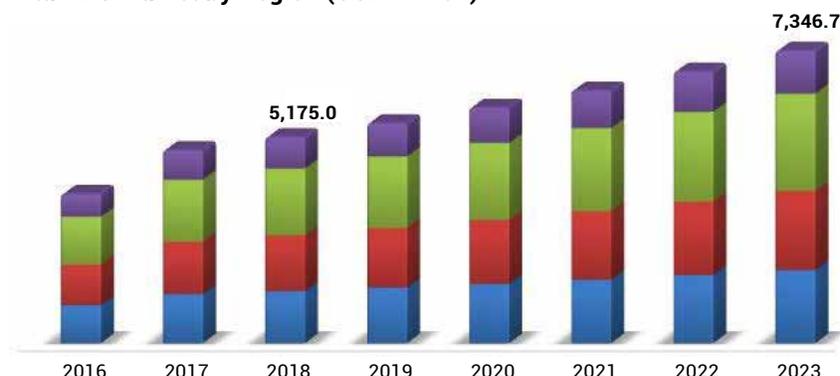
U.S. economy has been made through the transformation of aging of baby those born after Second World War. Novel approach of perpendicular statistics will change expenditure in healthcare and readjust market. The occurrence of vitamin and dietary supplement business where marketing have developed by 6% annually from 2007-2012 is discernible by this time and as of 2012.

**2. Improved awareness of customers for anticipatory healthcare**

If we take a look on magazine, news and social media, it will be clear that urban population across the world frequently allot both diet and lifestyle advice and provide detailed information about new products which has been an important for purchaser. VMHS manufacturers has been determines through discriminate customer attentiveness with objective to increased their marketing efforts.



**Vitamins Market by Region (USD million)**



**3. The increased of the self-directed consumer**

The period when patrons gradually rely on alternate channels to self-diagnose and to detect requirements of the health. At present, to know information on fitness and to be updated on health making decision throughout all parts of the health journey about 70% of Americans use the internet. This has promoted VMHS producers as the result of consumers taking their health into their own hands, not by the doctors.

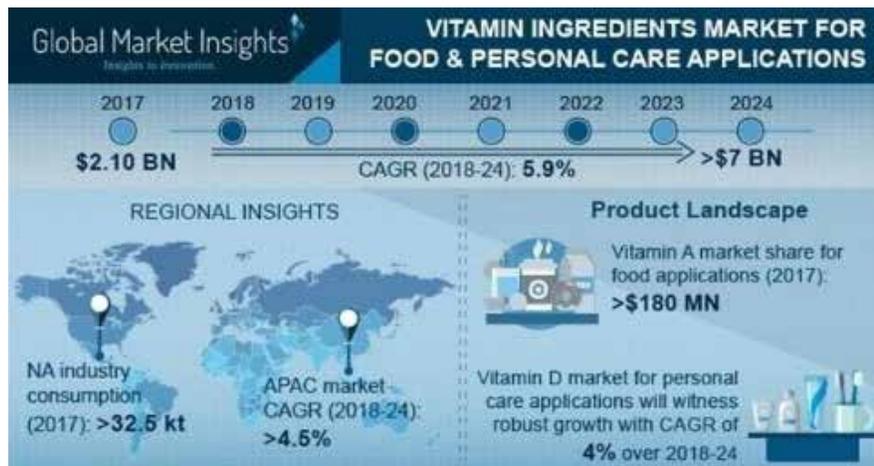
**4. Channel proliferation**

VMHS producers are exceedingly fragmented and are editing new sales stations to reach a diverse. The primary manufacturer existing necessities, for

illustration, preserves only 7% market share and the top five patented manufacturers composed less than a 25% market share. Such destruction is the consequence of absence of awareness of product and lack of consumer allegiance in the category.

**5. Shift from ingredient for occupying the broader position**

Traditionally, health needs of consumers has been focused on VMHS marketing .This prominence formed a market in which products were commercialized and difficulty differentiate between two. To overcome this , sellers have recently start to adapt their consumer messaging in the expectations of cheering use of a wider range of products.



TODAY'S MARKETS IS FILLED UP OF VARIOUS SYNTHETIC VITAMINS AND ITS HIGHER DEMAND OWING TO ITS EASY AVAILABILITY AND LOWER COST ASSOCIATED WITH ITS PRODUCTION

**Position of vitamins, minerals, and herbal supplements (VMHS) in the near future**

It has been stated that in coming years there will be some more driving factors that influence the VMHS category.

**1. Attractive label for branded VMHS products**

As market survey coupled with consumers need is the main cause for searching some innovative tools that may be some attractive label for branded VMHS products. For example: Walmart and Costco are the retailers that rise the demand through their own private label offerings through new branding and formulations, improved packaging with and consumer education pamphlet. The higher profit with consumer loyalty also important and draw attention of retailers for investing money in these products.

**2. Digital market growth**

Digital market has improved the online shopping experience by means of better online education and targeted marketing and improved the comfort level of consumers for buying the vitamins products and enhanced VMHS

market. For example: Amazon, recently launched a site that is dedicated to products for the 50+ demographic. moreover, the online live chat options will also help instantly to understand the sorts of specific consumer questions and break the barrier to online purchases.

**3. Regulatory guidelines reassure the increase**

The continuous growth of VMHS category will be intermingled with increased oversight and strict regulatory guidelines that was followed in manufacturing of products, safety of product and efficacy claims. Over the last years, there has been a appreciable increase in FDA enforcement actions pertaining to food and dietary supplement labeling violations. Hence, companies are most attentively with the language to avoid making either implied nutrient content claims or efficacy/health benefit claims. Strict regulatory guidelines would be applied to manufacturing processes and make a practices to help ensure safety and quality.

**Current and Future Prospects of vitamin as an important ingredient**

In today's world, maximum segment of market is occupied by cosmetic products and in most of them cosmetic products are prepared by vitamins as a significant ingredient. This major driving factor enforced the stimulation of vitamin ingredients market for cosmetic products. These skin care products have the ability to reduce wrinkles, dark spots, aging-induced cell damage and inflammation that may sufficient for rising the industry growth further.

It is estimated that global vitamin supplements will rise at 14% CAGR during the period of 2024. By adopting the innovative products and packaging materials has resulted the newer formulations namely softgels, gelcaps as compare to traditional tablets and powders. some other points may be considered for enhancing vitamin ingredient market such as increasing awareness of benefits of vitamins, enhancing urbanization, growing influence of media, changing the lifestyle pattern, rising incomes, growing adoption of vitamins in animal feeds, growing prevalence of immune-compromised patients.

Hence, all the points as discussed above suggested that companies will need to closely monitor the regulatory guidelines, market shifts, demands of consumers at globally and accordingly rationalized the products in order to avoid consumer backlash. The expansion of the vitamins market throughout the next decade provides a unique opportunity for retailers and manufacturers to invest their money on such heavy demanded market products.

**(The author is Vice Chancellor, Delhi Pharmaceutical Sciences and Research University, New Delhi)**



# LEARNING FROM PANDEMIC

India has 1.3 beds per 1000-population as against the norm of 3.5 per 1000. Similarly, we have 1.3 nurses per 1000 as against norm of 2.5 per 1000. We have 0.65 doctors for every 1000 population as against one per thousand. In regard to specialists, we have 80% shortage at Community Health Centers, which make these centers virtually non-functional. Over and above, the government allocation is mere 1.2% of GDP as against the global average of 9.7%...

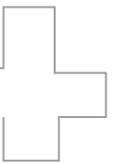
**BY DR GIRDHAR GYANI**



**W**ith the technological advancement in electronics many listening tools like smart phones, tabs and personal entertainment devices have become ubiquitous but we miss the habit of listening safe sounds that need to be adopted to mitigate the risk of hearing loss...

Many common causes of hearing loss can be prevented, including hearing loss caused by exposure to loud sounds. Safe listening can mitigate the risk of hearing loss associated with recreational sound exposure.”

The World Hearing Day is observed every year on March 3rd to raise awareness on ways of preventing deafness and hearing loss and promoting ear and hearing care across the world. This was started in 2013 and this year is the 10th World Hearing day. WHO hosts this annual World Hearing Day event at its headquarters in Geneva



**No single country ever can claim to handle such a crisis. Some may have excellent infrastructure, some may have pharmaceutical hubs, some may have excellent research institutes**

and people across the world celebrate it by organizing various IEC (Information, Education and Communication) activities.

On this day the WHO highlights the importance of safe listening as a means of maintaining good hearing across the life course. This year we have a very important theme of World Hearing day 2022 that is to hear for life, listen with care.

Hearing loss is the most common sensory deficit in humans today. As per WHO estimates in India, there are approximately 63 million people, who are suffering from Significant Auditory Impairment; this places the estimated prevalence at 6.3% in Indian population. As per NSSO survey, currently there are 291 persons per one lakh population who are suffering from severe to profound hearing loss (NSSO, 2001). Of these, a large percentage is children between the ages of 0 to 14 years.

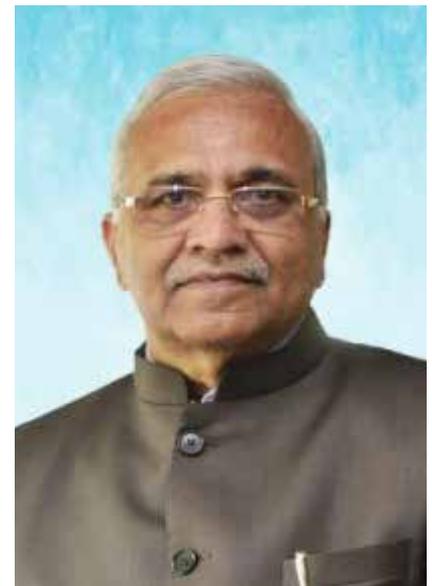
With such a large number of hearing impaired young Indians, it amounts to a severe loss of productivity, both physical and economic. An even

larger percentage of our population suffers from milder degrees of hearing loss and unilateral (one sided) hearing loss.

According to WHO, it is possible to have good hearing across the life course through ear and hearing care. As there is an increase in use of such devices by the younger generation, there is also a parallel increase in incidence of hearing loss. Our ears have delicate hair cells which transform the sound energy into electrical energy in the brain. These hair cells are sensitive to loud intensity sounds which are above the normal conversation levels.

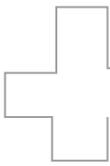
The actual organ of hearing is the cochlea in the inner ear. The cochlea receives sound waves and passes them on to the brain. This works smoothly in people with normal hearing.

The ears receive sound waves and change them into signals which are sent along nerves to the brain. The brain then analyzes the signals, recognizes them as sounds and interprets them: as soft music, for



instance, or as loud honking or human voices.

Sound waves are created when an object moves, for example when a guitar string or loudspeaker membrane vibrates. Whether we hear a sound depends both on the power of the sound as well as on the frequency of the vibration.



When somebody is using an earphone to listen to music, say in a metro or bus, the background noise will require the user to raise the volume of the device to dangerously high level, in order to overcome the background noise of the metro or bus engine enough to damage the delicate hair cells in the inner ear.

The damage is directly proportional to the intensity and duration of the exposure. It is now well known that sound exposure of more than 90 dB (decibel which comes from “deci” meaning one tenth) for 8 hours a day is dangerous and can lead to permanent hearing loss. If the intensity is increased by just 5 dB the exposure duration which is dangerous decreases to half. That means that for a sound of 95 dB, exposure of only 4 hours a day is sufficient to cause the inner ear damage and if the sound is 100 dB then the duration decreases to 1- 1/2 hours only. And a sound of 105 dB can damage your hearing if exposed for just 15 minutes in a week.

The sound level produced by an

mp3 player can reach up to 110 dB at maximum. This is even more relevant after Covid-19 when everyone including students is using headphones for long duration for online classes and webinars at an intensity which can harm the ears. The initial symptom in noise induced hearing loss is ear block sensation or ringing sensation in the ears is often overlooked. Then there is high frequency hearing loss which is usually asymptomatic and later on there is involvement of speech frequency when the patient becomes symptomatic. It can be easily diagnosed by audiometry which shows a classical dip in bone conduction at 4 kilohertz.

The hearing loss is irreversible and cannot be improved with any medication. The noise induced hearing loss because of use of these personal entertainment devices is the new epidemic which is going to

**EVEN AFTER ADDITION OF 3000 HOSPITALS GOVERNMENT HAS TO HAVE THE SUPPORT OF PRIVATE SECTOR TO CATER TO THE EVER-GROWING NEED TO COVER ALL.**





increase further.

**So following are the ways by which you can protect your hearing?**

- Turn down the volume of the music player. If you are not able to hear

**WE HAVE 0.65 DOCTORS FOR EVERY 1000 POPULATION AS AGAINST ONE PER THOUSAND. IN REGARD TO SPECIALISTS, WE HAVE 80% SHORTAGE AT COMMUNITY HEALTH CENTERS, WHICH MAKE THESE CENTERS VIRTUALLY NON-FUNCTIONAL.**

external noise then it is too loud. Also it is loud if the person who is sitting next to you is able to hear the music.

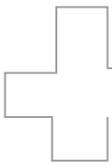
- To enjoy the music safely you must not hear it at more than 60 % of the maximum volume for a duration of not more than 60 minutes a day.
- Use of good quality noise cancelling muff-type headphones is better than ear bud style earphones. The muff type of

headphones allows one to listen to music at lower volume as it prevents the background noise interference.

- Take regular breaks from using the headphones. This gives time for the ear to recover from any insult and prevent the permanent damage.
- If you develop ringing sensation in the ear or have decreased hearing acuity then please see an ENT doctor.
- Do not stand close to loudspeakers during any event.
- Do not use ear buds to clean the ears as it can push the wax deep inside the canal and can also harm the ear.
- Use earplugs while bursting loud crackers. 9. If you have ear ache/discharge consult an ENT surgeon. Do not ignore any ear complaints.
- Avoid ototoxic drugs. 

**(The author is Director General, Association of Healthcare Providers India)**





# COVID-19 BACKS ON TRACK



India is likely to witness a fourth wave of the pandemic in August 2022. Even a mathematical model prepared by the Indian Institute of Technology, Kanpur, had already predicted a fourth wave is on the way. So you must undergo a test if any of symptoms like cough for more than two weeks, fever in the evening, sudden weight loss etc.

**BY ABHIGYAN/ABHINAV**

**D**r P D Rath, Director, Max Super Speciality Hospital, Saket, New Delhi, said, “Most people who fall sick with Covid-19 will experience mild to moderate symptoms and recover without special treatment. However, some will become seriously ill and require medical attention.”

According to Professor and Head Community Medicine, Dr D Y Patil Medical College, Pune, the virus can spread from an infected person’s

mouth or nose in small liquid particles when they cough, sneeze, speak, sing or breathe. These particles range from larger respiratory droplets to smaller aerosols.

People can be infected by breathing in the virus if they are near someone who has Covid-19, or by touching a contaminated surface and then their eyes, nose or mouth. The virus spreads more easily indoors and in crowded settings. The first known infections from SARS-CoV-2 were discovered in Wuhan, China. The original source of viral transmission to humans remains unclear, as does whether the virus became pathogenic before or after the spillover event.

There is no evidence of a direct

THE VIRUS CAN SPREAD FROM AN INFECTED PERSON'S MOUTH OR NOSE IN SMALL LIQUID PARTICLES WHEN THEY COUGH, SNEEZE, SPEAK, SING OR BREATHE



connection between climate change and the emergence or transmission of COVID-19 disease. So you don't believe that rising temperature will have direct impact on day by day growth of Covid-19. As the disease is now well established in the human population, efforts should focus on reducing transmission. Severe acute respiratory syndrome corona virus 2 (SARS-CoV-2) is a novel severe acute respiratory syndrome corona virus. It was first isolated from three people with pneumonia connected to the cluster of acute respiratory illness cases in Wuhan. All structural features of the novel SARS-CoV-2 virus particle

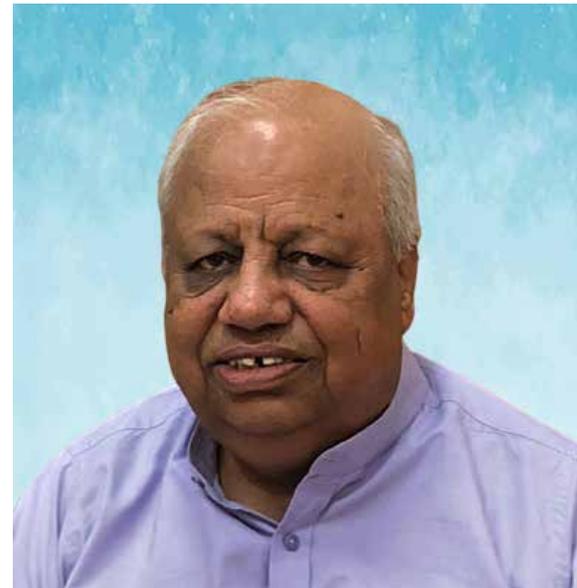
occur in related corona viruses in nature. The official names Covid-19 and SARS-CoV-2 were issued by the WHO on 11 February 2020.

**Dr Mansukh Mandaviya, Union Health Minister**, said, "We are taking all necessary steps to ensure that we are prepared well to face the challenge and threat posed by the growing pandemic of Covid-19. Most people who fall sick with COVID-19 will experience mild to moderate symptoms and recover without special treatment. However, some will become seriously ill and require medical attention

An aim to protect against Covid-19 the vaccination is recommended for people living with conditions that have been identified as increasing the risk of severe Covid-19, including cardiovascular disease, respiratory disease, diabetes, liver disease, obesity and neuro developmental and



**"WE ARE TAKING ALL NECESSARY STEPS TO ENSURE THAT WE ARE PREPARED WELL TO FACE THE CHALLENGE AND THREAT POSED BY THE GROWING PANDEMIC OF COVID-19. MOST PEOPLE..."**



neurodegenerative conditions.

The vaccine can also be offered to people who have had COVID-19 in the past. As per report symptomatic reinfection from the same variant is unlikely for up to 6 months after infection. Those with documented infection may therefore choose to delay vaccination to nearer the end of this period, especially when vaccine supply is limited, to allow others priority for vaccination.

**TYPE OF VACCINES**

Corbevax- Corbevax is a protein subunit Covid-19 vaccine developed by Texas Children’s Hospital Center for Vaccine Development and Baylor College of Medicine in Houston, Texas and Dynavax technologies based in Emeryville, California. An aim to protect against Covid-19 it is licensed to Indian biopharmaceutical firm Biological E. Limited for development and production.

Covaxin – This is India’s first indigenous Covid-19 vaccine manufactured by Bharat Biotech, a pioneering biotechnology company known for its world-class R&D and manufacturing capabilities. This vaccine is included along with immune-potentiators, also known as vaccine adjuvants, which are added to the vaccine to increase and boost its immunogenicity.

Covishield- It is a recombinant, replication-deficient chimpanzee

adenovirus vector encoding the SARS-CoV-2 Spike (S) glycoprotein. Following administration, the genetic material of part of corona virus is expressed which stimulates an immune response. AstraZeneca, Serum Institute of India both have manufactured the Covishield vaccine. This is also known as Oxford, Astrazeneca vaccine.

The Johnson & Johnson vaccine- This is non-replicating viral vector that aims to protect against Covid-19. This has been manufactured by Janssen Pharmaceutical Companies

Moderna Vaccine- Modern is a RNA type that aims to protect against Covid-19. People ages 18 years and older who are moderately or severely immune compromised should get a third dose at least 4 weeks after their second dose. Moderna, NIAID has developed Moderna Vaccine.

Novavax Vaccine- This is protein subunit type vaccine that aims. The Sputnik Light Vaccine and Sputnik V Vaccine – Both are non-replicating viral vector type vaccine that aim to protect against Covid-19 developed by Gamaleya Research Institute.

The Zydus Cadila Vaccine- This is DNA based type vaccine developed by Cadila Healthcare Ltd.

**USE OF VACCINE FOR PREGNANT LADY**

According to **Dr A K Agarwal, Professor of Excellence, Former**

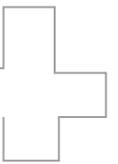
**Dean, Maulana Azad Medical College, New Delhi and currently Medical Advisor, Clinical Research and Innovation, Apollo Group of Hospitals,** the safety and efficacy of the use of vaccines in pregnant women is not yet available. However, based on previous evidence from other protein-based vaccines during pregnancy, efficacy is expected to be comparable to non-pregnant women of a similar age.

Even WHO has already recommended the use of the Covid-19 vaccine in pregnant women when the benefits of vaccination to the pregnant woman outweigh the potential risks? To help pregnant women make this assessment, they should be provided with information about the risks of Covid-19 in pregnancy, the likely benefits of vaccination in the local epidemiological context, and the current limitations of safety data in pregnant women. But WHO does not recommend pregnancy testing prior to vaccination and delaying pregnancy or terminating pregnancy because of vaccination.

Even WHO has already recommended the use of the Covid-19 vaccine in pregnant women when the benefits of vaccination to the pregnant woman outweigh the potential risks? To help pregnant women make this assessment, they should be provided with information about the risks of Covid-19 in pregnancy, the likely benefits of vaccination in the local epidemiological context, and the current limitations of safety data in pregnant women. But WHO does not recommend pregnancy testing prior to vaccination and delaying pregnancy or terminating pregnancy because of vaccination.

**WHO IS THE VACCINE NOT RECOMMENDED FOR?**

Individuals with a history of anaphylaxis to any component of the



“

The safety and efficacy of the use of vaccines in pregnant women is not yet available. However, based on previous evidence from other protein-based vaccines during pregnancy, efficacy is expected to be comparable to non-pregnant women of a similar age.

**WE ARE COMMITTED TO ACCELERATING THE PACE AND EXPANDING THE SCOPE OF COVID-19 VACCINATION THROUGHOUT THE COUNTRY.**

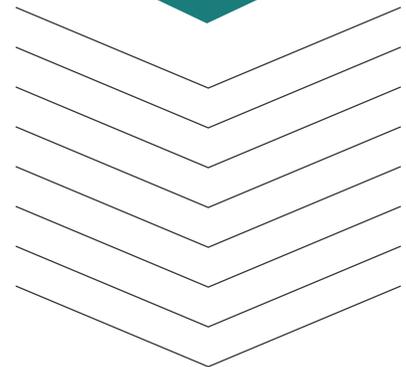
vaccine should not take it. Persons with acute PCR-confirmed Covid-19 should not be vaccinated until after they have recovered from acute illness and the criteria for ending isolation have been met. Anyone with a body temperature over 38.5°C should postpone vaccination until they no longer have a fever.

**According to Mansukh Mandaviya, Union health Minister,** we are committed to accelerating the pace and expanding the scope of Covid-19 vaccination throughout the country. The nationwide Covid-19 vaccination started on 16th January 2021. The new phase of universalization of Covid-19 vaccination commenced from 21st June 2021. The vaccination drive has been ramped up through availability of more vaccines, advance visibility of vaccine availability to States and UTs for enabling better planning by them,

and streamlining the vaccine supply chain.

Mandaviya, said, “As part of the nationwide vaccination drive, Government of India has been supporting the States and UTs by providing them Covid Vaccines free of cost. In the new phase of the universalization of the Covid-19 vaccination drive, the Union Government will procure and supply (free of cost) 75% of the vaccines being produced by the vaccine manufacturers in the country to States and UTs.”

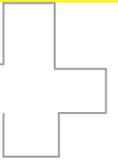
India’s Covid-19 vaccination coverage has exceeded 186.90 Cr (1,86,90,56,607) as per provisional reports till now. This has been achieved through 2,28,31,901 sessions. Covid-19 vaccination for the age group 12-14 years was started on 16 March, 2022. So far, more than 2.50 crore (2,50,83,940) adolescents have been administered with the first dose of Covid-19 vaccine. Similarly, the COVID-19 precaution dose administration for age group 18-59 years also started from recently. As per report, 2,11,000 precaution doses have been administered so far. 





**EXCLUSIVE** - PRIMUM NON NOCERE

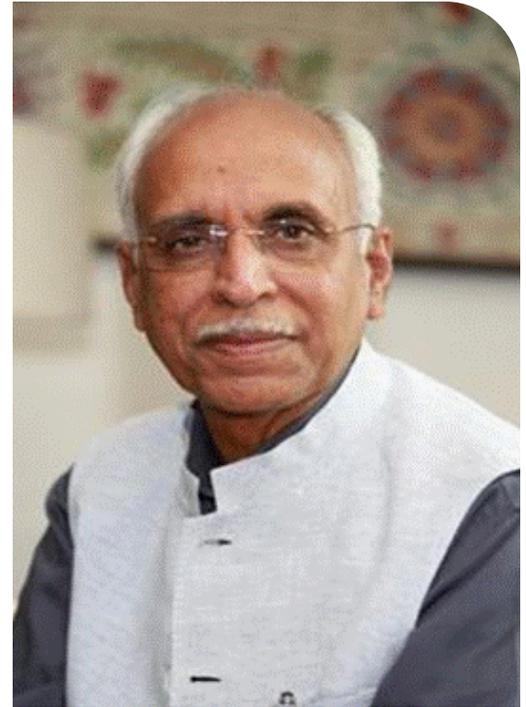




In present times healthcare delivery is viewed as potentially dangerous, expensive and driven primarily by technology & medical consultants. Rational behind this change has been ill understood both by the community and the healthcare providers and therefore they are inadequately prepared to deal with unforeseen outcomes including medical errors and cost. We need to look at the journey of increasing reporting of medical errors, medicine becoming hi-tech and expensive and how the medical community can cope with this change.

**HISTORY OF MEDICAL ERRORS**

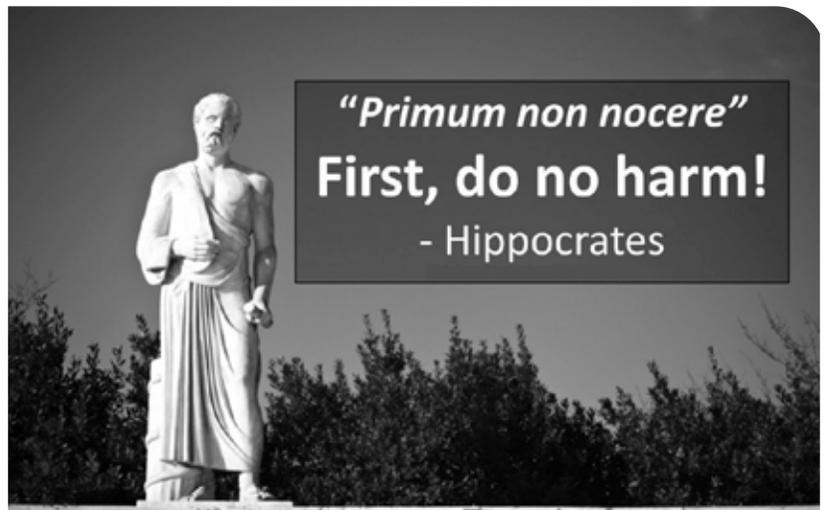
The fact that medical errors have become the 3rd leading cause of death in a developed country like USA is a pointer to the possible scenarios around the world especially in developing countries including India. Hippocrates recognized that harm could arise from the well-intentioned actions of healers. Thus, the Hippocratic Oath makes physicians pledge to “prescribe regimens for the good of my patients according to my ability and my judgment and never do harm to anyone.” Since then, primum non nocere (“FIRST DO NO HARM”)



# PRIMUM NON NOCERE

Healthcare delivery today has become very complex. Earlier it was considered to be safe and inexpensive, less invasive and under the comforting personal care of a family physician...

**BY DR VIJAY AGARWAL**





**SINCE THEN, PRIMUM NON NOCERE (“FIRST DO NO HARM”) HAS BECOME A CENTRAL TENET FOR CONTEMPORARY MEDICINE.**



**“Hippocratic Oath makes physicians pledge to “pre-scribe regimens for the good of my patients according to my ability and my judgment and never do harm to anyone.” Since then, primum non nocere (“FIRST DO NO HARM”) has become a central tenet for contemporary medicine.**

hard to come by and were mostly anecdotal, making most physicians and hospital administrators ignore medical errors as aberrations and they were being noticed only when law suits were filed. It is with the advent of news channels and other communication media that medical services started coming under a scanner of the common people who realized that the delivery of medical services were not without real risk. The health reporter for the Boston Globe, Betsy Lehman, died from an overdose during chemotherapy. Famous film star Sri Devi’s mother Rajeshwari was operated on the wrong side of brain with disastrous consequences. Josie King was an 18-month old baby when she died due to medical negligence in one of the best hospitals in USA. Since then, her mother Sorrel King went on to become a champion to promote patient safety. In April 1982, the public and the medical fraternity was shocked by the ABC television program 20/20 entitled The Deep Sleep; the producers stated that, every year, 6,000 Americans die or suffer brain damage related to anesthetic mishaps.

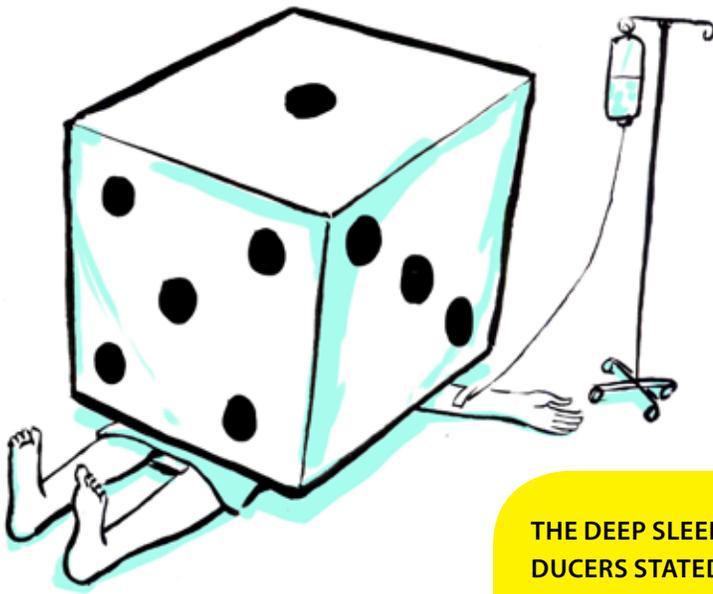
One of the milestones to highlight that medical errors were not anecdotal but a regular feature even in the best of the hospitals was the famous article “To Err is Human” published by Institute of Medicine (IoM) in the year

2000. The study estimated that as many as 98,000 people die in any given year from medical errors that occur in hospitals(USA alone) - more than the number of deaths from motor vehicle accidents, breast cancer, or AIDS - three causes that receive far more public attention. A 2006 follow-up to the IoM study found that medication errors were among the most common medical mistakes, harming at least 1.5 million people every year.

Since then medical errors have come under greater scrutiny. A study in 2016 declared medical errors to be the 3rd leading cause of death in USA. Recognizing that healthcare errors impact 1 in every 10 patients around the world, the World Health Organization recognized patient safety as an endemic issue of concern. Although we have poor structured documentation of medical errors in India, the incidence of medical errors in India will be manifold higher. Example of surveillance data of Hospital Associated Infections (HAI) published by Dr Victor Rosenthal and Indian coauthors from 20 cities of India, collected from 2004 to 2013, from 236,700 ICU patients for 970,713 bed-days can be an eye opener.. Authors found 5.1 central line-associated bloodstream infections (CLABSIs) per 1,000 central line-days (5 times above USA), 9.4 cases of

has become a central tenet for contemporary medicine.

The data on adverse outcomes were



ventilator-associated pneumonia (VAPs) per 1,000 mechanical ventilator-days (9 times above USA), and 2.1 catheter-associated urinary tract infections per 1,000 urinary catheter-days (2 times above USA). Furthermore, the burden of HAI was also reflected in higher mortality rates, hospital costs, because of prolonged length of stay (LOS), use of extra beds, and higher antimicrobial resistance.

**MEDICAL ERRORS AND INCREASING COST**

Medical errors and resulting complications have surely increased the cost of providing medical care. However, to quantify the degree to which the medical errors contribute to the increasing cost is not easy. The Society of Actuaries Health Section sponsored a study to measure the annual frequency of medical errors in the United States and the total measurable cost to the United States economy of these errors. This effort was based upon an analysis of an extensive claim database, and it therefore relied upon medical events, which had been submitted for payment by medical providers.

Key findings from the study included:

**THE DEEP SLEEP; THE PRODUCERS STATED THAT, EVERY YEAR, 6,000 AMERICANS DIE OR SUFFER BRAIN DAMAGE RELATED TO ANESTHETIC MISHAPS**

There were 6.3 million measurable medical injuries in the U.S. in 2008; of the 6.3 million injuries, the authors estimate that 1.5 million were associated with a medical error.

- The average total cost per error was approximately \$13,000.
- In an inpatient setting, seven percent of admissions are estimated to result in some type of medical injury.

The measurable medical errors resulted in more than 2,500 avoidable deaths and more than 10 million excess days missed from work due to short-term disability. This number includes only the errors that researchers could identify through claims data, so the total economic impact of medical errors was in fact greater than what was reported.

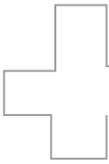
The relationship of the medical errors to the cost was taken to another level when medical profession came under attack for the fee-for-service system. It has been alleged that doctors and hospitals fared better financially when patients needed



**A 2006 follow-up to the IoM study found that medication errors were among the most common medical mistakes, harming at least 1.5 million people every year.**

follow-up care after an error occurred. The viewpoint is that for every complication arising out of an error, doctors and hospitals perform some additional services, for which they will receive additional payments. While a hospital's leadership consciously will not hurt patients to make more money, but the system does not encourage and reward better and more efficient care.

Some of the steps taken in a country like USA are an indication of things to change. Recent national health reform legislation (the Patient Protection and Accountable Care Act or PPACA) has several quality improvement provisions including restructuring the way health care is delivered in the United States through accountable



care organizations (ACOs) and value-based purchasing. The Centers for Medicare & Medicaid Services (CMS) has for the first time said it will stop reimbursing hospitals for two major problems that cost the government and by extension taxpayers, billions of dollars; (1) preventable readmissions and (2) health care facility-acquired conditions, such as infections.

A big causality of this emerging scenario even in India has been the erosion of the trust that medicos enjoyed in the community. It has been a drastic change for a country where doctors were worshipped; people have begun to believe that doctors have become greedy and the hospitals have become commercial.

Private healthcare is the dominant healthcare provider in India now as Government spending on health has been less than 1% of GDP for years leading to the consequential growth of private healthcare. The huge demand created by the increasing middle class and development in the medical sector paved the way for for-profit hospitals in the 1990s. This helped in augmenting the availability of super specialty services across the country.

The advent of these super-specialty corporate hospitals exposed the community to effective but expensive, yet error prone healthcare delivery. A study done by IIMA based on financial statement data of private hospitals for

**MOST HOSPITALS FEEL THAT GETTING ACCREDITATION IS THE FINAL DESTINATION OF THEIR QUALITY JOURNEY WHILE ACTUALLY IT SHOULD BE THE BEGINNING.**

the years 1999 to 2004 concluded that the financial risk in this sector is high because of lower profitability and lower operating efficiencies. Medical establishments are hugely capital intensive with very poor ROI. Many hospitals are running in losses. Although, international patients find hospitals in India to be good and inexpensive, yet they are considered very expensive by the local population in India. Reasons for this could be:

Most people have not planned expenditure on healthcare. Low penetration of health insurance needs to be addressed to meet the high unexpected expense for high end medical care.

Community has no knowledge of the real expense involved in running a hospital because the Government-run facilities are providing “free” care to them. However, these facilities are not free and are primarily run by taxpayers’ money. A costing exercise of the not for profit (non charitable) quality institutions needs to be done to make

people aware about the actual costs.

Financial burden of healthcare on the family has increased because of increased life expectancy with the elderly in the family requiring more medical attention.



**NEED FOR CHANGE:**

Highlighting of medical errors by media and violence faced by medical profession, has pushed the case for need for medical professionals to make a sincere attempt to adhere to patient safety guidelines, improve on communication with patients and adopt efficient work processes. Patient safety has emerged as a distinct healthcare discipline supported by a developing scientific framework. There is a significant trans-disciplinary body of theoretical and research literature that informs the science of patient safety.

The resulting patient safety knowledge continually informs improvement efforts such as: applying lessons learned from business and industry, adopting innovative technologies, educating providers and consumers, enhancing error reporting systems, and developing new



Care has been a step in this direction.

Unfortunately, these efforts are too small considering the complexity of health care delivery setting with multiple types of work, many different professions and varying working



economic incentives.

In spite of best efforts, the results of patient safety initiatives have been far from satisfactory.

It is being suggested that professional bodies work on twin challenges i.e. patient safety and affordability by organizing research and dissemination through workshops and seminars. In 1983, the British Royal Society of Medicine and the Harvard Medical School jointly sponsored a symposium on anesthesia deaths and injuries, resulting in an agreement to share statistics and to conduct studies. By 1984, the American Society of Anesthesiologists (ASA) had established the Anesthesia Patient Safety Foundation (APSF). Anesthesia related deaths have surely decreased significantly over a period of time. A similar effort of AHPI and CAHO to involve ISRO to evolve guidelines for Emergency and Critical

conditions across clinical environments. Areas like pharmacy, radiotherapy, nuclear medicine and blood bank require different inputs as these are highly standardized and rely on automation and information technology. They are islands of reliability within the much more chaotic wider hospital environment.

In healthcare we have to adapt our approach to safety according to the nature of the work, the working conditions and use a variety of underlying models of safety.

#### **ACCREDITATION INITIATIVES:**

One of the major routes for propelling healthcare providers to become safer was to encourage hospitals to follow standards (SOPs) and other national and international guidelines. A standard is a statement that defines the structures and processes that must be substantially in place in an organization to enhance the quality of care. Accreditation is an external review of quality with four principal components:

Accreditation bodies like NABH have been able to sensitized hospitals in India about the need for accreditation. Many government health insurance schemes have begun empanelment of hospitals on the basis of NABH accreditation. This has increased push for more and more hospitals going for accreditation. However, this has also created tendency in obtaining accreditation certificate through short cuts rather than working in spirit of patient safety. Studies are needed to document the impact of accreditation on quality/ patient safety. Most hospitals feel that getting accreditation is the final destination of their quality journey while actually it should be the beginning.

One of the reasons for this has been the fact that clinicians have kept themselves away from learning and adopting the rapid development in the field of hospital quality. It is also the inability of the clinician to comprehend

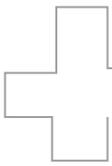
that delivery of healthcare service is now teamwork. The clinicians are rather reluctant to learn from quality managers who have emerged as “specialists” in quality having learnt all the Standards and SOPs. Many of times the quality managers are much junior in hierarchical set-up hierarchical of the hospital.

They are not able to establish a rapport with the senior clinicians who consider quality documentation to be a roadblock in the clinical work. The senior administrators are focused on the balance sheet and find quality issues raised by the quality manager as necessary evil. Quality implementation can happen only with the active involvement of all the stakeholders. The SOPs and guidelines have to be owned by all the members of a department/ hospital.

#### **CONCLUSION:**

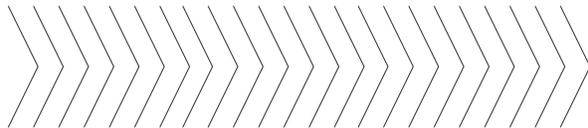
With the time, healthcare as component of overall wellbeing was being seen as basic obligation to be met by the governments. In order to meet such an obligation, governments need to raise spending on healthcare as percentage of GDP which again is not an easy task for developing economies like India, which have other basic priorities including education, environment, infrastructure, electricity, roads etc. Only way out is to incentivize private health sector to invest in healthcare infrastructure and regulate the same for quality and patient safety. Equally important is to apply management tools to help in improving of operational efficiency and cutting down of wasteful work processes and thereby reducing the operational cost. These measures will surely help hospitals in achieving high patient safety at low cost. 

**(The author is President, Consortium of Accredited Healthcare Organizations, CAHO)**



**WORLD FAME CRICKETER**  
**SIKHAR DHAWAN**  
**WORKS FOR NOBLE CAUSES**

Exclusive interview with Double Helical



**S**hikhar Dhawan, in an exclusive interview with Double Helical, says that the foundation plans to adopt 11 NGOs and work on campaigns to spread awareness regarding issues related to providing quality healthcare, education, skill development, hunger eradication, job creation, poverty removal, eradication of illiteracy, women and children welfare, rehabilitation, human rights and legal aid, shelter homes for senior citizens, and inclusion & disadvantaged communities among others.

Shikhar Dhawan, the Indian-international cricketer and the founder of the foundation, said, "The Shikhar Dhawan Foundation will adopt and incubate 11 new NGOs for different noble causes every year just like a cricket team, The team will

**With an aim to covering the whole society, free medical camps, blood donation drives, eye care camps, health awareness camps, and programs, strong dedication for ongoing Covid-19 relief, rehabilitation ( drug de-addiction) for youth, male adults, street children, and various others, world fame Indian cricketer has recently announced SHIKHAR DHAWAN FOUNDATION.**





**With vision to take care to every one Shikhar Dhawan Foundation is a small initiative. I believe that service before self has always been my success mantra.**



support like a coach and all of us will grow together. I and my team will become the face of these NGOs and always intend to support them for one year. With vision to take care to every one Shikhar Dhawan Foundation is a small initiative. I believe that service before self has always been my success mantra. I derive pride knowing that I could make a difference to the society, towards someone's life and uplift it for the good.

This journey that we are set to begin with has developed from a larger vision of our love towards Shikhar Dhawan- Foundation.

**Let us know about SDF's true**

**mission?**

The true and core mission of the Shikhar Dhawan Foundation is to make the world a better place to live for all sections of society in all areas of the world and in every walk of life. We believe and are determined that we will be able to change as many lives as we can.

**Where would SDF(Shikhar Dhawan Foundation) be in the future?**

For the long future SDF aims to build a vibrant ecosystem for the entire social sector which creates collaboration and synergy amongst each other. We want SDF to play a leading role in every corner of society.

**Where do you see the foundation in the next five years?**

In the next five years, we believe through our incubation model we will create the most effective NGOs leading the development work with social innovations in solving social problems and creating long-term sustained impact. We will have developed a model incubation program for nonprofit organizations which can then be replicated on a pan India scale.

**What sort of changes do you as a foundation want to make in society?**

Our foundation does not just want to work alone in the social sector. We have a larger aim. We want others to grow and develop with us. We want many NGOs working in various sectors, places, and issues to come up and make changes in the lives of a maximum number of people. Our sole vision is to make this world a better place to live for all. We want to eradicate the difference between rich and poor. We want nobody to go to bed hungry. We want no child who is malnourished and we want nobody to be deprived of the necessities of life.

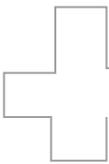
**What are the types of 11 NGOs that you intend to pick for incubation in the Shikhar Dhawan Foundation?**

We will be selecting those NGOs that have a potential for social innovation and the intent for a deeper and sustainable impact. We will look for founders and teams that have the spirit and share our vision.

**What do you have long-term strategy and plan to your foundation by leaps and bounds?**

Our overall long-term plan for the foundation is to incubate as many potential organizations as we can. We want to create well working NGOs in every nook and corner of the country so that people of all areas could be targeted and their ideas are brought





into reality. We want people living in any part of the country, be it a remote area or a metropolitan, if they are deprived of any basic necessities, hunger, or job then we as a foundation or any of our incubated NGOs will reach them and help them.

**What sets SDF apart from other organizations and foundations that are working in the community?**

Other organizations just focus on their NGOs and one or two social issues. But in our foundation, we believe in growing together. We have a vision and mission of growing and helping in the growth of other organizations or NGOs as well. And also we just don't work on one social issue, but there are various issues on which we are working simultaneously. We believe that we should do as much good as we can for society and the underprivileged people.

**Why are SDF goals important?**

Our goals are important because that is the soul of our foundation. We

believe if we can make and change the life of even a chunk of people in the world then our purpose is done and our goal is to make a larger impact in the world.

**How is working at SDF align with the Foundation's value?**

Any NGO's values include principles such as accountability, collaboration, social justice, empowerment, and independence and we make sure all of these are aligned with the greater vision of the foundation.

**What is the vision of SDF and how do you resonate it with the work you are doing at the foundation?**

Our lives revolve all around us and we can't work for the people. Through this foundation, we want to work for the people, for their betterment and fulfillment of desires and hopes.

**Is it compatible with the day-to-day reality of the way your foundation works?**

Yes, absolutely, it aligns completely with the vision and reality of the business as in the social sector that we are operating in, Shikhar Dhawan Foundation deals with the reality that there are all sorts of people living in the world. There are rich and poor, privileged and underprivileged, and many other categories. And this is a manmade affair and not a product of nature. Therefore, we as a foundation want to work wholeheartedly for their better and brighter future.

**What sort of guidance and mentorship will you offer to the NGOs?**



The NGOs will gain an opportunity to grow and develop from saplings into huge trees whose fruits of prosperity will be borne by the community. The NGOs will receive support in terms of expert guidance, training programs, management consultancy, and technical know-how of monitoring and impact evaluation. The foundation will support the NGOs in their transformation into tech-enabled scalable organizations.

**What will be the area of focus at SDF?**

**Education:** Underprivileged children particularly girls upliftment, malnutrition, adult education, health and sex education, institutions for basic and technical education, innovative educational programs.

**Vocational Training Programmes and skill development:** Youth, women, skilled and unskilled labor, unorganized sector workers, computer courses, beauty parlor, fashion designing, cooking, tailoring, and bakery work.



**WE HAVE A VISION AND MISSION OF GROWING AND HELPING IN THE GROWTH OF OTHER ORGANIZATIONS OR NGOS AS WELL. AND ALSO WE JUST DON'T WORK ON ONE SOCIAL ISSUE, BUT THERE ARE VARIOUS ISSUES ON WHICH WE ARE WORKING SIMULTANEOUSLY.**



“There are many problems in society and we believe that each and everyone has the birthright to live a life free of all these problems, with peace, prosperity, good health, and happiness.

**Health:** Covering the whole society, free medical camps, and blood donation drives, eye care camps, awareness camps, and programs, post covid19 relief.

**Rehabilitation (Drug de-addiction):** Youth, male adults, street Children, and various others.

**Child Labor, Female Child Abortion, Gender Bias, Predetermined Sex-selection Practices:** Women, children, particularly girls.

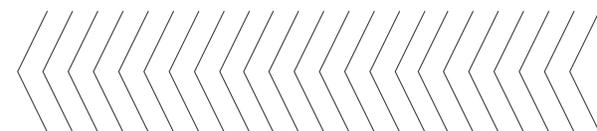
We all can affect social change and the first step is to talk about social issues. Discussing and spreading awareness about social issues helps create a better understanding of the problems regarding the root cause and nature of these issues. The Shikhar Dhawan Foundation is established to bring change and help prevent social issues and would be devoted to the common good.

**What Shikhar Dhawan Foundation Team Says?**

Kanika Dewan, Director-Impact and Strategy, Shikhar Dhawan Foundation, said, “Through this foundation, we aim to make a change in the lives of people, aim to eradicate social issues like hunger, poverty, illiteracy, and discrimination which form the core of our society, and thereby foster the development of our society. We want to create a long-lasting positive impact on society and its people.”

**Amitesh Shah, CEO, Da One 42,** said, “There are many problems in society and we believe that each and everyone has the birthright to live a life free of all these problems, with peace, prosperity, good health, and happiness. With Shikhar Dhawan Foundation, we want to make this happen.

“We always wanted to work for the betterment of society, for the betterment of its people, and make the world a better place. There is



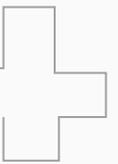
a divide and inequality in society which can definitely be overcome. Under the Shikhar Dhawan Foundation, we will be working for the well-being of the underprivileged and their upliftment,” Amitesh Shah, added. 



**EXCLUSIVE** - DON'T TAKE YOUR HEALTH INTO YOU OWN HANDS

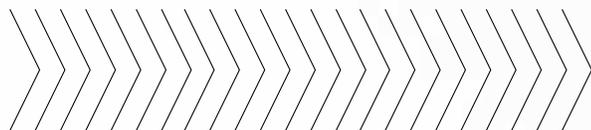


# DON'T TAKE YOUR HEALTH INTO YOUR OWN HANDS



**The lack of clear regulatory framework has been a major challenge to the growth of the dietary supplements market in India. Around 60 percent of the dietary supplements sold across India are fake, counterfeit, unregistered and unapproved, in addition to being extremely difficult to identify...**

**BY AMRESH KUMAR TIWARY**



In India, protein supplements are priced high, making it quite expensive for consumption on a regular basis by the lower middle class and rural population of the country. Dietary supplements manufacturers are providing an increasing amount of information to customers to make them aware about their products. Market players are currently undertaking a number of measures to win customer trust and improve overall quality standards in the industry.

Consumers prefer dosages in the form of capsules since they are easier to swallow and offer more formulation flexibility. Liquid encapsulation is one of the emerging technologies and it provides superior safeguarding of the ingredients through moisture protection.

This trend has benefited VMHS manufacturers because many supplement purchases are the result of consumers taking their health into their own hands, not the direct advice of a doctor.

VMHS manufacturers have encouraged this self-directed behavior by improving their education and marketing efforts, and targeting consumers both on and off-line.

Additionally, as consumers become more educated, they are increasingly interested in personalized VMHS solutions and are leveraging online tools provided by retailers and manufacturers to create a personalized regimen.

VMHS manufacturers are highly fragmented and are accessing new sales channels to reach a diverse and broad set of customers. The leading manufacturer Living Essentials, for instance, maintains only 7 percent market share, and the top five branded manufacturers together hold less than a 25 percent market share. Private label accounts for 10 percent of sales. Such fragmentation is the result of a general lack of brand awareness and an absence of consumer loyalty within the category.

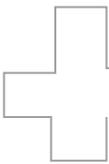
The highest concentration of VMHS sales are in super/hyper markets, with online stores and specialty retailers such as GNC following closely behind. As they've grown in popularity due to their perceived higher product quality and private label options, specialty retailers have contributed significantly to channel proliferation.

Historically, VMHS marketing has been focused on promoting a specific ingredient that addresses a consumer

health need –e.g. omega 3 for heart health or lutein for eye support. This emphasis created a market in which products were commoditized and consumers had difficulty differentiating between brands. To combat this, marketers have recently begun to tailor their consumer messaging to include a focus on a holistic benefit platform, in the hopes of encouraging usage of a broader array of products.

One manufacturer's family of preventative eye health solutions and General Mills' heart healthy cereals are prime examples of this growing trend. Through targeted marketing efforts, these companies have successfully created a need and sold a benefit oriented solution to consumers. VMHS manufacturers are also using the benefit platform as a way of achieving a differentiated, premium positioning in the market place, appealing, for instance, to expectant mothers, heart health, 60 plus men, or other specific consumer segments. The resulting expanded suite of product offerings has been a primary driver of growth within the category.

As branded product recalls continue to occur and more purchase decisions are based on specific needs. The consumers' comfort with private label



substitutes gains in strength. The retailers like Walmart and Costco are also fueling the trend by continuing to enhance their own private label offerings through new branding and formulations, improved packaging, and in-store consumer education. Many retailers are also now positioning their store brands as “lifestyle brands,” in an attempt to set them apart and build loyalty with customers.

Safeway, for instance, has publicly stated that in ten years it will no longer be a grocery store selling wellness products. Rather it will be a wellness store selling food, with the Safeway brand leading the change. Given the attractive margins and consumer loyalty that private label VMHS brands can garner, retailers are likely to continue investing in these products, further fueling their growth.

Despite VMHS being a relatively difficult category for consumers to shop for online without prior product knowledge, online sales have experienced a dramatic increase over the last five years. The primary driver of this has been retailers’ focused efforts on improving the online shopping experience through better online education and targeted marketing. This has increased the comfort level consumers have for buying this category online. Amazon, for instance, recently launched a site dedicated to products appropriate for the 50 plus demographic, one that’s easy to shop for by need state. Competing with Amazon are a variety of start-ups and established players (e.g., vitacost.com) who are creating a meaningful online presence as a specialty VMHS destination. Many sites now have live chat options to help instantly address the sorts of specific consumer questions that were previously a barrier to online purchases.

Another key growth driver of online sales is the increased interest in Eastern health and wellness products. As the alternative medicine trend



**The final growth driver is the increasing number of personalized online VMHS systems available to consumers free of charge.**

continues to grow it is likely that demand for Eastern products will accelerate, especially among younger consumers. Easy and convenient online access to these products will help companies leverage this growth opportunity.

The final growth driver is the increasing number of personalized online VMHS systems available to consumers free of charge. Both manufacturers and retailers are beginning to offer free access to “wellness tools” that create a customized VMHS list based on a consumer’s specific conditions and needs.

The high level of fragmentation within the VMHS category makes it a prime

candidate for mergers and acquisitions. Within the last three years, we have seen pure play companies get acquired and large companies deepen or broaden their category presence (e.g. P&G’s purchase of New Chapter, the Carlyle Group’s purchase of NBTY, Pfizer’s purchase of Alacer). Both pharmaceutical companies and consumer packaged goods (CPG) makers have publicly committed to expand their consumer health division, suggesting that the acquisition trend in the space will continue. Non-traditional players are also beginning to explore the category as a possible source of incremental growth.

CPG expansion into the VMHS space will likely enhance overall category sophistication as these companies are more likely than traditional VMHS players to find new ways to innovate in both delivery and packaging. Large CPG companies will bring marketing expertise, category management best practices and deep consumer insights that will successfully align products with consumer trends and needs. This will further accelerate the awareness of the VMHS category among a wide range of consumers, contributing to additional sales.



**THIS TREND HAS BENEFITED VMHS MANUFACTURERS BECAUSE MANY SUPPLEMENT PURCHASES ARE THE RESULT OF CONSUMERS TAKING THEIR HEALTH INTO THEIR OWN HANDS, NOT THE DIRECT ADVICE OF A DOCTOR.**

Continued growth of the VMHS category will be coupled with increased oversight and a tightening of regulations around manufacturing, product safety and efficacy claims. Over the past year, there has been a noted increase in FDA enforcement actions pertaining to food and dietary supplement labeling violations. Manufacturers will need to be more careful with the language they chose to put on labels to avoid making either implied nutrient content claims or efficacy/health benefit claims. Tighter regulations will also be applied to manufacturing processes and practices in order to help ensure quality and safety in light of recent recalls. Between 2004 and 2012, more than half of all Class 1 recalls by the FDA were dietary supplements. Sexual enhancement, bodybuilding and weight loss products were the top three problem categories.

There has also been an increased focus in the last few years on potential FDA bans of certain vitamins and supplements that may be harmful, such as a form of vitamin B6 and certain energy supplements. An increasing number of clinical research trials are being done to test the efficacy and long term health benefits of taking vitamins,

some of which have suggested that large doses of certain vitamins may actually increase the risk of cardiac events in elderly people or those with heart disease. While tighter regulations will add a new measure of complexity for manufacturers, it will also provide an opportunity for the good actors to shape the market. Major players should proactively work with regulatory bodies to help set a more stringent bar for supplements. Such regulatory changes and industry-government cooperation will ultimately engender greater consumer confidence in the safety and efficacy of VMHS products, thus benefiting the overall market.

**Double Helical View**

Strong category growth is expected to continue amid both increased consumer interest in health and retailers' efforts to position themselves as one-stop health and wellness destinations. Manufacturers will need to closely watch regulatory shifts and adjust accordingly in order to avoid consumer backlash or supply disruption due to product quality concerns. Yet taking on these challenges is well worth it. The expansion of the VMHS space throughout the next decade offers a

unique opportunity for retailers and manufacturers to capitalize on a robust growth sector.

The online retail channel is the top outlet for sales of vitamin and mineral and supplements (VMS), hitting \$2 billion and surpassing Walmart's vitamin sales of \$1.7 billion in 2016, according to the 2016 TABS Analytics Vitamin and Minerals Supplements study.

The decline in heavy buyers is particularly noticeable among women. The percentage of female heavy buyers has gone from 45% in 2012 to just 32% in 2016, a noticeable drop of 13 percentage points. Despite this drop in heavy buyers, overall purchase incidence among female buyers has increased to an all-time high of 82%, driven by more light buyers.

The 2016 VMS study also found that heavy buying among younger consumers (ages 18 to 54) has dropped from 25% in 2015 to 21% in 2016, however, consumers 55 years and older are twice as likely to be heavy buyers (43%).

The softness are seeing in the VMS market compared to previous years is directly linked to the decline in heavy buyers. This has been isolated to the mass market as specialty and online has held their heavy buyers and picked up volume as a result. The bigger heavy buyer declines are occurring with women and younger buyers between the ages of 18 to 54. Since heavy buyers respond well to category innovation and retailer promotions, these two areas should be a primary focus for manufacturers and retailers going forward. 



**EXCLUSIVE** - MIND YOUR HEAR LOSS





# MIND YOUR HEAR LOSS

Hearing is precious and you must protect it. Take good care of your ears... To hear for life, listen with care.

BY DR RAVI MEHER



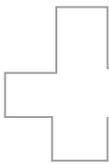
Dr Ravi Meher

**W**ith the technological advancement in electronics many listening tools like smart phones, tabs and personal entertainment devices have become ubiquitous but we miss the habit of listening safe sounds that need to be adopted to mitigate the risk of hearing loss...

Many common causes of hearing loss can be prevented, including hearing loss caused by exposure to loud sounds. Safe listening can mitigate the risk of hearing loss associated with recreational sound exposure.”

The World Hearing Day is observed every year on March 3rd to raise awareness on ways of preventing deafness and hearing loss and promoting ear and hearing care across the world. This was started in 2013 and this year is the 10th World Hearing day. WHO hosts this annual World Hearing Day event at its headquarters in Geneva and people across the world celebrate it by organizing various IEC (Information, Education and Communication) activities.

On this day the WHO highlights the importance of safe listening as a means of maintaining good hearing across the life course. This year we have a very important



**AS PER NSSO SURVEY, CURRENTLY THERE ARE 291 PERSONS PER ONE LAKH POPULATION WHO ARE SUFFERING FROM SEVERE TO PROFOUND HEARING LOSS (NSSO, 2001). OF THESE, A LARGE PERCENTAGE IS CHILDREN BETWEEN THE AGES OF 0 TO 14 YEARS.**



theme of World Hearing day 2022 that is to hear for life, listen with care.

Hearing loss is the most common sensory deficit in humans today. As per WHO estimates in India, there are approximately 63 million people, who are suffering from Significant Auditory Impairment; this places the estimated prevalence at 6.3% in Indian population. As per NSSO survey, currently there are 291 persons per one lakh population who are suffering from severe to profound hearing loss (NSSO, 2001). Of these, a large percentage is children between the ages of 0 to 14 years.

With such a large number of hearing impaired young Indians, it amounts to a severe loss of productivity, both physical and economic. An even larger percentage of our population suffers from milder degrees of hearing loss and unilateral (one sided) hearing loss.

According to WHO, it is possible to have good hearing across the life course through ear and hearing care. As there is an increase in use of such devices by the younger generation, there is also a parallel increase in incidence of hearing loss. Our ears have delicate hair cells which transform the sound energy into electrical energy in the brain. These hair cells are sensitive to loud intensity sounds which are above the normal conversation levels.

The actual organ of hearing is the cochlea in the inner ear. The cochlea

receives sound waves and passes them on to the brain. This works smoothly in people with normal hearing.

The ears receive sound waves and change them into signals which are sent along nerves to the brain. The brain then analyzes the signals, recognizes them as sounds and interprets them: as soft music, for instance, or as loud honking or human voices.

Sound waves are created when an object moves, for example when a guitar string or loudspeaker membrane vibrates. Whether we hear a sound depends both on the power of the sound as well as on the frequency of the vibration.

When somebody is using an earphone to listen to music, say in a metro or bus, the background noise will require the user to raise the volume of the device to dangerously high level, in order to overcome the background noise of the metro or bus engine enough to damage the delicate hair cells in the inner ear.

The damage is directly proportional to the intensity and duration of the exposure. It is now well known that sound exposure of more than 90 dB (decibel which comes from “deci” meaning one tenth) for 8 hours a day





is dangerous and can lead to permanent hearing loss. If the intensity is increased by just 5 dB the exposure duration which is dangerous decreases to half. That means that for a sound of 95 dB, exposure of only 4 hours a day is sufficient to cause the inner ear damage and if the sound is 100 dB then the duration decreases to 1- 1/2 hours only. And a sound of 105 dB can damage your hearing if exposed for just 15 minutes in a week.

The sound level produced by an mp3 player can reach up to 110 dB at maximum. This is even more relevant after Covid-19 when everyone including students is using headphones for long duration for online classes and webinars at an intensity which can harm the ears. The initial symptom in noise induced hearing loss is ear block sensation or ringing sensation in the ears is often overlooked. Then there is high frequency hearing loss which is usually asymptomatic and later on there is involvement of speech frequency when the patient becomes symptomatic. It can be easily



**WHEN SOMEBODY IS USING AN EARPHONE TO LISTEN TO MUSIC, SAY IN A METRO OR BUS, THE BACKGROUND NOISE WILL REQUIRE THE USER TO RAISE THE VOLUME OF THE DEVICE**

diagnosed by audiometry which shows a classical dip in bone conduction at 4 kilohertz.

The hearing loss is irreversible and cannot be improved with any medication. The noise induced hearing loss because of use of these personal entertainment devices is the new epidemic which is going to increase further.

**So following are the ways by which you can protect your hearing?**

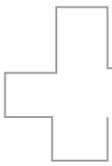
- Turn down the volume of the music player. If you are not able to hear external noise then it is too loud. Also it is loud if the person who is sitting next to you is able to hear the music.
- To enjoy the music safely you must not hear it at more than 60 % of the maximum volume for a duration of not more than 60 minutes a day.
- Use of good quality noise cancelling muff-type headphones is better than ear bud style earphones. The muff type of headphones allows

one to listen to music at lower volume as it prevents the background noise interference.

- Take regular breaks from using the headphones. This gives time for the ear to recover from any insult and prevent the permanent damage.
- If you develop ringing sensation in the ear or have decreased hearing acuity then please see an ENT doctor.
- Do not stand close to loudspeakers during any event.
- Do not use ear buds to clean the ears as it can push the wax deep inside the canal and can also harm the ear.
- Use earplugs while bursting loud crackers. 9. If you have ear ache/ discharge consult an ENT surgeon. Do not ignore any ear complaints.
- Avoid ototoxic drugs. 

**(The author is Director Professor, Department of ENT, Maulana Azad Medical College, New Delhi)**





# RESTORE YOUR HAIR

There is a very good reason why the hair on your head is called 'crowning glory'. A glorious mane of hair can enhance one's personality, make you stand out among the crowd, and build your self-confidence like nothing else can...

**B**ut not everyone is blessed with ever-growing hair. For many reasons, be they hormonal, medicine-induced, lifestyle and cosmetic treatments, or other health issues, many begin to lose hair even in their late twenties these days. Surveys have shown that diet, hair treatments

for fashion, stress can all become potential reasons why millennials starting at male pattern baldness an early age. This affects one's self-esteem and attitude to life, and young men begin to despair their looks. But these days, thanks to medical advancements, one does not have to despair lost hair for long! Hair transplantation is now a minimally invasive procedure.

Hair transplantation is a surgical technique that removes hair follicles from one part of the body, called the donor site, to a bald or balding part of the body known as the recipient site...

The technique is primarily used to treat male pattern baldness. For successful hair transplants, grafts must survive and adapt to new areas where they are transplanted. Clinical studies show that about 85-95% of all implanted grafts easily grow in the transplanted area. This high percentage indicates that hair transplants are

generally very successful. A hair transplant can last a lifetime.

## WHAT IS HAIR TRANSPLANTATION?

Dr Amrendra Kumar, a well known dermatologist, hair transplant surgeon and director, Dermaclinix, said, "It is a procedure that involves transfer of hair follicles (called grafts) from one part of the body (donor area) to the scalp where baldness has set in (recipient area). This procedure is mainly used to treat male pattern baldness – also called Androgenetic alopecia. This is the most common condition responsible for baldness in males which affects more than 80% of the male population. Hair transplantation is one of the most opted for procedure to get back a head full of hair, for someone affected with baldness. It's a basic procedure that's done under a local anaesthesia – where a hair from the donor area is grafted on to the bald scalp. The donor area is that part of the body that's resistant to balding (such as the back and sides of the scalp, beard hair and at times, other body hair), and so, the transplanted hairs last a lifetime. This procedure is considered a generally very successful one as clinical studies have shown that about 85-95% of all



**"IT IS A PROCEDURE THAT INVOLVES TRANSFER OF HAIR FOLLICLES (CALLED GRAFTS) FROM ONE PART OF THE BODY (DONOR AREA) TO THE SCALP WHERE BALDNESS HAS SET IN (RECIPIENT AREA).**



implanted hair grows pretty soon in the transplanted area.”

According to Dr. Vijay Singhal, Senior Consultant Dermatologist, hair transplantation, a surgical technique, allows the doctor to single out the permanent hair on the back of the patient’s head and use them as the transplanted hair to the bald spots. The hair at the back of our heads are permanent and do not suffer any damage through age, which is why these hair are chosen for the process. This procedure is quite similar to the technique widely used in flora where a plant can be transferred from one place to another. The process allows the patient to have normal hair like before, which can be shaved, cut, trimmed, coloured or anything they wished.

**IT’S FOR BOTH MEN AND WOMEN**

Usually, this is a process that helps those men with male pattern baldness. However, this procedure can also be used to restore hair in female pattern hair loss, eyebrows or eyelashes hair restoration, beard hair restoration and even, in some cases of hair loss due to surgery or trauma. Natural hairs grow in

groups called follicular units (number of hairs vary from 1-4). Today, modern hair transplantation techniques can reproduce the exact natural growth pattern of hair by transferring complete hair follicular units to the scalp. The result? Ahead full of very natural-looking hair that mimics the natural orientation of the hair follicles.

**THE PROCEDURE: PRE-OPERATIVE ASSESSMENT AND PLANNING**

Like for every cosmetic procedure, a pre-operative assessment and planning is done at the first consultation with the patient. Even though it’s considered a fairly successful procedure, hair transplant results vary from person to person depending on many factors. This is what the dermatologist/surgeon assesses during the first consultation. They analyse the following things:

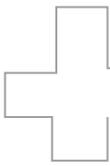
- The first and the foremost is the condition of the scalp – is it normal, does it have issues such as atrophy or thinning of skin, dandruff... conditions that may affect the result
- Cause of baldness – whether it’s androgenetic alopecia, or some

other type of baldness

- Trichoscopic analysis – to diagnose the root cause of baldness, check hair thickness, and hair density of donor area
- Recipient area assessment – number of grafts needed to cover the baldness
- Donor area assessment – hair density, thickness of the hair in donor area. Also, whether the area is large enough to supply hairs for the number of grafts needed
- Underlying medical conditions if any – such as hypertension, diabetes, etc, as they may affect the transplantation results
- History of medications – to see if it may affect local anaesthesia or bleeding during surgery
- Lifestyle – smoking habits, alcohol consumption, etc

**THE PLANNING STAGE**

Based on the pre-operative assessment, the actual transplantation is planned. The surgeon will discuss the best approaches suited for the person undergoing the transplant charts out the best method suited for that patient,



## MYTHS SURROUNDING HAIR TRANSPLANTATION PROCEDURES

**Hair transplantation can affect brain and eyes:** No, it does not. Neither does it cause cancer

**Only men can have hair transplantation:** No, women can, too  
Transplant is very obvious: No, it is not. If implanted at the natural angle and direction of growth, they look absolutely natural

**Transplanted hairs do not grow back after trimming:** They do. They are just like natural hair  
Another person's hairscan be transplanted onto my head: No – that is impossible

**The transplanted area can also go bald:** No, if the hair is extracted

from a safe donor zone, they last exceptionally long, up to a lifetime

**You cannot wash transplanted hair:** Yes, you can. Transplanted hair can be taken care of with simple shampooing just as natural hairs

**You must take lifelong medications:** No. Absolutely not. Transplanted hair do not need medications to grow

**Older people with underlying medical conditions like diabetes should not go for hair transplantation:** They can. Hair transplantation is a very safe surgery; however, certain care should be taken before hair transplantation in these persons

**FUE is better than FUT or vice versa:**

The results totally depend on surgeon's expertise

**• Robotic hair transplantation is better:**

No. Till date, an expert surgeon's hand is better than a robot. So far, only ARTAS robot is approved for hair transplantation and that too has some flaws. Most devices advertised as 'robots' are not robots

• Good hair transplant shows immediate results: No. Transplanted hairs take nine to 12 months to grow fully

• It is a very costly procedure: No. It is very affordable, though the costing depends on many factors

among other things. The surgeon will also discuss...

- The techniques of transplantation, the patient's preferences
- Results expected
- Number of grafts required
- The desired density versus expected density of transplanted hairs
- The quality and nature of grafts and their impact on the results
- Number of sessions needed
- Post-operative instructions/medications

### THE PROCEDURE OF TRANSPLANTATION

Hair transplantations are outpatient procedures done under local anaesthesia. Pre-operative medications may include antibiotics, along with shampooing of scalp, sterilisation of the area. After that, the procedure follows the following steps:

• **Extraction:** This is usually done using the Follicular Unit Transplantation (FUT or strip method) or Follicular Unit

Excision/extraction method (FUE). A lot depends on the surgeon's experience here – in the strip method, a chunk of skin with hair is sliced out from the donor area and the hairs in the strip are separated and transplanted. This process always leaves a scar. In FUE method, the follicular units are extracted directly. This method is best for extracting hairs from scalp, beard or other body parts. Scars are minimal.

• **Recipient area designing:** The surgeon creates multiple holes in a calculated manner – these slits must be perfect otherwise grafts may look unnatural.

• **Implantation:** The extracted hairs are implanted, usually done by the technicians using extreme caution not to damage the hairs.

• **Dressing:** Usually of the donor area after the transplant

### WHAT HAPPENS AFTER THE TRANSPLANTATION?

One of the biggest things here is not to worry when the transplanted hairs

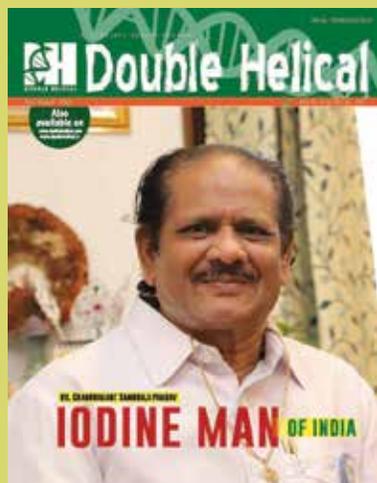
begin to fall off. It is a natural part of the process. The hairs will begin to grow after three months, and will gradually increase in density. It will take nine to 12 months on an average for the full head of hair to grow back.

### POSSIBLE COMPLICATIONS/SIDE EFFECTS

Universally, hair transplantation is very safe and can be performed even on children and aged persons. However, sometimes a few adverse effects can be seen, though long-term complications are exceedingly rare. Complications may include pain, or excessive bleeding and are usually manageable. Immediate post-operative complications may include pain, swelling on face, infection and itching. These complications need close monitoring – and are easily addressed.

A word of caution here: FUT and FUE complications can turn ugly sometimes, therefore it is advised that one always goes to certified, reputed surgeons with many years of experience.

# Your Guide to **Healthy Living**



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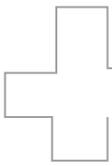
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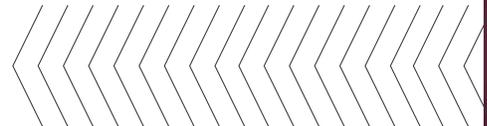
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# GERM THEORY OF DISEASE

Like first love this infatuation turned into worship. It is intriguing the way scientific consensus down the ages have fallen in and out of love with their theories often to be disappointed later. The germ theory of disease faced a dead end when many coming in contact with germs did not suffer...



BY AMITAV BANERJEE



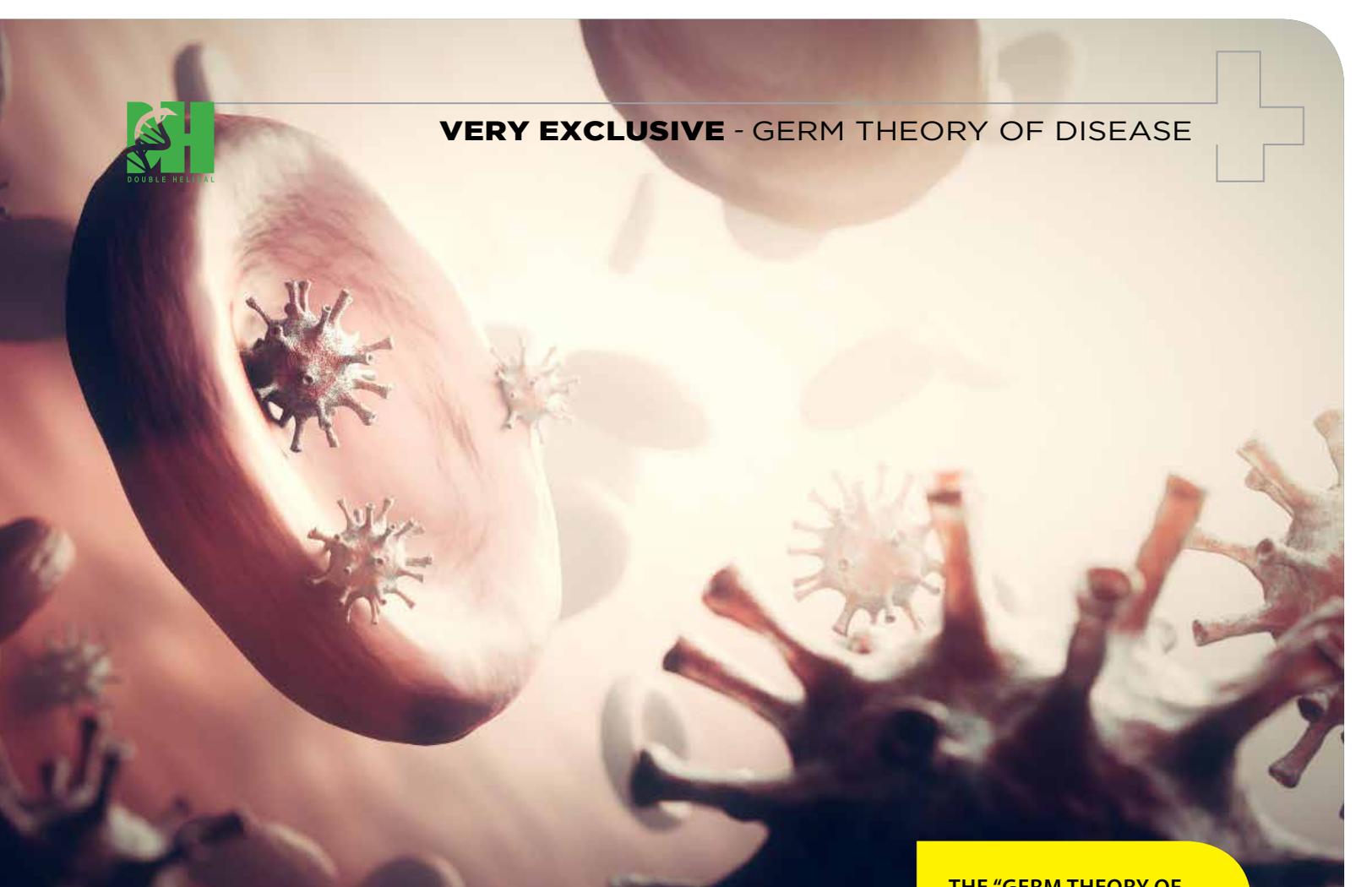
Communicable diseases were the bane of humankind and caused much agony. Louis Pasteur's discovery of microbes and subsequent discoveries by Robert Koch, of the causative organisms of anthrax and tuberculosis in quick successions, promised much.

The ancient art of medicine took its first baby steps into the world of science. Agony turned into ecstasy. Prior to the "Germ Theory of Disease" right from the time of Hippocrates, who wrote the treatise, "Airs, Waters and Places," wise physicians advised clean environment

and healthy lifestyle to promote health and ensure freedom from illness. Keen observations of individuals in their environment and of various social factors defined the ancient art of medicine. The physician interaction with patients and people emphasized lifestyle and environment. Over time, such recommendations become mundane and unglamorous. They called for some efforts on part of the people who prefer passive roles in the management of their ills.

The "Germ Theory of Disease" gave new hope for quick elimination of disease by attacking precise targets, "the cause," i.e. the germs. Subsequently, with the discovery of antibiotics which killed germs the dream of a disease free world seemed real. Like first love this infatuation turned into worship. It is intriguing the way scientific consensus down the ages have fallen in and out of

A FEW EXAMPLES WILL MAKE THINGS CLEARER. THE SMALLPOX VIRUS WAS "THE CAUSE" FOR SMALLPOX. IT WAS BOTH "NECESSARY" AND "SUFFICIENT."



love with their theories often to be disappointed later. The germ theory of disease faced a dead end when many coming in contact with germs did not suffer.

“The Germ” could not completely explain the disease process. The concept of “necessary” and “sufficient” cause evolved. Some causes were “necessary” and also “sufficient.” On the other hand, some causes were “necessary” but not “sufficient.” Later with rise in non-communicable diseases, the concept of cause further got diluted to neither being “necessary” nor “sufficient” but still a cause, renamed as a “risk factor.”

A few examples will make things clearer. The smallpox virus was “the cause” for smallpox. It was both “necessary” and “sufficient.” As without it, small pox could not occur in a person, and all who got infected with the virus suffered from small pox. There were no asymptomatic cases or healthy carriers. Therefore the virus was necessary as well as sufficient to cause disease. Given

this an effective vaccine could eradicate it.

On the other hand, tuberculosis perplexed medical scientists. The bacteria causing tuberculosis, called *Mycobacterium tuberculosis*, is “necessary” cause for getting tuberculosis. However, it was realized that an appreciable number of persons who get infected with tuberculosis do not suffer from it. There appeared to be other determinants such as immune status, nutrition, genetics and a host of known and unknown factors. In tuberculosis, the germ was a “necessary” but not “sufficient” cause of disease. Just when the concept of “cause” of a disease seemed to have been resolved with such compromises, the emerging burden of non-communicable diseases such as cancer, heart diseases, and others rendered cause more elusive.

Studies reveal that smokers were more vulnerable to lung cancer compared to nonsmokers. Smoking

**THE “GERM THEORY OF DISEASE” GAVE NEW HOPE FOR QUICK ELIMINATION OF DISEASE BY ATTACKING PRECISE TARGETS, “THE CAUSE,” I.E. THE GERMS.**

came to be considered as “a cause” of lung cancer. But this “cause-effect” association is not simple. Observation that some non-smokers develop lung cancer means that it is not a “necessary cause.” And also all smokers do not develop lung cancer. Therefore smoking is neither “necessary” nor “sufficient” for developing lung cancer. However it is still “a cause,” subsequently renamed “risk factor” in non-communicable disease epidemiology. These stages of realization have similarities to stages of love in real life! During initial phases of falling in love, the object of affection is “the necessary as well the sufficient cause” for all happiness.

After the honeymoon period is over, the pragmatic realities of life makes one

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“The necessary and sufficient cause” for happiness transforms to “necessary but not sufficient.” Still later other pursuits in life makes this relationship “neither necessary nor sufficient” for happiness.

realize that there are other needs besides love to make one happy. “The necessary and sufficient cause” for happiness transforms to “necessary but not sufficient.” Still later other pursuits in life makes this relationship “neither necessary nor sufficient” for happiness. But still a long term relationship with a significant other gives meaning and balance to life.

A song in a classic Hindi movie “Aandhi,” “Tere bina zindagi se koi shikwa nahi, tere bina zindagi bhi zindagi nahi,” means “Without you there is no regret in life, but without you life is no life,” sums this up! Just when medicine and public health seemed to reach this level of maturity reconciling to the fact that unraveling the “cause – effect” of disease and health is as complex as unraveling the secret of happiness in



human life, the heady technological advances of the 21st century in the form of viral genomics and mRNA vaccines blinded this detached thinking.

Vaccines were thought to be the “necessary and sufficient” panacea which will end the Covid-19 pandemic like a magic wand. And like a person infatuated who is blind to any imperfections in the beloved, the medical community and people fell in love with “new vaccine,” presuming it to be perfect and precise with no side effects. It was believed that it is both “necessary” and “sufficient” to win the war against the novel corona virus. Hastily the vaccine was given emergency use authorization and statutory status in the form of direct and indirect mandates in many countries.

The government behaved like young couples eager to solemnize their union. Almost a year into the rollout of vaccines, the honeymoon period seems to be over. Many populations with meager vaccination coverage are having lower incidence of the infection compared to many countries with higher coverage. So vaccines appear to be neither “necessary” nor “sufficient” to end the pandemic. But used judiciously it can still be a trusted companion for

elderly and people with co-morbidities. And given reports of occasional side effects such as Myocarditis in young people, mandating vaccination for all without balancing the risks and benefits particularly in children will be like rushing into an arranged child marriage. The take home message is that there is no single panacea or shortcut to health. Physical activity, healthy diet, control of obesity and anxiety, adequate sleep all contribute to health.

Undoubtedly, these health promotion measures will protect against chronic non-communicable conditions such as diabetes, coronary heart disease, high blood pressure, osteoarthritis, etc and also increase immunity against acute infections such as the novel corona virus and future pandemics of communicable diseases. Scientific advances such as newer vaccines may be important additions to our toolkit to fight diseases but can never be sufficient. Both the art of yesteryears and the current evolving science and technology have to be combined judiciously to achieve the goal of health for all. 

**(The author is Professor and Head, Community Medicine, Dr DY Patil Medical College, Pune)**



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