



डी.जी.एच.एस. संचारिका

DGHS NEWSLETTER



MESSAGE FROM DIRECTOR GENERAL OF HEALTH SERVICES

I am extremely pleased to know that the Directorate General of Health Services is coming up with the 3rd issue of the DGHS Newsletter.

In the current times, when air pollution has become a challenge, activities of the Directorate in relation to air pollution and the Advisory issued by the Health Ministry are being highlighted in this issue. Other topics covered are Elderly Health, Iodine Deficiency Control Programme and the National Blindness Survey findings (released on the World Sight Day by Hon'ble HFM). The issue also includes glimpses of weekly health talks and the screening camps for noncommunicable diseases held in Dte. GHS.

I congratulate the editorial team for their consistent efforts in compiling important and current activities of the Dte. GHS through this quarterly newsletter.

(Dr. Sanjay Tyagi)

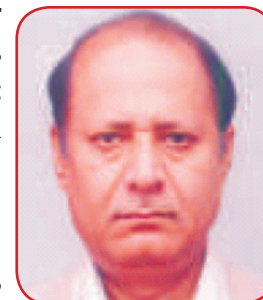


Directorate General of Health Services
Ministry of Health and Family Welfare
Government of India

Air Pollution: A Challenge to Sustainable Health

Dr Inder Parkash, Advisor (PH)

Air pollution is defined as the presence of toxic chemicals or compounds (including those of biological origin) in the air, at levels that pose a health risk. The different categories of **Air pollution are:** Ambient Air pollution (AAP), Household Air Pollution (HAP) and Second hand smoke.



Air Pollutants & Health effects

Particulate Pollutants: PM10, PM2.5 and ultrafine particulates (UFP) < 0.1 micron. They cause severe pulmonary inflammation and haemorrhage, high degree of alveolar and interstitial edema, disruption of epithelial and endothelial cell layers and even death. They may aggravate cardiovascular problems, pulmonary diseases and development of cancer.

Chemical pollutants: Sulphur Dioxide (SO₂): exacerbate respiratory symptoms of the existing respiratory diseases. Oxides of Nitrogen (NO_x): These are immunotoxic and potent vasodilators and lead to pulmonary arterial hypertension. Carbon Monoxide (CO): It binds strongly with hemoglobin in red blood cells to form carboxyhaemoglobin which causes impaired oxygen transport leading to hypoxia and results in cardiovascular & nervous system disturbances. Polycyclic aromatic hydrocarbons (PAHs): These are of particular interest because of their carcinogenic potential (lung cancer). Volatile Organic Compounds (VOCs): They are respiratory tract irritants, neurotoxic, hemotoxic, leukemogenic and carcinogenic.

Biological Pollutants: Bacteria: - responsible for airborne infections i.e. Bordetella Pertussis, Corynebacterium Diphtheria, Mycobacterium Tuberculosis, Mycobacterium Pneumoniae, Streptococcus Pneumonia. Viruses: - Mumps virus, Myxovirus Influenza, Poliovirus, Rhinovirus, Rubella virus (German), Varicella virus, Variola virus, Hemophilus Influenza, respiratory Syncytial virus, Para Influenza, Adenovirus. Air pollution is also known to enhance Human papilloma virus. Fungus: - Aspergillus fumigatus, Blastomyces dermatitis. Pollen and other allergens:- Cause bronchial allergy, asthma & eosinophilia.

Magnitude of Problem

- 7 million Premature Deaths annually are linked to air pollution.
- 4.3 million Deaths are attributed to Household Air Pollution, 50% of which are in children < 5 years. 3.0 million Deaths occur in Low and Mid Income countries.
- 3.7 million Deaths are attributed to Ambient Air pollution of which 470000 premature death are due to respiratory diseases and 2.1 million Deaths due to anthropogenic PM2.5

Who are at Risk/Vulnerable?

All regions of the world are affected climate change, but the resulting health risk to human population varies greatly. **Shared health security:** Globalization has brought the benefits of efficient transport and trade with rapid flow of people, goods, services, but

in an increasingly interconnected world, some health risks can quickly spread from one region to another.

Those at risk are; Children, elderly, pregnant women and those with pre-existing chronic diseases, those living in poverty, outdoor workers, people living in megacities, small islands, those living in developing states, coastal, mountainous and Polar Regions Countries with weak health infrastructure and countries that are lacking in preparedness to manage the hazards of air pollution.

Sources of pollution: Natural Sources: consist of volcanic activities, winds and air currents, wildfires, microbial decaying processes, radioactive decay processes and increasing temperatures. Anthropogenic Causes consists of mining and smelting, mine tailing disposal, foundry activities, industrial processes, Brick Kilns, vehicular emission, roads & transportation construction & demolition activities, coal power plants, heating of buildings, waste incineration, landfill disposal practices, agriculture, forest fires & agriculture management, military activities, smoking, storage and use of household products and dry cleaned clothes.

Pollution Level:

To assess the level of health risk due to air pollutants and its communication to general population, Central Pollution Control Board has suggested colour coded Air Quality Index (AQI). There are six AQI categories, namely Good, Satisfactory, Moderately polluted, Poor, Very Poor, and Severe. Each of these categories is based on ambient concentration values of air pollutants and their likely impact on health as given below:

AQI Category	Concentration Range								
	AQI	PM10	PM2.5	NO2	O3	CO	SO2	NH3	Pb
Good	0-50	0-50	0-30	0-40	0-50	0-1.0	0-40	0-200	0-0.5
Satisfactory	51-100	51-100	31-60	41-80	51-100	1.1-2	41-80	201-400	0.5-1.0
Moderately Polluted	101-200	101-250	61-90	81-180	101-168	2.1-10	81-380	401-800	1.1-2.0
Poor	201-300	251-350	91-120	181-280	169-208	10-17	381-800	801-1200	2.1-3.0
Very poor	301-400	351-430	121-250	281-400	209-748*	17-34	801-1600	1200-1800	3.1-3.5
Severe	401-500	430+	250+	400+	748+*	34+	1600+	1800+	3.5+

* CO in mg/m³ and other pollutants in ug/m³, 2h-hourly average values for PM10, PM2.5, NO2, SO2, NH3 and Pb and 8-hourly values for CO and O3

Prevention and Control measures:

Long term plan: Air pollution is caused by the human activities, so all communities, departments and Ministries have to play role for long term abatement. Since, all the ministries are working on business model, MOH&FW cannot stand alone in the system.

Short term actions - People's Initiatives Understand the concept of Reduce, Reuse and Recycle: Do not throw away items that are of no use to you. In-fact reuse them for some other purpose. For e.g. you can use old jars to store cereals or pulses. Use energy efficient devices: CFL lights consume less electricity as against their counterparts. They last longer, consume less electricity, lower electricity bills and also help to reduce pollution by consuming less energy.

Individual level: quit smoking, do more cycling & walking, use both sides of paper, reuse paper bags, avoid plastic bags, choose products with minimum packages, use broom instead of blowers, get an energy audit done, buy rechargeable batteries, use cold water instead of hot water, eat organic food,

Family level: plant a kitchen garden, use low VOC or water based paint, turn off lights when not in use, buy green electricity, use natural gas instead of charcoal, use EPA approved, and not hazardous chemicals, always use recycled product, insulate leakages, use fans instead of AC, use blankets and not blowers, reduce, reuse, segregate, recycle, buy items made of recycled material, buy air purifiers, keep kids and yourself at home after school/work, don't go outside at night or move out unnecessarily.

Community level: consider going green, talk to local representatives, educate your companions, join an environment group **Vehicle use & management:** Use public transport, drive smart, do regular care checkup, keep car tyres properly inflated, buy energy efficient vehicle, consolidate trips, avoid auto rickshaws **Work places:** make use of solar energy.

Advisory issued for Public Avoid places with high pollution like roads with slow & heavy traffic, areas near polluting industries, construction-demolition sites, coal based power plants and brick kilns etc.

- On days with poor to severe AQI, avoid outdoor morning and late evening walk, run, jog and other physical exercise
- Do not open external doors and windows during morning and late evening hours (when AQI is Poor- severe range or above), may ventilate if necessary between 12 p.m. to 4 p.m. in afternoon.
- Avoid burning biomass such as wood, coal, animal dung, kerosene. Use clean smokeless fuels (gas or electricity) for cooking and heating purposes. If using biomass, use clean cook stoves.
- Avoid burning firecrackers, or any form of wood, leaves, crop residues, and waste.
- Avoid exposure (active as well as passive) to smoke of cigarettes, bidis and related tobacco products.
- Avoid burning and exposure to smoke of mosquito coils and incense sticks in closed premises.
- Remain indoors on days with poor to severe plus AQI. Reschedule outdoor activities as per AQI level.
- If irritation in eyes, keep washing your eyes with safe running water frequently, consult doctor if no relief.
- Consult the nearest doctor in case of breathlessness, giddiness, cough, chest discomfort or pain.
- Practice *wet mopping* instead of sweeping or *vacuum cleaning* inside homes. If you choose to use vacuum cleaner, use those which have High Efficiency Particulate Air (HEPA) filter.
- As a "no-regret" strategy, healthy and balanced diet and maintaining hydration is advocated.

National Iodine Deficiency Disorders Control Programme (NIDDCP)

Iodine is an essential micro-nutrient required for normal human growth & development. The disorders caused due to deficiency of nutritional Iodine in the diet are called Iodine Deficiency Disorders (IDDs). Examples of IDD are Goitre, Cretinism, Abortions, Stillbirth, Perinatal and Infant mortality, Deaf Mutism, Squint, Impaired Mental Functions etc. While some of the Iodine Deficiency Disorders (IDDs) are permanent and irreversible, however, they can be easily prevented by regular consumption of Iodised Salt. Daily requirement of iodine is 150 mcg in adults and 250 mcg in pregnant and lactating women.

In order to prevent and control Iodine Deficiency Disorders in the country, GOI launched National Iodine Deficiency Disorders Control Programme (NIDDCP) in 1962 (erstwhile National Goitre Control Programme) and is being implemented in all States/UTs.

Goals and Objectives of NIDDCP

Goal: - To prevent and control Iodine Deficiency Disorders (IDDs) in the entire country.

Objectives: -

- To bring down the prevalence of IDD to below 5% in the country.
- To ensure 100% consumption of adequately iodated salt (>15ppm) at household level.

Current Status of IDD Prevalence: Results of sample surveys conducted in 427 districts covering all the States/Union Territories have revealed that 348 districts are endemic where the prevalence of Iodine Deficiency Disorders (IDD) is more than 5%. No State / UT is free from IDD.

Activities under NIDDCP:

- Surveys to assess the magnitude of the Iodine Deficiency Disorders in Districts and impact surveys every 5 years
- Ensuring supply of Iodized salt in place of common salt all over the country.
- Laboratory monitoring of Iodized salt and Urinary Iodine Excretion.
- Health education and publicity.
- Monitoring quality of Iodized salt by Salt Testing Kit through ASHA at Community/ household level.

Role of Nutrition & IDD Cell, MoHFW: 1) Technical Assistance to and coordination with States /UTs for monitoring of implementation of the program. 2) Inter-sectoral Co-ordination at Central level. 3) Monitoring of Quality Control of Iodized Salt at production level through Salt Commissioner's Office and at distribution/consumer level through States/UTs. 4) Managing IEC activities at Central level. 5) Collection, compilation & analysis of data (both physical and financial) from State/UTs 6) Imparting Training to State/UT Health personnel regarding NIDDCP.

Role of State IDD Cell: 1) Monitoring Iodine levels of Iodated salt with wholesalers and retailers within the State/UTs and Coordination with Food & Civil Supplies Deptt. of State/UT. 2) Monitoring distribution of iodated salt within the State/UT through

open market and public distribution system. 3) Creating demand for iodized salt and monitoring its consumption. 4) Conducting IDD Surveys to identify the magnitude of IDD in various Districts and resurveys after every 5 years to assess the extent of IDD and the impact of Iodated salt. 5) Procurement of Salt Testing Kits for community testing of salt by ASHAs. 6) Conducting Training, Health Education and Publicity.

Role of State IDD Monitoring Laboratory: 1) Estimation of the Iodine content of salt by Titration Method. 2) Estimation of Urinary Iodine Excretion for the bio-availability of Iodine.

Global Iodine Deficiency Disorders Prevention Day, 21st October - Every year "Global Iodine Deficiency Disorders Prevention Day" is observed on 21st October in the country, marked by organization of Seminars, Workshops, Sensitization cum awareness meetings, Health Education Camps and testing of the salt consumed at household level by ASHAs using Salt Testing Kits available in the Districts to create awareness about importance of consumption of Iodised salt in preventing IDD disorders. Essay writing; slogan writing, quiz & painting competitions etc. are organized among school children. Appeals and messages to the community are also issued by the Chief Minister/ Health Minister of the state/UTs

Significant achievements of NIDDCP:

- 1) Over the years, the Total Goitre Rate (TGR) in the country has reduced significantly.
- 2) Consumption of Iodated salt at the household level has increased to 93 % (NFHS-4 survey, 2015-16).
- 3) The production and supply of Iodized salt during 2018 and 2019 was 67.38 lakh tonnes and 66.97 lakh tonnes respectively.
- 4) For effective implementation of National Iodine Deficiency Disorders Control Programme, 35 States/UTs have established Iodine Deficiency Disorders Control Cells and IDD Monitoring Labs in their States/ UTs.
- 5) National Reference laboratory for monitoring of IDD has been set up at NCDC, Delhi. There are four Regional laboratories also for conducting training, monitoring, quality control of salt and urine testing
- 6) IEC activities have been intensified.



National Blindness and Visual Impairment Survey 2015-19 conducted under the National Programme for Control of Blindness & Visual Impairment (NPCB&VI)

The report of **National Blindness and Visual Impairment Survey** was released by the Hon'ble HFM Dr. Harsh Vardhan, on 10th October, 2019 (World Sight Day) during the Central Council meeting of the Health Ministers of all States.

Salient features and findings of the survey are:

- Conducted in 31 districts of 24 States/Union Territories of India from 2015-2019 by Dr. R.P. Center, AIIMS, New Delhi under the aegis of (NPCB&VI).
- A nation-wide sample survey conducted after a period of more than 10 years.
- Designed as a house to house survey to generate representative data for the sampled districts as well as the country. Both rural and urban areas included in the survey.
- Individuals aged 50 years or older were randomly selected and examined.
- All participants examined by trained ophthalmologists and optometrists, supported by field supervisors and laboratory technicians.
- Assessments included usage of spectacles, measurement of presenting vision, pin-hole vision, lens evaluation, retina evaluation (if indicated), details about cataract surgery, barriers to cataract surgery and identification of causes of blindness or V.I for each eye and for the individual.
- Field supervision was done by faculty from Dr. R.P. Centre, State Program Offices, District Health Offices and representatives from local partner Institutes for better quality control.
- Further, in >50year age group population, individuals with high blood sugar (random) were also assessed for diabetic retinopathy in 21 districts of the country.
- A Blindness Survey in 0-49 year age group population was also carried out in January 2019 in 6 districts from six zones of India, as an addendum to NPCB&VI Survey, conducted in population aged 50 years and above during 2015-19, so as to make it a national representative sample. The prevalence obtained from these 6 districts was directly standardized for age and gender against the population of India (under 50 yrs.) for the year 2017.

For comparison of the findings of the previous Blindness Survey (2006-07), with the current one, we also needed to note that the definition of blindness in 2006-07 was Best Corrected Vision <6/60 in the better eye, whereas the current definition of blindness is Presenting Vision <3/60 in the better eye. The major findings and a comparison of the findings of the current survey with 2006-07 survey is placed below. In order to ensure comparability, the findings presented for 2006-07 survey are as per the current definition of blindness/visual impairment.

Summary findings of the National Blindness and Visual Impairment Survey (2015-19):

- Estimated prevalence of blindness (Visual Acuity<3/60 in better eye) in overall population was 0.36%.
- Estimated prevalence of Visual Impairment (Visual Acuity <6/18 in better eye) in overall population was 2.55%.

- ✓ Estimated prevalence of severe visual impairment was 0.35%.
- ✓ Estimated prevalence of moderate visual impairment was 1.84%.
- ✓ Estimated prevalence of early visual impairment was 2.92%.
- The prevalence of blindness was found to be more among females, less educated people and rural areas.
- Major causes of blindness are Cataract (66.2%), Corneal Blindness (7.4%), Cataract Surgical complications (7.2%) and Glaucoma (5.5%).

Key findings of National Diabetic Retinopathy Survey (2015-19):

- Prevalence of diabetes in surveyed population was 11.8% (known diabetics- 8.0% and fresh cases of diabetes – 3.8%).
- Prevalence of diabetic retinopathy among diabetics – 16.9%
 - ✓ Prevalence of mild retinopathy – 11.8%.
 - ✓ Prevalence of moderate retinopathy – 4.5%.
 - ✓ Prevalence of proliferative retinopathy – 0.6%.
- Prevalence of diabetic maculopathy – 7.0%.
- Prevalence of sight threatening diabetic retinopathy -3.6%.

In comparison to previous National Survey 2006-07, it is evident that the prevalence of Blindness has been reduced from 0.68% to 0.36% (47.3% reduction). In absolute numbers also the persons suffering from blindness has also come down from 12 million (2006-07) to 4.8 million (current survey). The prevalence of visual impairment has been reduced from 5.3% to 2.55% (relative reduction of 51.9%). We are now very near to achieving the Vision 2020 goal of WHO of reduction of blindness to 0.30% by 2020. The WHO goal of bringing down the level of visual impairment by 25% by 2019 from the level of visual impairment in 2010 has been achieved to a much greater level (by 51.9%).

This reduction shows the impact of the initiatives and measures that have been undertaken by the NPCB&VI over the years.



NATIONAL PROGRAMME FOR HEALTH CARE OF ELDERLY

The unprecedented increase in longevity of life in the 20th century has resulted in the phenomenon of population ageing all over the world. The population over the age of 60 years has more than tripled in last 50 years in India. As per the census 2011, the number of elderly people (60+ years) was 103.83million and is projected to increase to 133.32 million (2021), 178.59 million (2031), 236.01 million (2041) and 300.96 million (2051). The burden of diseases among elderly is too pronged with both communicable and non-communicable diseases leading to increasing disability in elderly.

The Ministry of Health & Family Welfare launched the “National Programme for the Health Care of Elderly” (NPHCE) during 2010-11, to address various health related problems of elderly people. NPHCE is an articulation of the International and national commitments of the Government as envisaged under the UN Convention on the Rights of Persons with Disabilities (UNCRPD), National Policy on Older Persons (NPOP) adopted by the Government of India in 1999 & Section 20 of “The Maintenance and Welfare of Parents and Senior Citizens Act, 2007” dealing with provisions for medical care of Senior Citizen. The Vision of NPHCE is to provide accessible, affordable, and high-quality long-term, comprehensive and dedicated care services to an Ageing population; creating a new “architecture” for Ageing; and to promote the concept of Active and Healthy Ageing. The programme is State oriented and basic thrust of the programme is to provide dedicated health care facilities to the senior citizens (>60 year of age) at various level of primary, secondary and tertiary health care.

Objectives of NPHCE :

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

The Programme has three components: **(i) NHM** that consists of Primary & Secondary care service delivery through District Hospitals (DH), Community Health Centres (CHC), Primary Health Centres (PHC), Sub-Centre/Health & Wellness Centres. **(ii) Tertiary care services** are supported by the subcomponent ‘Rashtriya Varishth Jan Swasthya Yojana (RVJSY). These services are being provided through Regional Geriatric Centres (RGCs) located at selected Medical colleges and Two National Centres of Aging (NCAs) -AIIMS, New Delhi and Madras Medical College, Chennai. **(iii) Central component** of the program consist of IEC, Monitoring & Evaluation and Longitudinal Ageing Study in India (LASI) project. Programme was launched in the last year of the 11th plan period in 100 districts of 21 states. As on date 713 districts have been sanctioned grants for geriatric care services.

The paradigm of elderly care services provided in 2018-19 is as under.

S.N.	Services	RGCs	DHs	CHCs	PHCs	SCs	Total
1	OPD care services	236957	6402825	3683248	2834295	462609	1,36,19,934
2	In-door admissions	21498	506801	92596	-	-	6,20,895
3	Physiotherapy care	54382	698971	415177	-	-	11,68,530
4	Lab Tests	289708	3388364	1179232	556648	-	54,13,952
5	No of Elderly Screened	NA	756495	339374	186401	293012	15,75,282
6	Home care services	NA	82140	30570	34501	89108	2,36,319
7	Provided supportive devices	NA	13989	10618	6879	38585	70,071
8	Cases referred	NA	26677	37684	34951	52688	1,52,000
9	Cases died in hospitals	NA	13527	1591	104	-	15,222

Major activities undertaken recently;

- A website cum MIS of the NPHCE program has been prepared by Center for Health Infomatics (CHI) to provide comprehensive information along with data regarding Geriatric facilities and services.
- Audio/Video spots on topics of elder care, print material-folder, posters etc. have been developed.
- Regional Review Workshops (West Zone, North East Zone, East Zone & South Zone) were conducted to review the functioning, Physical & financial progress of RGC's & States/UT Nodal Officers.
- Indian elderly perspective presented at Regional meeting on Integrated Care for Older People (ICOPE) for South East Asia Region, 18-20 September 2019 at New Delhi conducted by WHO -SEARO.



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



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



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



Regional meeting on Integrated Care for Older People (ICOPE) for South East Asia Region, 18-20 September 2019 at New Delhi



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

Eye Health Checkup in DGHS



NCD Screening at Dte GHS



National Organ Donation Day, 2019



Glimpses of Theme Based Health Talks in Dte.GHS



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Events/articles pertain to the period July to December, 2019.

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