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# Cervical Cancer Screening in India

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South Asia Regional Meeting

HPV Prevention and Control Landscape and the way forward.

13<sup>th</sup> , 14<sup>th</sup> and 15<sup>th</sup> - Dec 2022– New Delhi, India.



# Non-Communicable Diseases in India

- NCDs are estimated to account for **63%** of all deaths (**62 million deaths**) in India of which the cardiovascular diseases lead with 27% overall mortality cause followed by chronic respiratory diseases (11%), **cancers (9%)**, diabetes (3%) and others (13%) (Source WHO)
- Cervical cancer ranks as **4th most common cancer in women globally** (570000 new cases in 2018) and the **2nd leading cause and death of female cancer in India**. About **75,000 new cervical cancer cases** are diagnosed annually in India in 2020.
- Cervical cancer is preventable by screening asymptomatic women for precancerous cervical lesions and treating the lesions before they progress to invasive disease. It's curable if detected early.



# Burden of Cancer in India

As per the Indian Council of Medical Research (ICMR), the estimated number of Cancer Cases are about

- Prevalence: 3.5 Million cancer patients (old + new)/ year
- Incidence: 1.46 Million new cases/ year
- Mortality: 700000 deaths/ year

Among males, cancers of lung, mouth, oesophagus and stomach are the leading sites (major types) across most of the registries.

Among females, cancer of the breast is the leading site in 19 registry areas. Cancers of the cervix uteri is the leading site in 7 registry areas.



# Overview on screening program in India

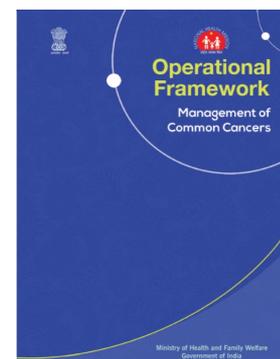
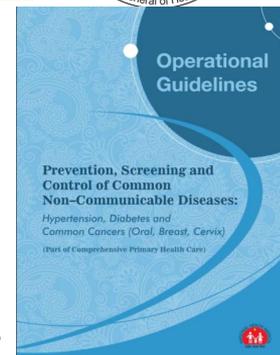
## National Programme for the Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases, and Stroke (NPCDCS)

- Health Promotion & Awareness about common NCDs including Cancer & its risk factors.
- Population-based Screening (PBS) at all healthcare delivery levels
- Continuum of Care: Early Diagnosis, Treatment, Follow-up, Referral and Rehabilitation of people living with NCDs.
- NCD infrastructure and Human Resource Capacity
- Supportive Supervision, Monitoring and Operational Research
- Financial Support through Programme Implementation Plan
- Cancer Infrastructure

# Population Based Screening



- Launched as a package under Comprehensive Primary Health Care (CPHC) in 2018
- Screening targeted of all persons >30yrs age in community for 5 common NCDs (Diabetes, Hypertension, Oral Cancer, Breast Cancer & Cervical Cancer)
- Prevention, control & screening services through trained frontline workers (ASHA & ANM), linked with referral support and continuity of care
- Being implemented in Health & Wellness Centres as a part of CPHC under AB-HWC
- PBS helps in better management of diseases by the way of early stage of detection, follow up, treatment adherence and also awareness of the NCDs



# Visual Inspection with Acetic Acid (VIA) for Cervical Cancer Screening in India



- VIA is simple and inexpensive noncytological method of detecting precursor lesions
- WHO approved VIA for developing countries and in India VIA is done by either Staff Nurse or MO of PHC.
- VIA is naked eye examination of the uterine cervix after application of 5% acetic acid and interpreting the result after one minute
- **Principle of VIA test** Acetic acid application on cervical epithelium causes reversible intracellular dehydration and coagulation of the protein within the cervical cells. The intensity of coagulation is dependent on amount of protein. As the dysplastic cells have more chromatin content, the coagulation is intense, and cells turn white after application of acetic acid.



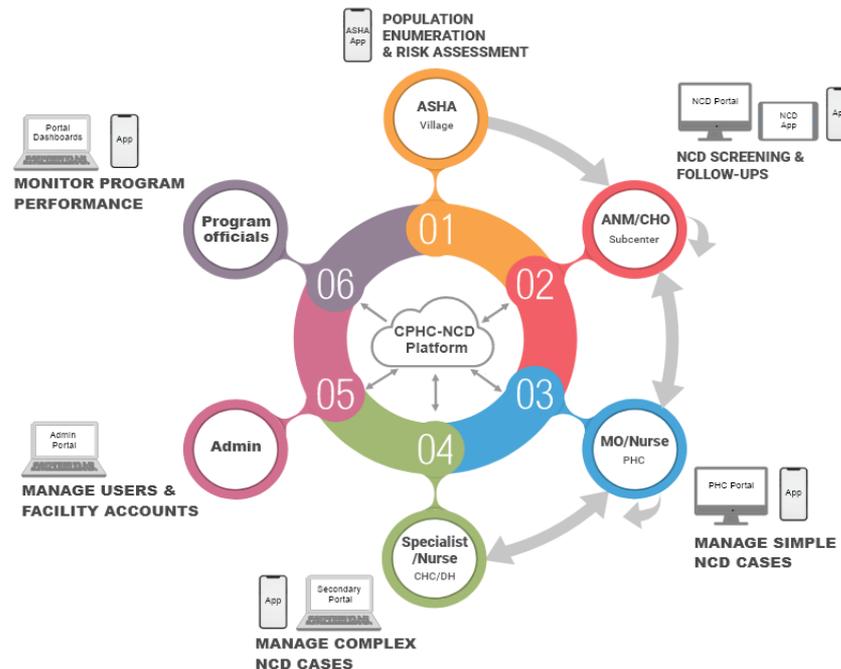
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# Population Based Screening: CPHC NCD Portal





# AB - HWC Portal

As on 01-12-2022

Details of Service	Total Numbers
Total HWCs operational	1,30,048
CBAC Filled	266.45 Cr
Total Oral cancer Screening	16.37 Cr
Total Breast cancer Screening	7.80 Cr
Total Cervical cancer Screening	5.36 Cr



# Illness to Wellness

Promotive  
healthcare\* :

Eat Right

Fit India  
Movement

Yoga /  
Wellness  
activities

42 health  
calendar days  
celebrated by  
each AB-HWCs

Preventive  
healthcare :

Screening /  
follow-up

Hypertension, Diabetes,  
3 common cancers



# School Health and Wellness Ambassadors Program



1. School health promotion through wellness ambassadors
2. Access to psychological support
3. Promotion of healthy life-style
4. Health screening services
5. Access to counsellors, helplines and adolescent friendly health clinics
6. Adolescent health promotion



Growing Up Healthy



Emotional Well-being and Mental Health



Interpersonal Relationships



Values and Responsible Citizenship



Gender Equality



Nutrition, Health and Sanitation



Prevention and Management Substance Misuse



Promotion of Healthy Life Style



Reproductive Health and HIV Prevention



Safety and Security Against Violence and Injuries

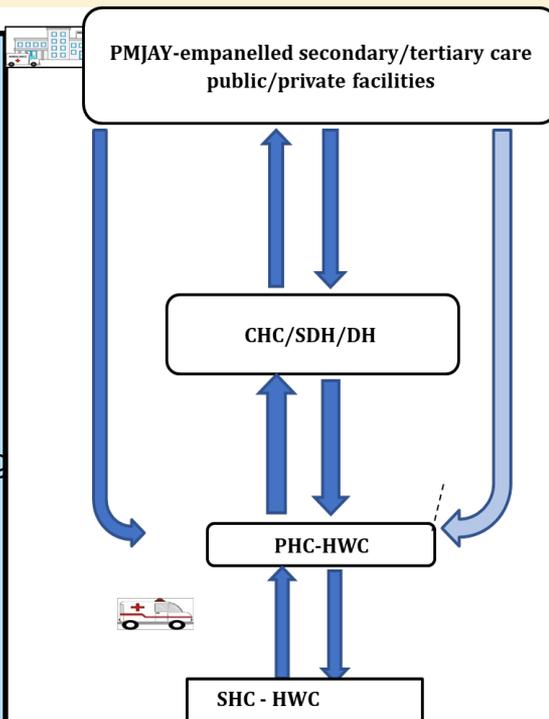


Promotion of safe use of Internet and Social Media Behaviors



# Continuum of Care

- All AB-HWCs are enabled to create Ayushman Bharat Health Account (ABHA) for its clients
- Upward referral** from primary health care facilities to CHC/SDH/DH
- PMJAY eligible beneficiaries in need of hospitalization- have choice to opt for Govt/ Private PMJAY empanelled facilities.
- ABHA supports tracking, access, updating personal health records like lab reports, prescriptions, etc.
- For emergency cases** take the patient to an appropriate hospital including PM JAY empanelled hospital



- Downward Referrals** from tertiary/secondary care facilities to PHC or SHC HWC as per patient's choice
- 102/104/108 call centres to serve as Ayushman Bharat Continuum of care Centres (ABCC) for facilitating downward referral using ABHA account
- All ABHA ID users can generate their own ABHA address during sign up & view personal health records

The screenshot shows the ABHA profile for Harsvardhan Nayak. It includes the National Health Authority logo, the user's name, ABHA Number (91-XXXX-XXXX-XX75), ABHA Address (narxxxxxxxx@abe), Date of Birth (dd/mm/yyyy), Gender (Male), and Mobile number (8XXXXXX21). A QR code is also visible on the right side of the profile.



# Tertiary Cancer Care Centre Scheme

1. State Cancer Institute (SCI) and Tertiary Cancer Care Centre (TCCC)
2. 39 institutions (19 SCIs & 20 TCCCs) funded so far, GOI: State Share 60:40% & NE region 90:10%
3. Maximum support of Rs. 120 Crores for SCI, 45 Crores for TCCCs

## Activities of SCI/TCCC

- Tertiary care diagnosis and treatment
- Coordination of cancer related activities in their respective geographical areas
- Training of doctors/health personnel
- Outreach and Screening activities
- Research activities, Participate in cancer registry program
- Palliative Care



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# Challenges associated and gaps

## Health Prevention & Promotion

- Limited demand generation through health promotion activities
- Inadequate availability of IEC materials in regional languages focus on physical activity and appropriate foods
- Lack of Specification plan for stress and work life balance in both urban and rural areas
- Inadequate **Health & Wellness Session** per HWC as per the guidelines of 60 Wellness Sessions per HWC to be conducted in 6 months

## Infrastructure

- Districts need to be saturated with District NCD Clinics & strengthened further.

**Cancer Care Facilities** Gap of infrastructure for cancer care facilities such as Radiotherapy equipment, Chemotherapy services at District Hospital Level.



# Challenges associated and gaps

## Management of NCDs:

- **Cancer Screening** The main focus is on screening and treatment. There is still a gap in referrals and follow up.
- **Drugs and Equipment:** Irregular supply of drugs/consumables across AB-HWCs and NCD clinics.
- **CPHC-NCD Portal – Implementation and usage** Uptake of registration in CPHC NCD needs to be strengthened. Hilly States are facing a huge challenge due to connectivity issues.

## Monitoring, Evaluation & Supervision

- Lack of robust monitoring and evaluation of the programme.
- Data Management and Surveillance for NCD risk factors is essential for health policy, program planning and implementation.
- Inadequate investment on research with respect to NCD prevention and control.



# Way Forward: How the gaps can be filled?

## Short Term Plans:

1. **Health Promotion Advocacy**- Eat Right Toolkit and Fit India Activity at each level, Tobacco Cessation Centres and de-addiction centres, Awareness program in school and colleges, Advocacy on NCDs through celebrities
2. **Multi-sectoral Action Plan** - Mapping of high-risk groups through and linking them to the required NCD service
3. **Infrastructure** - Saturation of NCD Clinics at all DH & CHC
4. **Human Resources & Capacity Building** - Strengthening HR pattern for better monitoring of NCD service delivery - Task shifting and task sharing models
5. **Management of NCD**- NCD Services to be available for all NCDs & ensure continuum of care
6. **Drugs and Equipment**- Regular supply of NCD drugs and consumables



# Way Forward: How the gaps can be filled?

## Long Term Road Map NCDs:

1. **Human Resources** Fill up of vacancies both at program management level and services HR level & Regular Training/Capacity Building
2. **Infrastructure Strengthening Cancer**
3. **Oncology Department** in all medical colleges
4. **Infrastructure for Diagnostics at district level:** Mammography, Fibroscan, CT/MRI, Spirometer
5. **Robust IT platform** for monitoring and optimal use of Artificial Intelligence
6. **Universal availability** of the affordable basic technologies and essential medicines
7. **Linkage with other Ministries/ Departments/ Private sector**
8. **Establish disease specific Centre of Excellence (CoE)**
9. **Reduction in air pollution and use of alternate energy**
10. **Healthy workplaces**



# Future of Cervical Screening and Management

- **Vaccine for Cervical cancer** – There is evidence that in 70% of women, 0.5 ml of the vaccine given intramuscularly according to the standard schedule of **0, 1 and 6 months** can prevent the development of pre-cancerous lesions of the cervix and the possible progression into cervical cancer. Introduction of **HPV vaccine for cervical cancer** under the program, for girls under the age group of **9 to 14 years**. It is envisioned to be introduced in campaign mode by May 2023. DCGI has given approval of **Cervava** India's first HPV vaccine [Quadrivalent Human Papillomavirus vaccine (qHPV)] on 12<sup>th</sup> July 2022.
- **VIA vs HPV-DNA screening**– Visual methods are VIA & VILI [visual inspection with acetic acid (VIA) and Lugol's iodine (VILI)]. HPV DNA-based detection tests to digitally find suspected cases of cancer. HPV-DNA has 100% sensitivity & 90% Specificity vs VIA with 30% only & 85%. HPV-DNA is being piloted in some states.
- **HUB & Spoke model (cancer)**– Urgent need to expand the access to radiotherapy infrastructure. Hub (**For 4 crore pop.**) at HQ of a State Capital/ Division HQ, will have PET SCAN, advanced LINAC, chemotherapy & surgery, whereas spoke will be at Division/District HQ (**1 crore pop.**) so that common citizens get access to it within 100KM having basic LINAC (Radiotherapy) with CT scan & chemotherapy/surgery.



## Conclusion: Lessons learned

- ✓ Exposure to risk factors begins in early life, therefore, NCDs Health Promotion & IEC should focus on younger generations as well.
- ✓ Detection, screening and treatment of NCDs, as well as palliative care, are key components of the response to NCDs including cancers
- ✓ When diagnosed, cervical cancer is one of the most successfully treatable forms of cancer, as long as it is detected early and managed effectively.
- ✓ **With a comprehensive approach to prevent through vaccination and screening, detect early and treat, cervical cancer can be eliminated as a public health problem within a generation**



Thank you



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