

**PREVENTIVE ONCOLOGY & PRIMARY CARE
FOR NATIONAL CANCER GRID
IDENTIFICATION OF RESEARCH PRIORITIES
DRAFT**

Identifying Gaps in knowledge and pertinent research issues and hypotheses for the following fields under the ambit of Preventive Oncology and Primary care

I. SCREENING TECHNOLOGIES in secondary cervical cancer prevention

The performance of VIA as a primary screening tool for the detection of cervical pre-cancer and cancer has been inconsistent. Recently, many high-income countries have integrated HPV-DNA testing into their cervical cancer screening programs. The comparatively high cost and resource requirements of HPV-based screening have to date prevented many LMICs from doing the same. A significant development has been the entrance of innovative, easy-to-use and highly accurate HPV tests that can be provided at point of care; these could enable LMICs to implement 'test and treat' approaches for cervical cancer screening.

1. Value of VIA for the triage of HPV-positive women to improve the effectiveness of screen-and-treat strategies
2. HPV primary screening : Is self-sampling a solution to expand the coverage and bring equity to screening : HPV testing of self-collected samples could permit reaching remote areas, urban women who are missed by invitations to screen, and women who refuse provider-assisted sampling. Is the balance between lower accuracy and higher coverage acceptable
3. Is there a role for genotyping in screening or triage?

Genotyping for HPVs 16, 18, and other priority hrHPVs improves the positive predictive value of screening and permits more rational colposcopy referral. Can

genotyping become affordable in the near future to be implemented in screening, triage, and surveillance.

4. Implications of HPV positive results Education of Providers and Patients : How should we educate healthcare providers and patients concerning HPV testing results. Gradual introduction of HPV testing leads to patient anxiety and confusion related to the diversity of guidelines. The change from an oncologic to an STI-detection paradigm in cervical cancer screening requires research on sound educational approaches to demystify the implications of HPV positive results

II. IMPLEMENTATION RESEARCH for Effective Program implementation

More attention is being paid to the task of taking effective interventions and actually putting them into play in communities, health systems, guidelines, and health policy. This is an important trend to pursue if the field is to realize its maximum impact on the cancer burden, persistent disparities, and adverse trends

1. Capacity Assessment of District Health System in India on Services for Prevention and Screening of Common cancers.
2. Health Work Force Skill Sets : Analysis of skill mix and competencies required to meet current and future health service needs for sustainable cancer control implementation programs aligned with the WHO Global Strategy on Human Resources for Health Workforce 2030. The foundation for a strong and effective health workforce, able to respond to the 21st century priorities.
3. Operations Research: Population, Intervention, Comparison, Outcome studies for Program uptake, facilitators and barriers of effective screening implementation including cancer screening uptake and correlates among populations

4. Program implementation approaches/Modelling studies for Point of Care Testing :
Single visit VIA , Single/Two visit HPV
5. Interventions in real-world situations: Evaluate the actual efficacy of cancer screening approaches and interventions in real-world situations with different economic levels in India

III. HPV VACCINATION as a primary prevention strategy and paradigms in Post Vaccination era

Primary prevention via immunization

1. Though wealth of data that has been generated on the efficacy and safety of the two available HPV vaccines through several RCTs, it has also left many questions unanswered.
2. Further research and epidemiologic surveillance is needed by post-hoc exploration of completed phase 3 RCTs.
3. Role of cross-protection, the extent of protection with incomplete vaccination regimens, pan-mucosal protection against vaccine-targeted types, and anamnestic response from subsequent exposure to HPV.
4. HPV vaccination registries : Establishment of surveillance systems linking HPV vaccination registries with data from periodic HPV surveys, screening registries, and PBCRs could provide valuable information concerning duration of protection, possible type replacement, protection against other cancers, and safety.

Post HPV Vaccination Era

Post Vaccination Surveys HPV infection prevalence? Do we know enough already?

With the advent of HPV vaccination, there has been a renewed interest in conducting HPV prevalence surveys for possible type replacement post vaccination, a phenomenon that occurred with pneumococcal vaccination. The biological plausibility or empirical evidence that other HPV genotypes will emerge to occupy the ecological niche presently occupied by the vaccine-target types (HPVs 6, 11, 16, and 18).

IV. HPV EPIDEMIOLOGY

1. HPV infections Clearance and Persistence : Do HPV infections acquired early in life become latent? Can we distinguish between new infections and latent infections in older women and men? A longstanding, yet unanswered question in HPV epidemiology is whether or not infections clear completely or become latent, to reappear later in life.
2. Prognostic markers of cervical lesion progression : Do we know enough about prognostic markers of cervical lesion progression? To help clinicians to tailor clinical follow-up and surveillance. Molecular markers predictive of increased risk is required for validation studies. Which ones can be incorporated into clinical testing?
3. HPV Genotyping : The qualitative information from genotyping of cervical samples collected during screening is gradually being incorporated into practice guidelines. Presence of HPV16 or HPV18 in a cervical sample indicates an elevated risk that a high-grade lesion is present and thus, colposcopy referral is warranted regardless of cytology result.

V. UTILISATION OF DATA SCIENCES

- Advent of data science or "big data," which has raised new questions and new possibilities for cancer control research. Large volumes of data are now available from electronic health records. New challenge of approaching data and looking for useful patterns rather than the traditional approach of hypothesis driven research?

VI. TOBACCO CONTROL RESEARCH

1. Barriers and Opportunities for Integrating tobacco control and Cessation into Public Health systems
2. Cost-effectiveness and budget impact analysis of cessation interventions
3. Optimize Intervention Effectiveness by Increasing the Reach, Demand, Quality, Dissemination, Implementation, and Sustainability of Tobacco cessation Interventions
4. National Partnerships: models of Intergovernmental and nongovernmental collaboration for effective policy implementation
5. The gaps: loopholes in the provisions under COTPA
6. Opportunities for regulating tobacco products' Traditional and novel products, content and emissions to reduce harm and addiction potential
7. Innovative tools for monitoring policy impact and tobacco use surveillance
8. Identify Innovative Policy and Macro-Environmental Approaches to Further Reduce Tobacco Use
9. Priorities and challenges for advancing the WHO FCTC

VII. INTEGRATING SUSTAINABLE LIFESTYLE MODIFICATIONS (DIET, EXERCISE AND WEIGHT)