Sir,
Cancer accounts for 7% of all deaths in India. Breast, oral, and cervical cancer are the three most common cancers occurring in India, which accounts for 34% of all cancers in India and hence the Government of India (GOI) has recently launched the operational guidelines for screening and prevention of common cancers, to move from opportunistic screening to organized, systematic screening in the country. As per guidelines, risk assessment, screening, referral, and follow-up will be done by the existing health-care providers (HCPs) at the health facilities and services would be provided to all men and women aged 30 years and above. The screening will be carried out mainly by frontline health workers and staff nurses with confirmation of screen positives by medical doctors. Our main objective in this study was to explore the perceived challenges and attitudes of HCPs toward the implementation of this program, as these HCPs are already involved in other public health activities.

The study was conducted at a Cancer Hospital in Silchar, Assam where a hands-on training workshop was conducted for master trainers on population-based cancer screening. This workshop was conducted over 4 days in November 2017. The participants were medical officers, auxiliary nurse midwives (ANM), accredited social health activists (ASHA), staff nurses, nongovernmental organization representatives, and other HCPs from public health facilities. The trainers of the master trainers were experts from the Indian Council of Medical Research (ICMR) and medical college from Delhi. The training modules included concepts of screening, national program guidelines of population screening for common cancers, oral, breast, cervical cancer screening, and tobacco cessation counseling. The study participants were selected purposively for the present study to know their attitudes and perceptions before the implementation of the screening program.

A short questionnaire was developed and pretested. Following a written voluntary informed consent, the questionnaire was administered to the participants on the last day of the workshop after the end of training sessions. The data were entered into excel sheet and was analyzed using SPSS version 20 (Armonk, NY: IBM). A descriptive analysis was done for the various opinions and difference of opinions was noted using Chi-square or Fischer’s exact test. This study is part of the pilot project, approved by the ICMR Ethical Committee.

The answers of only 58 participants were considered for the analysis. Half of the participants were doctors and staff nurses. Frontline health workers including ANM and ASHA were the other participants. Most of them were working at Primary Health Centres (PHC) and a Charitable Cancer Hospital.

The study participants were asked if they were clear of their role in population cancer screening. Twenty-six participants stated to be well aware of their role in screening. Twenty-five stated not being very clear on their roles in screening, and six participants stated being unaware of their roles in screening.

Half of the study participants stated that they could do cancer screening with difficulties or would be unable to do screening along with their other professional responsibilities. More number of frontline health workers stated this as compared to the medical personnel ($\chi^2 = 4.46, P = 0.04$).

Majority of HCP opined that the lack of human resource and an increased workload on the existing human resource as being the main challenge in the implementation of population cancer screening [Table 1]. This opinion was seen to be stronger among the frontline health workers as compared to the medical personnel, and this difference was found to be statistically significant ($\chi^2 = 11.61, P = 0.00$).

Lack of motivated HCPs, difficulty in motivating community, and lack of higher referral centers for the management of screen-positive patients were the few other challenges foreseen. Although the health personnel foresaw, a number of challenges, majority (89.65%) were in favor of GOI to implement the population cancer screening program.

### Table 1: Challenges foreseen by healthcare workers in implementation of population cancer screening program at Silchar Assam

| Challenges foreseena | Study participants ($n=58$), $n$ (%) |
|----------------------|--------------------------------------|
| Lack of human resource | 30 (51.72) |
| Existing human resource overburdened | 19 (32.76) |
| Difficult to motivate community for screening | 16 (27.59) |
| Lack of motivated staff | 12 (20.69) |
| Lack of higher referral centres | 10 (17.24) |
| Lack of community awareness | 1 (1.72) |
| Poor services of higher referral centres in Assam | 1 (1.72) |
| Poor services of higher centres at Assam | 1 (1.72) |

*a Multiple responses
One-third of the study participants opined that screening should be done by specialist doctors. One-fifth of the study participants stated that ASHA should do the screening and almost the same number of participants opined that MO at PHC should do the screening. Least number of participants stated ANM as the personnel to do the screening.

Majority of frontline health workers as compared to medical personnel stated that the screening should be performed by medical personnel only, and not by them. This difference of opinions was found to be statistically significant ($\chi^2 = 7.19, P = 0.01$).

Majority of the HCPs were in favor of PHC as the first preferable site of population cancer screening followed by Sub-Center (SC). Almost one-fifth of the participants considered district hospital as a preferable place for population screening.

Majority of the frontline health workers were of the opinion that the screening should be conducted at SC and PHC as compared to the medical personnel, who opined that screening should be conducted at higher public health facilities [Figure 1]. However, this difference was not found to be statistically significant.

A motivated and well trained human resource is an inevitable component for the successful implementation of any National Health Program. The public health delivery system in India is four-tiered and has various cadres of health personnel with specified job responsibilities at various facilities as given in the Indian Public Health System guidelines. All the national programs in India including the cancer screening program are integrated under the National Health Mission utilizing the existing public health personnel for most of the programs.[5]

This may raise serious issues in the success of the program as screening coverage may be low if the frontline health workers are already overburdened with work. The rural health statistics 2017, shows that there is a lack of 28741 ANMs at SCs and PHCs and a lack of 7552 lady health visitors.[6] This study also brings forth the fact that a lack of human resource and an overburdened human resource are the main challenges foreseen. A time-motion study has shown that ANM spends 7:04 h working mainly on maternal and child health (MCH), family planning and immunization-related activities. In this study, minimum time was spent by the frontline health workers on adolescent health and noncommunicable diseases.[7]

Thus, the already existing high burden of MCH activities on frontline workers could be the reason of our study participant’s perception of cancer screening activities as difficult, when compared to medical personnel. The introduction of a mid-level HCP as recommended under the national health policy 2017 may ease the burden of the frontline health workers and may lead to efficient and better provision of public health services.[8]

The organized cancer screening program is yet to be rolled out in the country. This is the first study based on the implementation of population-based cancer screening guidelines. Although there were certain limitations in this study such as a small sample size, the pertinent barriers and challenges are clearly reflected by the opinions of HCPs.

This study suggests that HCPs are in full support for the implementation of common cancer screening program provided they get support from the government in terms of additional staff, better referral facilities, and capacity building of existing human resource, which may lead to a successful implementation of this cancer screening program.

**Financial support and sponsorship**

This study was supported by the Indian Council of Medical Research.

**Conflicts of interest**

There are no conflicts of interest.

**Ashwini Kedar, Ravi Kannan, Ravi Mehrotra, Roopa Hariprasad**

Division of Clinical Oncology, National Institute of Cancer Prevention and Research, Noida, Uttar Pradesh, *Cachar Cancer Hospital and Research Centre, Cachar, Assam, India*

**Address for correspondence:** Dr. Roopa Hariprasad, Division of Clinical Oncology, National Institute of Cancer Prevention and Research, I-7, Sector 39, Noida, Uttar Pradesh, India.

E-mail: roopoalcmr@gmail.com

**References**

1. World Health Organization. Noncommunicable Diseases (NCD) Country Profiles, India. World Health Organization; 2014. Available from: http://wwwapps.who.int/iris/bitstream/handle/10665/128038/9789241507509_eng.pdf;jsessionid=5BB3E2BEFF5B1924312E5E464D098?sequence=1. [Last accessed on 2018 Jun 15].

2. Ferlay J, Soerjomataram I, Dikshit R, Eser S, Mathers C, Rebelo M, et al. Cancer incidence and mortality worldwide: Sources, methods and major patterns in GLOBOCAN 2012. Int J Cancer 2015;136:E359-86.

3. Operational Framework – Management of Common Cancers. Ministry of Health and Family Welfare: Government of India; 2016. Available from: http://www.nicpr.res.in/index.php/component/k2/item/313-operational-framework-management. [Last accessed on 2018 Apr 12].

4. Operational Guidelines on Prevention Screening and Control of Common Non Communicable Diseases. Ministry of Health and Family Welfare, Government of India; 2016. Available from: http://www.nhm.gov.in/images/pdf/NPCDCS.pdf. [Last accessed on 2018 Feb 02].

5. National Rural Health Mission, Framework for Implementation. Ministry of Health and Family Welfare, Government of India; 2005-2012. Available from: http://www.nhm.gov.in/images/pdf/about-nrhm/nrhm-framework-implementation/nrhm-framework-latest.pdf. [Last accessed on 2018 Jun 20].

![Figure 1: A bar chart showing the opinion of study participants as to the health facility where cancer screening can be done](image-url)
6. Health Manpower in Rural Area, Rural Health Statistics, Health Management Information System. Ministry of Health and Family Welfare, Government of India; 2017. Available from: https://www.nhlmis.nic.in/Pages/RHS2017.aspx?RootFolder=%2F%7E%7E%7ERURAL%20HEALTH%20%26%20STATISTICS%2F%28A%29%20RHS%20-%20%202017 &FolderCTID=0X01200057278FD1EC909F429B03E86C7A7C3F31 &View=9029EB52-8EA2-4991-9611- FDF53C824827. [Last accessed on 2018 Oct 18].

7. Singh S, Upadhyaya S, Deshmukh P, Dongre A, Dwivedi N, Dey D, et al. Time motion study using mixed methods to assess service delivery by frontline health workers from South India: Methods. Hum Resour Health 2018;16:17.

8. National Health Policy 2017. Ministry of Health and Family Welfare, Government of India; 2017. Available from: https://www.mohfw.gov.in/sites/default/files/9147562941489753121.pdf. [Last accessed on 2018 Apr 11].

3rd PGIVAC
PGIMER’s National Workshop on Vaccinology
22nd to 26th July, 2019, Chandigarh
First Announcement

We are pleased to announce that 3rd National Workshop on Vaccinology will be held from 22nd to 26th July 2019 in Department of Community Medicine & School of Public Health, Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh. The objective of this workshop is to generate awareness among the participants regarding vaccinology and to build their capacity to conduct research related to vaccine development, estimating the vaccine efficacy & effectiveness and policy level decision making regarding introduction of newer vaccines.

Who should Attend:
Public Health Experts, Program Managers, Researchers, Academicians, PhD Scholars, Faculty and Residents of Community Medicine, Family Medicine, Pediatrics, Immunology, and Microbiology departments.

Total seats: 35

Interested applicants may send their one-page CV, including a statement on how they are going to use the knowledge gained through this workshop in their respective fields, by 15th May, 2019 by an email at pgimer.vaccinologycourse@gmail.com

Registration fees: INR 6500
For further information please contact:

Dr. Madhu Gupta
Professor of Community Medicine
Department of Community Medicine & School of Public Health
PGIMER, Sector-12, Chandigarh-160012
pgimer.vaccinologycourse@gmail.com, 7087008223, 7009769629

Dr. Adarsh Bansal
Research Officer
Department of Community Medicine School of Public Health,
PGIMER, Chandigarh
dadarsh_bansal@yahoo.com, +919872091920