



Project Report

Collaborative Action for Control of Cancer and other Non-Communicable Diseases among Navi Mumbai Police

NAVI MUMBAI

MAHARASHTRA





Dr. Gauravi Mishra
Dr. Sharmila Pimple
Dr. C. S. Pramesh
Dr. Vasundhara Kulkarni
Dr. Rajesh Dikshit
Dr. Pankaj Chaturvedi
Dr. Sudeep Gupta

Department of Preventive Oncology
Centre for Cancer Epidemiology,
Tata Memorial Centre, Mumbai, India



PROJECT REPORT

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other Non-Communicable Diseases among
Navi Mumbai Police**



Department of Preventive Oncology

Since its establishment in 1997, the Department of Preventive Oncology has been actively engaged in Health Promotion, Cancer Control, Prevention, Screening and Early Detection. Recognized as a WHO Collaborating Centre for Cancer Prevention, Screening and Early Detection. Since establishment, department plays a crucial role in combating cancer. The results of a global study involving data from 200 countries, reveals that nearly 50% of cancer-related deaths can be avoided through the mitigation of lifestyle risk factors, coupled with the promotion of a nutritious diet and regular physical and mental activities. [1] Awareness, screening, early detection and treatment have the potential to prevent nearly one-third of all cancer-related deaths. Unfortunately, low-to-middle income countries bear the greatest burden, accounting for 70% of cancer-related deaths. [2] By implementing appropriate prevention, early detection and treatment strategies, millions of lives could be saved each year.

Goals and Objectives of the Department of Preventive Oncology:

- Information, Education and Communication
- Services
 - Cancer Screening: Hospital and Community-based Screening
 - Diagnostic Services such as Biopsy, Colposcopy etc.
 - Pre-Cancer Management
 - Special Clinics: Tobacco Cessation Clinics, Dysplasia Clinic and Breast Self Examination (BSE) Clinic
- Health and Manpower Development
- Research
- Academics [Homi Bhabha National Institute (HBNI)]
 - Flagship Training Workshops
 - Research Degree: PhD [Clinical Epidemiology & Preventive Oncology]
 - Fellowship in Department of Preventive Oncology [Duration: 2 Years]
 - Senior Residency in Department of Preventive Oncology [Duration: 1 Year]
 - Preventive Oncology Certificate Course for Nurses [Duration: 1 Month]
 - Observers in Department of Preventive Oncology
- Advocacy, NGO- Training and Networking

Department is located on the third floor of the 'Service Block', Tata Memorial Hospital, Parel, Mumbai: 400012. Phone No: +91-22-24177000 Extn: 4632, Email: preventive@tmc.gov.in



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Dr. Gauravi Mishra

Professor and Physician, Department of Preventive Oncology,
Deputy Director, Centre for Cancer Epidemiology (CCE), Tata Memorial Centre

Dr. Sharmila Pimple

Professor and Head, Department of Preventive Oncology, Tata Memorial Hospital

Dr. C. S. Pramesh

Director, Tata Memorial Hospital

Dr. Vasundhara Kulkarni

Scientific Officer, Department of Preventive Oncology, Tata Memorial Hospital

Dr. Rajesh Dikshit

Director, Centre for Cancer Epidemiology (CCE)

Dr. Sudeep Gupta

Director, Tata Memorial Centre

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**Department of Preventive Oncology,
Centre for Cancer Epidemiology (CCE),
Tata Memorial Centre (TMC),
Homi Bhabha National Institute (HBNI), Mumbai, India**

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Contributors

Sr. No	Name	Role	Designation and Institutional Affiliation
1.	Dr. Gauravi A Mishra	Principal Investigator	Professor & Physician, Department of Preventive Oncology, Deputy Director, CCE TMC, Mumbai
2.	Dr. Sharmila Pimple	Co-Principal Investigator	Professor & Head, Department of Preventive Oncology, TMH, Mumbai
3.	Dr. C. S. Pramesh	Co-Principal Investigator	Director, TMH, Mumbai
4.	Dr. Vasundhara Kulkarni	Co- Investigator	Scientific Officer, Department of Preventive Oncology, TMH, Mumbai
5.	Dr. Kunal Oswal	Co- Investigator	Former Program Manager, Prevention and Awareness, Tata Trust
6.	Mr. Alay Parikh	Co- Investigator	Former Program Officer, Tata Trust
7.	Dr. Devendra Chaukar	Co- Investigator	Former Professor & Head, Division of Head & Neck Oncology, Surgeon, TMH, Mumbai
8.	Dr. S.M. Patil	Co- Investigator	Dean & Police Surgeon, Police Hospital, Sandhurst Road, Nagpada-Mumbai Central, Mumbai
9.	Dr. Sandeep Tandon	Co- Investigator	Professor and Head, Department of Pulmonary Medicine, TMH, Mumbai
10.	Dr. Heena Kauser Shaikh	Co- Investigator	Scientific Officer, Clinical Research Co-Ordinator, ACTREC
11.	Dr. Tanuja Sheth	Consultant	Professor & Head, Department of Pathology, TMH, Mumbai
12.	Mrs. Parishii Majmudar	Co- Investigator	Medical Social Worker, TMH, Mumbai
13.	Dr. Jyoti Bajpai	Co- Investigator	Former Professor, Medical Oncology, TMH, Mumbai
14.	Dr. Sushma Gaikwad	Co- Investigator	Associate Professor, Department of Medicine, B.Y.L. Nair Hospital & T. N. Medical College, Mumbai Central, Mumbai, India
15.	Ms. Subhadra Gupta	Co- Investigator	Former Sr. Research Statistician, Department of Preventive Oncology, TMH, Mumbai
16.	Ms. Jyoti Patel	Co- Investigator	Nurse Manager, Department of Preventive Oncology, TMH, Mumbai
17.	Dr. Tushar Bandgar	Co- Investigator	Professor and Head, Department of Endocrinology, Seth G S Medical College and KEM Hospital, Mumbai

Sr. No	Name	Role	Designation and Institutional Affiliation
18.	Dr. Anurag R. Lila	Co- Investigator	Associate Professor, Department of Endocrinology, Seth G S Medical College and KEM Hospital, Mumbai
19.	Dr. Tukaram Jamale	Co- Investigator	Assistant Professor and Head, Department of Nephrology, Seth G S Medical College and KEM Hospital, Mumbai
20.	Dr. Maheema A Bhaskar	Co- Investigator	Professor Adhoc Physician, Department of Pulmonary Medicine, TMH, Mumbai
21.	Dr. Pavankumar Ravindra Biraris	Co- Investigator	Associate Professor, Adhoc Physician, Department of Pulmonary Medicine, TMH, Mumbai
22.	Dr. Anshu Gul Punjabi	Co- Investigator	Assistant Professor, Department of Pulmonary Medicine, TMH, Mumbai
23.	Dr. Dolorossa Fernandes	Co- Investigator	Former Sr. Research Fellow, TMH, Mumbai
24.	Mr. Anil Patil	Project Team Member	Former Sr. Research Statistician, Department of Preventive Oncology, TMH, Mumbai
25.	Dr. Gayatri Tulapurkar	Project Team Member	Research Fellow, Department of Preventive Oncology, TMH, Mumbai
26.	Mr. Vijay Suryavanshi	Project Team Member	Senior Statistician, Department of Preventive Oncology, TMH, Mumbai
27.	Mr. Tushar Jadhav	Project Team Member	Project Co-ordinator, Department of Preventive Oncology, TMH, Mumbai
28.	Ms. Priyanshi Soni	Project Team Member	Research Assistant, Department of Preventive Oncology, TMH, Mumbai
29.	Ms. Pratiksha Dongre	Project Team Member	Assistant Data Manager, Department of Preventive Oncology, TMH, Mumbai
30.	Mrs. Poonam Petkar	Project Team Member	Assistant Data Manager, Department of Preventive Oncology, TMH, Mumbai
31.	Mrs. Anjali Salvi	Project Team Member	Supervisor, Department of Preventive Oncology, TMH, Mumbai
32.	Mrs. Meena Kule	Project Team Member	Research Counselor, Department of Preventive Oncology, TMH, Mumbai
33.	Mrs. Sangeeta Phatak	Project Team Member	Health Assistant, Department of Preventive Oncology, TMH, Mumbai
34.	Dr. Rajesh Dikshit	Mentor	Director, Centre for Cancer Epidemiology (CCE), Navi Mumbai
35.	Dr. Pankaj Chaturvedi	Mentor	Director, Advance Centre for Training, Research and Education in Cancer (ACTREC), Navi Mumbai
36.	Dr. Sudeep Gupta	Mentor	Director, Tata Memorial Centre (TMC), Mumbai

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Correspondence:

Dr. Gauravi Mishra

Professor and Physician, Department of Preventive Oncology,

Deputy Director, Centre for Cancer Epidemiology,

Tata Memorial Centre,

Kharghar, Navi Mumbai 410210

Office address 1:

Room No: 314, Third floor, Service block,

Department of Preventive Oncology,

Tata Memorial Hospital,

Parel, Mumbai 400012

Contact No: 91-22-24177000

Extn: 4634

Office address 2:

Room No: 230, Second Floor,

Centre for Cancer Epidemiology,

ACTREC,

Kharghar, Navi Mumbai 410210.

Contact No: 91-22-68735000

Extn: 5008

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Background

Navi Mumbai is a systematically developed city situated adjacent to Mumbai, in the Konkan region of Maharashtra. [3] In order to maintain the law and order in the city, a special Police Commissionerate was established under Maharashtra Police as Navi Mumbai city Police Commissionerate. [4] The recruitment and training processes for Police personnel are generally rigorous and merit-based, incorporating multiple stages of assessment including evaluation of physical and mental fitness. This approach ensures that individuals selected for law enforcement roles possess the physical endurance and capability to meet the demands of their duties. [5]

The selection process in the Police Department emphasizes physical competence, however long-term occupational environment of Police work presents significant challenges in maintaining overall health. Occupational stress is a well-documented concern identified in this workforce. Police personnel work in high-stress environments characterized by unpredictable threats, exposure to violence, responsibility for public safety and heavy shift duties. [6] Chronic exposure to these occupational stressors leads to a range of physical and psychological health issues including hypertension, cardiovascular disease, depression, anxiety and Post-Traumatic Stress Disorder (PTSD) [7]

The coping strategies used to relieve stress often results in increased rates of smoking and alcohol consumption among Police personnel [8, 9] Despite the assumption that police work is physically active, modern law enforcement tasks often involve extended periods of sedentary behaviour such as surveillance, desk duties and patrolling in vehicles. Studies suggest that many Police personnel do not meet the recommended levels of physical activity needed for health maintenance, further increasing their vulnerability to NCDs. [10] Furthermore, the irregular shift patterns common which can disrupt sleep cycles, which further contributes to physical and psychological stress. Sleep deprivation has been strongly linked with impaired cognitive function, mood disorders and increased risk of chronic illnesses. [11] Moreover, irregular eating habits leads to poor nutrition and metabolic imbalances.

The results of a cross-sectional study conducted among Police personnel in Jodhpur, India to identify risk factor exposure and prevalence of NCDs revealed that, 44.3% of Police personnel were obese, 29.28% hypertensive and 76.1% were pre-hypertensive. [12]

To summarize, Police recruitment emphasizes physical standards, however, the occupational realities place Police personnel at high risk for stress-related health issues and NCDs. Poor health among law enforcement personnel not only reduces their effectiveness in maintaining public safety but also affects their wellness.

With this background, the Department of Preventive Oncology, Tata Memorial Hospital (TMH) initiated workplace awareness and screening programme for common cancers viz. Oral Cavity, Breast and Uterine Cervix cancers along with NCDs viz. Hypertension, Obesity and Diabetes Mellitus among Police personnel. The Department of Preventive Oncology, Tata Memorial Hospital has been conducting awareness and screening programme for Police personnel since 2019. This project was initiated for Mumbai Police division in December 2019, and was further extended to include Maharashtra Police of the Navi Mumbai region.

Under this initiative, all the Police personnel received detailed health awareness on signs, symptoms, prevention and early detection of common cancers viz. Oral Cavity, Breast and Uterine Cervix Cancers and NCDs and also on the health hazards of tobacco and alcohol use. All eligible Police personnel were screened for common cancers viz. Oral Cavity, Breast and Uterine Cervix Cancers along with NCDs viz. Hypertension, Obesity and Diabetes Mellitus. This programme was initially planned for the Mumbai Police and it received a great response. Many Police personnel were identified with the diseases and availed treatment at empanelled hospitals.

The aim of this awareness and screening programme was to formulate a demonstrable and sustainable model for prevention, control and early detection of NCDs including common cancers among Police personnel, using simple and cost-effective methods that can be replicated in other parts of India. This booklet gives comprehensive details about the project activities conducted and its outcomes. This is the first of its kind preventive screening programme conducted for Police personnel in Maharashtra and could be replicated in other Districts and States in India. It is also necessary to implement this among the same group periodically.

Executive Summary

◆ **Initiation of the Project:**

The project received approval from Institutional Ethics Committee (IEC) of Tata Memorial Hospital (TMH) on 10th July, 2023.

◆ **Approval and Permissions from Senior Authorities:**

Department of Preventive Oncology, TMH with Non-CSR funding support from Tata Memorial Centre Research Administration Council (TRAC) and other Non-CSR contributions from various donors, initiated health awareness and screening programme for Navi Mumbai Police personnel. Necessary approvals were obtained on 03rd March 2023 from the Deputy Commissioner of Police to conduct awareness and screening programme for Police personnel of Navi Mumbai region. Awareness and screening of Maharashtra Navi Mumbai Police for common cancers and NCDs was initiated on 08th March 2023 at the Commissioner of Police Office, Navi Mumbai. All Police personnel who were screen positive for Oral Cavity, Breast and Uterine Cervix cancers were referred to TMH for further evaluation and diagnostic procedures. Similarly, those who were screen positive for Diabetes, Hypertension and Obesity were referred to respective empanelled hospitals for further management.

◆ **Duration of the Project:**

- The cancer and NCD awareness and screening programme for Navi Mumbai Police personnel was initiated on 8th March 2023 and was completed on 6th November 2023.
- Mop-up camps were organized and follow-up of screen positives who had not availed the referral and diagnostic services at the nodal hospital was completed.

◆ **Locations:**

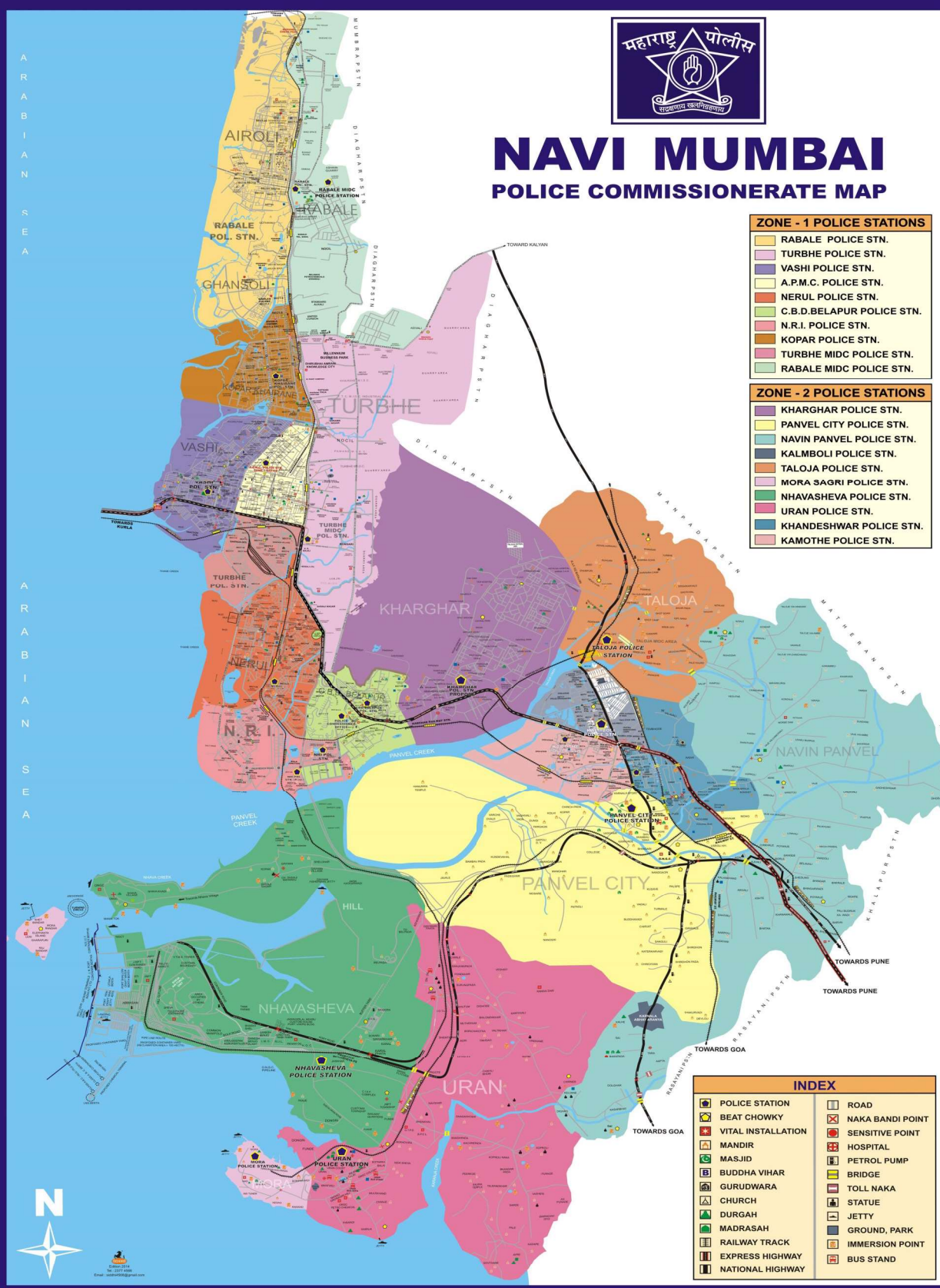
The detailed list of centres where the programme was implemented is as follows:

Main Office	Head Quarter	<ol style="list-style-type: none"> 1. Quick Response Team (QRT) 2. Right Control Police (RCP) 3. Motor Transport 4. Wireless
	Commissioner of Police Office	<ol style="list-style-type: none"> 1. Cyber Crime 2. Economic Offences Wing (EOW) 3. Main Control 4. Crime Branch 5. Special Branch 6. Anti-Encroachment and Cell (CIDCO, MNPA) 7. Protection & Security 8. B.D.D.S 9. Welfare
Zone 1	<ol style="list-style-type: none"> 1. Vashi Police Station 2. A.P.M.C. Police Station 3. Rabale Police Station 4. Rabale MIDC 5. Koparkhairne Police Station 6. Turbhe Police Station 7. Sanpada Police Station 8. Nerul Police Station 9. C.B.D. Belapur Police Station 10. N.R.I Police Station 11. Turbhe MIDC Police Station 12. Rabale MIDC Police Station 	
Zone 2	<ol style="list-style-type: none"> 1. Panvel City Police Station 2. Panvel Taluka Police Station 3. Kamothe Police Station 4. Khandeshwar Police Station 5. Kalamboli Police Station 6. Kharghar Police Station 7. Taloja Police Station 8. Uran Police Station 9. Nhavasheva Police Station 10. Mora Coastal Police Station 	



NAVI MUMBAI

POLICE COMMISSIONERATE MAP



ZONE - 1 POLICE STATIONS

- RABALE POLICE STN.
- TURBHE POLICE STN.
- VASHI POLICE STN.
- A.P.M.C. POLICE STN.
- NERUL POLICE STN.
- C.B.D.BELAPUR POLICE STN.
- N.R.I. POLICE STN.
- KOPAR POLICE STN.
- TURBHE MIDC POLICE STN.
- RABALE MIDC POLICE STN.

ZONE - 2 POLICE STATIONS

- KHARGHAR POLICE STN.
- PANVEL CITY POLICE STN.
- NAVIN PANVEL POLICE STN.
- KALMBOLI POLICE STN.
- TALOJA POLICE STN.
- MORA SAGRI POLICE STN.
- NHAVASHEVA POLICE STN.
- URAN POLICE STN.
- KHANDESHWAR POLICE STN.
- KAMOTHE POLICE STN.

INDEX

- | | |
|--|--|
| POLICE STATION | ROAD |
| BEAT CHOWKY | NAKA BANDI POINT |
| VITAL INSTALLATION | SENSITIVE POINT |
| MANDIR | HOSPITAL |
| MASJID | PETROL PUMP |
| BUDDHA VIHAR | BRIDGE |
| GURUDWARA | TOLL NAKA |
| CHURCH | STATUE |
| DURGAH | JETTY |
| MADRASAH | GROUND, PARK |
| RAILWAY TRACK | IMMERSION POINT |
| EXPRESS HIGHWAY | BUS STAND |
| NATIONAL HIGHWAY | |

♦ **Aims and Objectives:**

The awareness and screening programme for Police personnel of Navi Mumbai region aimed towards creating a sustainable and demonstrable model and identifying exposure to risk factors for NCDs, including common cancers, creating awareness and determining the prevalence of common cancers in this group by conducting screenings for oral cavity, breast and uterine cervical cancers using evidence based low-cost and effective techniques.

Additionally, the objectives were to estimate the prevalence of common NCDs by screening for diabetes mellitus, hypertension and obesity using simple and effective standard techniques. The project also aimed to formulate referral linkages for all screen-positive cases of common cancers to the Department of Preventive Oncology at TMH, Mumbai, for diagnostic confirmation and further management.

Similarly, the project aimed to establish referral linkages for screen-positive cases of NCDs to Police empanelled hospitals. Furthermore, the project aimed to provide professional assistance for tobacco and alcohol cessation at the camp site during the first visit and through referral services to the Tobacco Cessation Clinic at the Department of Preventive Oncology, TMH, Mumbai for follow-up sessions.



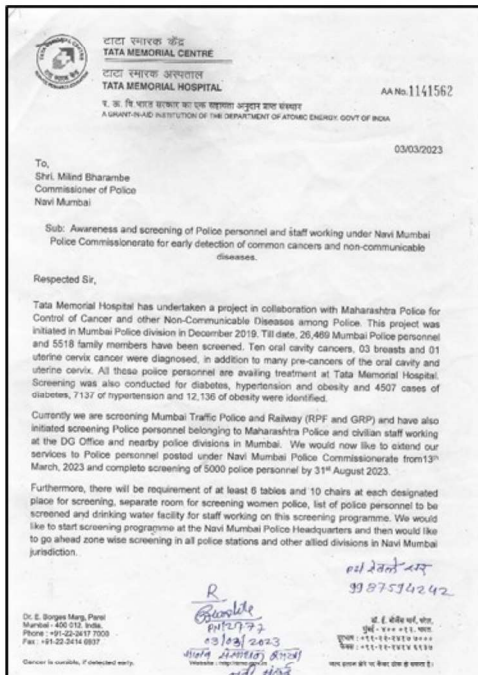
Process Followed All Through

Pre-Camp Procedure

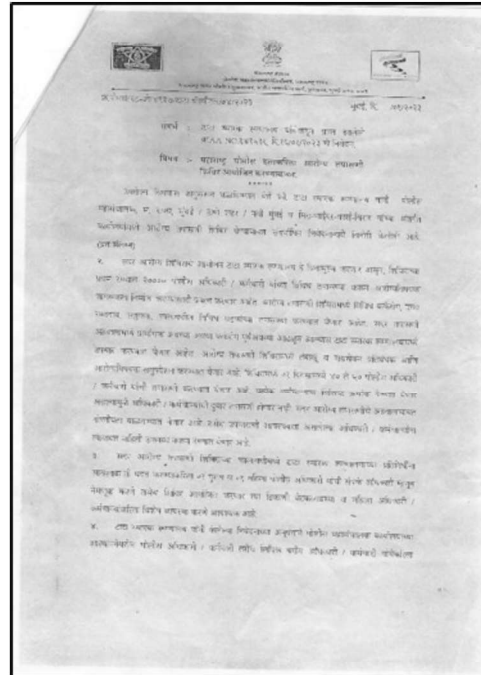
- Senior Officials of the particular division where the camp was proposed to be held, were contacted. Necessary permissions were obtained to conduct awareness and screening programme for Police personnel. Camp locations were finalized after considering the availability of necessary facilities for conducting the camp. All the Police personnel were informed about the awareness and screening programme through a broadcast message.



Obtaining Permissions from Senior Authorities of Police Division



Permissions Letter Submitted to Commissioner of Police, Navi Mumbai



Response to Permissions Letter Received from Commissioner of Police Office, Navi Mumbai

Chronology of Activities in the Screening Camps

- ◆ **Informed Consent Procedure:** All eligible Police personnel were given necessary information regarding the project and were invited to attend the awareness and screening camps. Informed consent was obtained from those who were willing to participate in the programme. The consent forms were made available in English and other vernacular languages such as Marathi and Hindi. A copy of the signed consent was provided to the participants.



Registration and Informed Consent Procedure

- ◆ **Health Awareness Sessions:** All Police personnel were provided with detailed health awareness session focusing on hazards of tobacco and alcohol use, risk factors, signs, symptoms, early detection and prevention of oral cavity, breast and uterine cervix cancers. They also received detailed health education on NCDs such as Diabetes Mellitus, Hypertension and Obesity. Trained Medical Social Workers (MSWs) delivered these interactive sessions for around 45 minutes to one hour using pictorial based flipcharts, calendar chart and pamphlets. Following this, a structured questionnaire was administered to collect the socio-demographic details and to assess the risk factors.



Health Awareness Sessions Delivered by MSW

- ◆ **Screening of Police Personnel for Common Cancers:** After the detailed health awareness programme, Police personnel were invited for screening of oral cavity, breast and cervical cancers. Screening was conducted using simple and cost-effective methods viz. Oral Cavity cancer screening by Oral Visual Inspection (OVI), Breast cancer screening by Clinical Breast Examination (CBE), Uterine Cervix cancer screening by application of 5% acetic acid on cervix (VIA). Reports generated were distributed to the police personnel. 5-10% participants were re-screened by a Medical Officer for quality check purpose.



Oral Cavity Cancer Screening by Health Assistants and Medical Officer

- ◆ **Screen Positives and Referral Management:** All the screen positives for Oral Cavity, Breast and Uterine Cervix cancers were referred to TMH for further diagnostic evaluation and treatment. A dedicated team of Health Assistants and MSWs assisted these participants in completing the procedures at TMH. Smoking and smokeless tobacco users were referred to Tobacco Cessation Clinic of Department of Preventive Oncology.
- ◆ **Screening of Police for NCDs:** Along with screening for common cancers Police personnel were screened for common NCDs viz. Diabetes Mellitus, Hypertension and Obesity. Screening methodologies used were collection of 2 ml blood for HbA1c estimation, blood pressure measurement and height and weight measurement. All reports were generated and distributed to respective Police personnel. The Police personnel who were screen positive for NCDs were referred to Empanelled Hospital for further management.

Screening for Non-Communicable Diseases



**Blood Pressure Measurement
by Health Assistants**



**Blood Collection for
HbA1c Estimation**

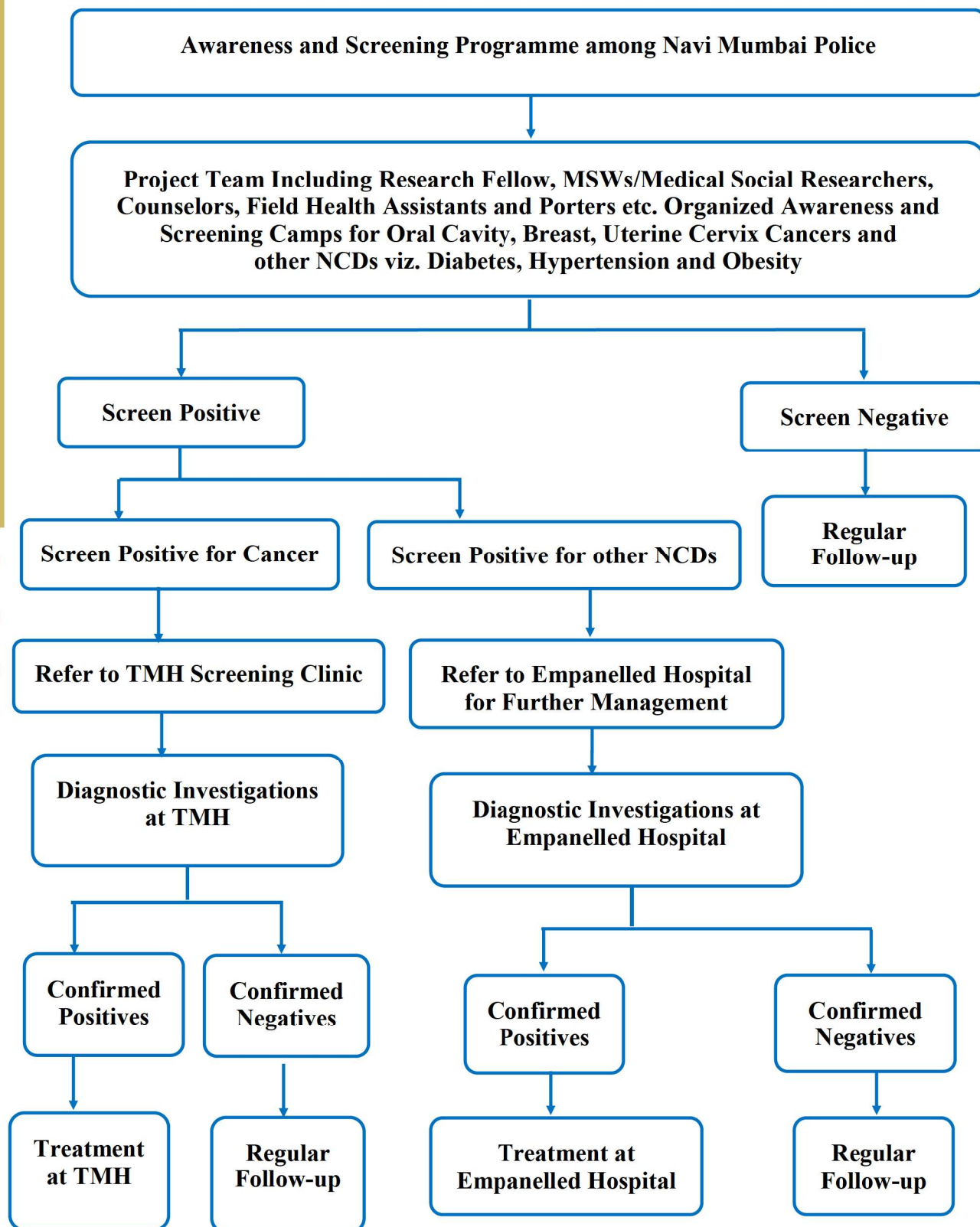


Measurement of Height



Measurement of Weight

Flow Chart



Outcomes of Awareness and Screening Programmes

This comprehensive screening program was focused on awareness and screening of common cancers using low-cost and effective screening techniques, viz. Oral Visual Inspection (OVI) for Oral cavity cancers, Clinical Breast Examination (CBE) for Breast cancers and Visual Inspection of Cervix using 5% of acetic acid (VIA) for cervical cancers. Awareness and screening for NCDs, viz. Hypertension, Diabetes and Obesity was also conducted under this programme. Screening methodologies used for NCDs were height, weight measurement and calculation of Body Mass Index (BMI) for Obesity, collection of 2ml blood for HbA1c estimation and blood pressure measurement.

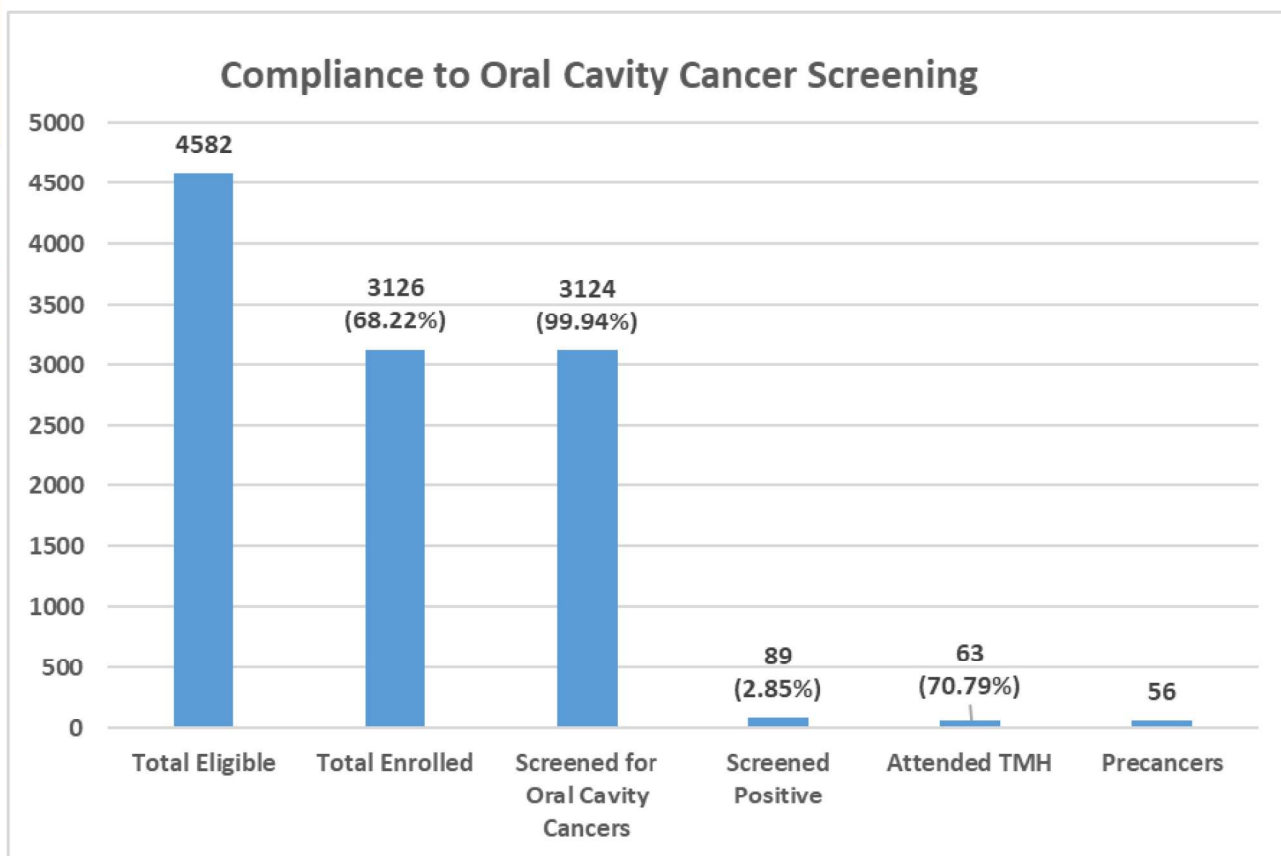
Beneficiaries of Health Awareness Sessions:

Among 4582 eligible participants, 3126 (68.22%) Police personnel consented and were enrolled. Among them, 2484 (66.35%) were men and 642 (76.61%) were women. All enrolled beneficiaries received detailed health awareness session on risk factors, signs, symptoms, methods of early detection and prevention of oral cavity, breast and uterine cervix cancers and also on the hazards of tobacco and alcohol use. They also received detailed health education on prevention and control of NCDs such as Diabetes Mellitus, Hypertension and Obesity.

Outcomes of Awareness and Screening Programmes

Compliance to Screening for Oral Cavity Cancers:

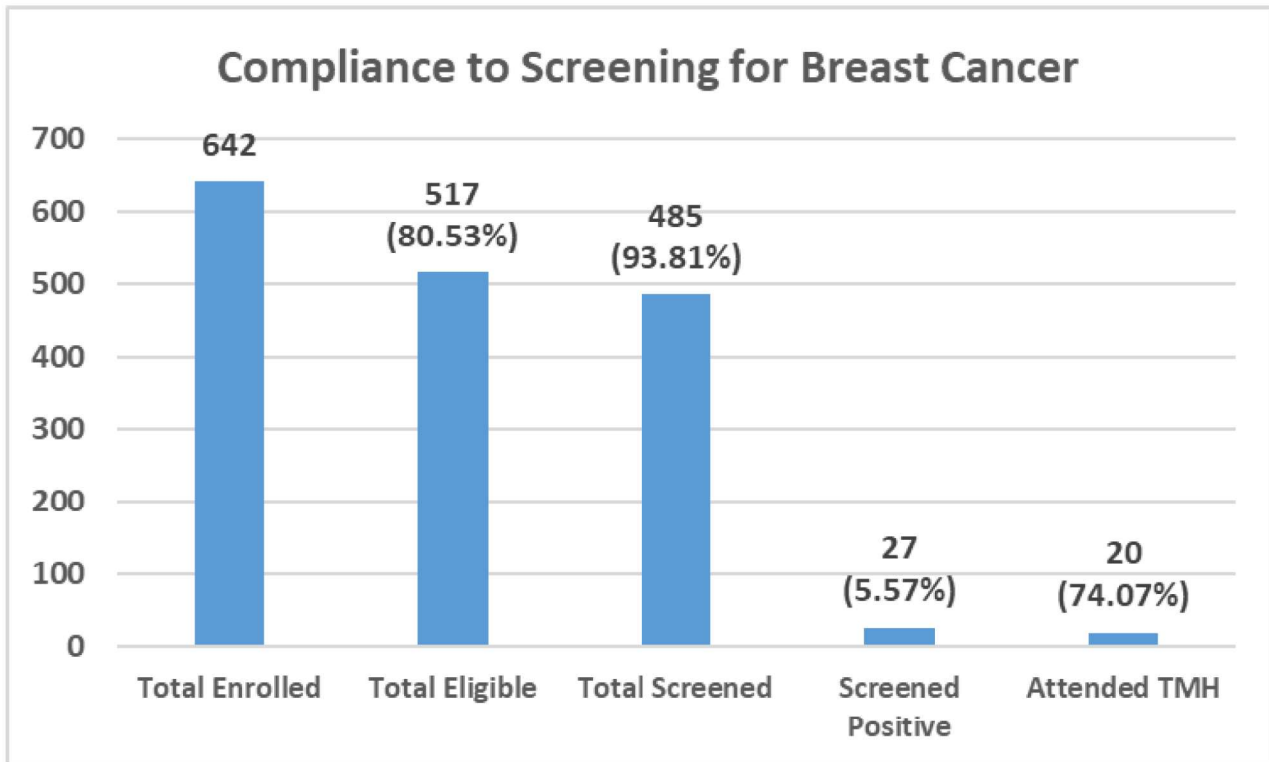
Among 4582 eligible participants, 3126 (68.22%) Police personnel were enrolled. Of these, 3124 (99.94%) were screened for oral cavity cancers. Amongst them 2483 (79.48%) were men and 641 (20.51%) were women. A total of 89 (2.85%) participants were screened positive and were referred to TMH for further diagnosis and treatment. Amongst them, 63 (70.79%) participants attended TMH. The referred participants were re-examined at the Screening Clinic of Department of Preventive Oncology, TMH. On further evaluation, 56 (88.89%) clinically confirmed precancers, 5 (7.94%) were histopathologically confirmed as having precancers and one case of oral cavity cancer was diagnosed. They availed treatment at TMH.



Outcomes of Awareness and Screening Programmes

Compliance to Screening for Breast Cancer:

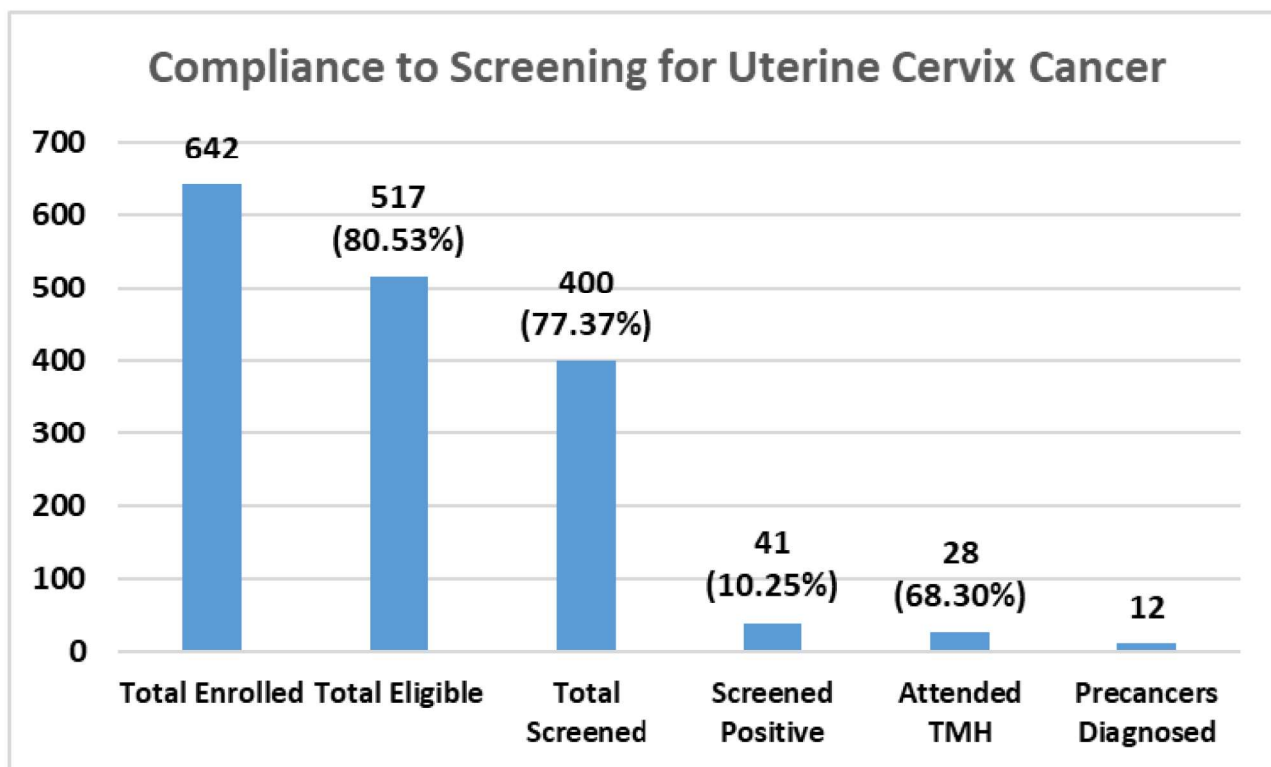
Among 642 enrolled women Police personnel, a total of 517 (80.53%) beneficiaries in age group of 30-65 years were eligible for breast cancer screening. Among them, 485 (93.81%) were screened for breast cancers. 27 (5.57%) participants were screened positive and were referred to TMH for further diagnosis and treatment. 20 (74.07%) women Police personnel attended TMH and completed further diagnostic procedures. None were diagnosed with breast cancer.



Outcomes of Awareness and Screening Programmes

Compliance to Screening for Uterine Cervix Cancer:

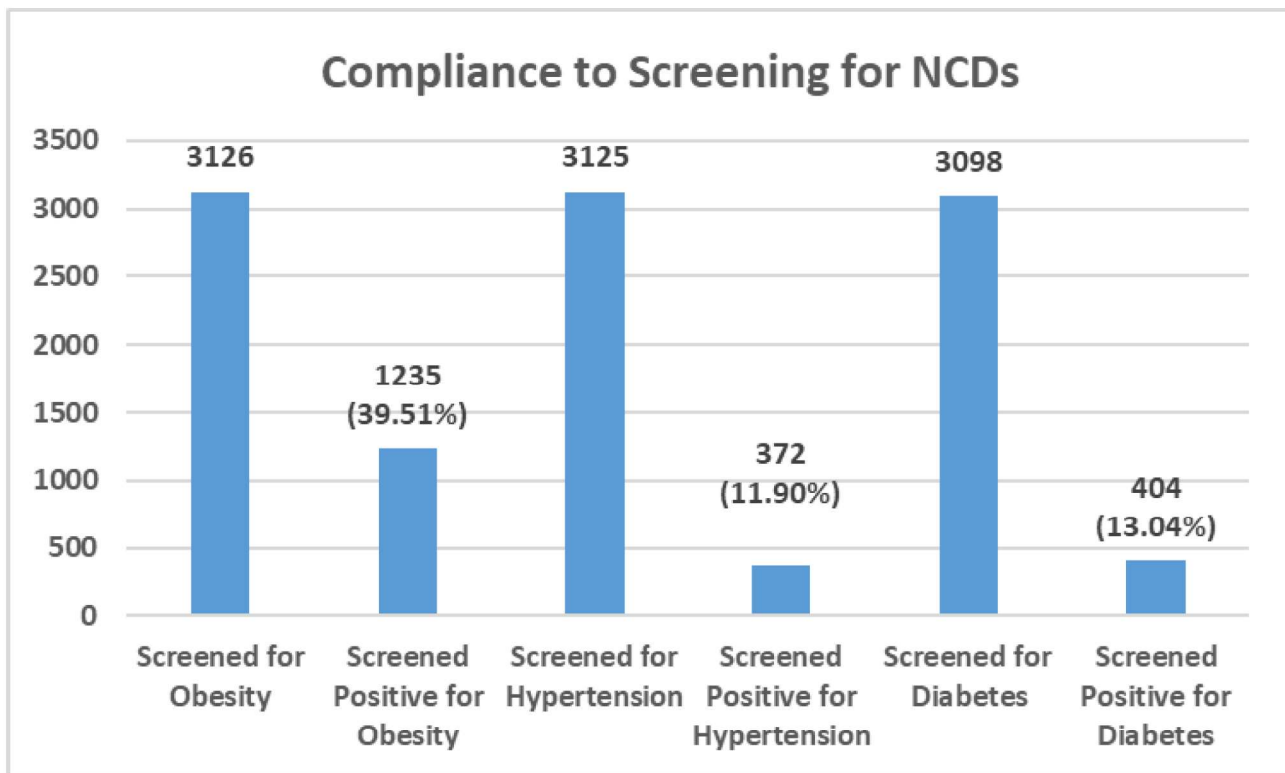
Among 642 enrolled participants, 517 (80.53%) women Police in age group of 30-65 years were eligible for breast cancer screening. Amongst them 400 (77.37%) were screened for uterine cervix cancers. 41 (10.25%) participants were screened positive and were referred to TMH for further diagnosis and treatment and 28 (68.30%) attended TMH. On further evaluation, 12 histopathologically confirmed uterine cervix precancers were diagnosed and have availed treatment at TMH.



Outcomes of Awareness and Screening Programmes

Compliance to Screening for NCDs:

All the enrolled beneficiaries (3126) were screened for obesity, 3125 (99.97%) were screened for Hypertension and 3098 (99.10%) Police personnel were screened for diabetes mellitus. Among them, 1235 (39.51%) were screened positive for Obesity, 372 (11.90%) for Hypertension and 404 (13.04%) for Diabetes Mellitus. All the screen positives were referred to empanelled hospital for further evaluation and treatment.

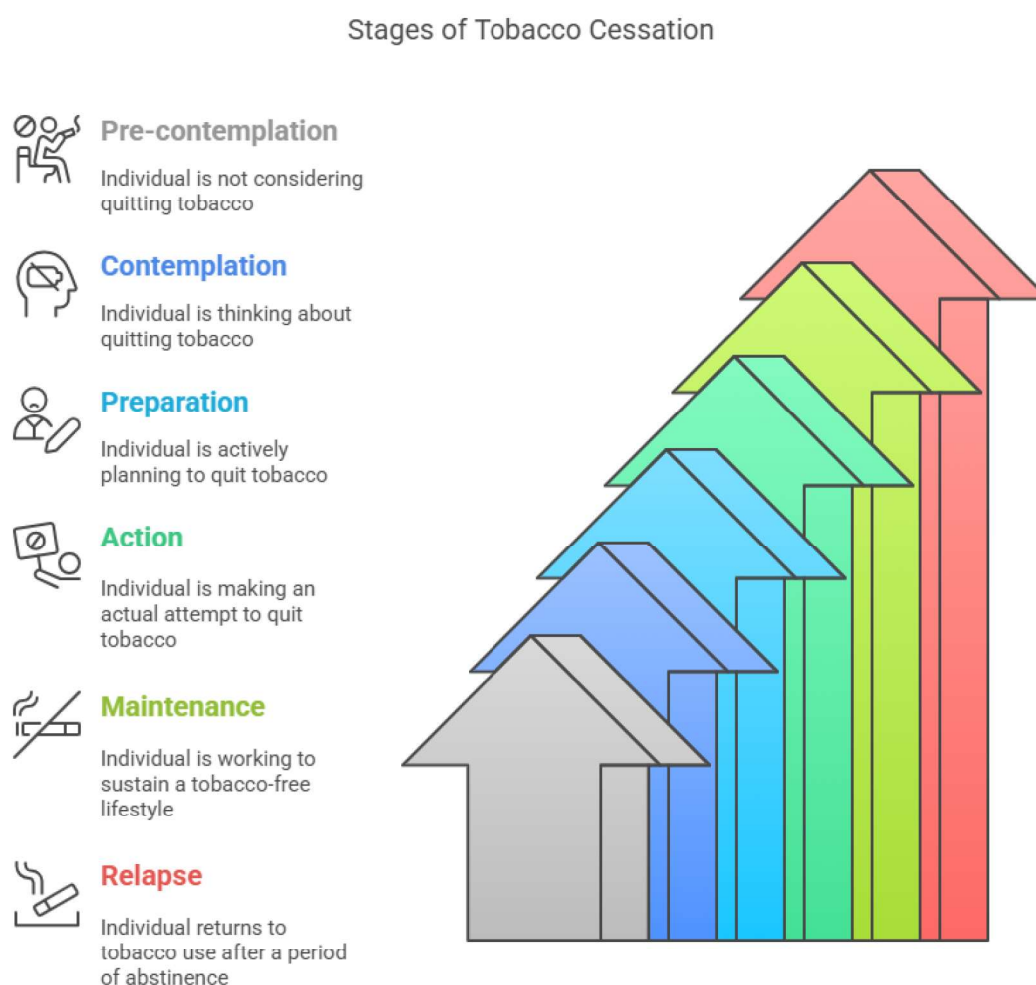


Assistance for Tobacco Cessation Counselling (TCC) at Camp Setting and at Preventive Oncology Tobacco Cessation Clinic

Initially, all enrolled beneficiaries received detailed health awareness session on hazards of tobacco and alcohol use. This was followed by recording of history of tobacco use, filling of questionnaires and risk factor assessment. Among 3126 Police personnel enrolled, 824 (26.36%) Police were tobacco users. Among them, 817 (99.15%) were men and 07 (0.84%) were women. 657 (79.73%) had habit of consuming tobacco in smokeless form, 113 (13.71%) in smoking form and 54 (6.55%) used a combination of both smoking and smokeless form of tobacco. Tobacco Cessation Counselling (TCC) was provided to all Police personnel at the camp settings to assess the stage of tobacco cessation and assist them to quit tobacco.

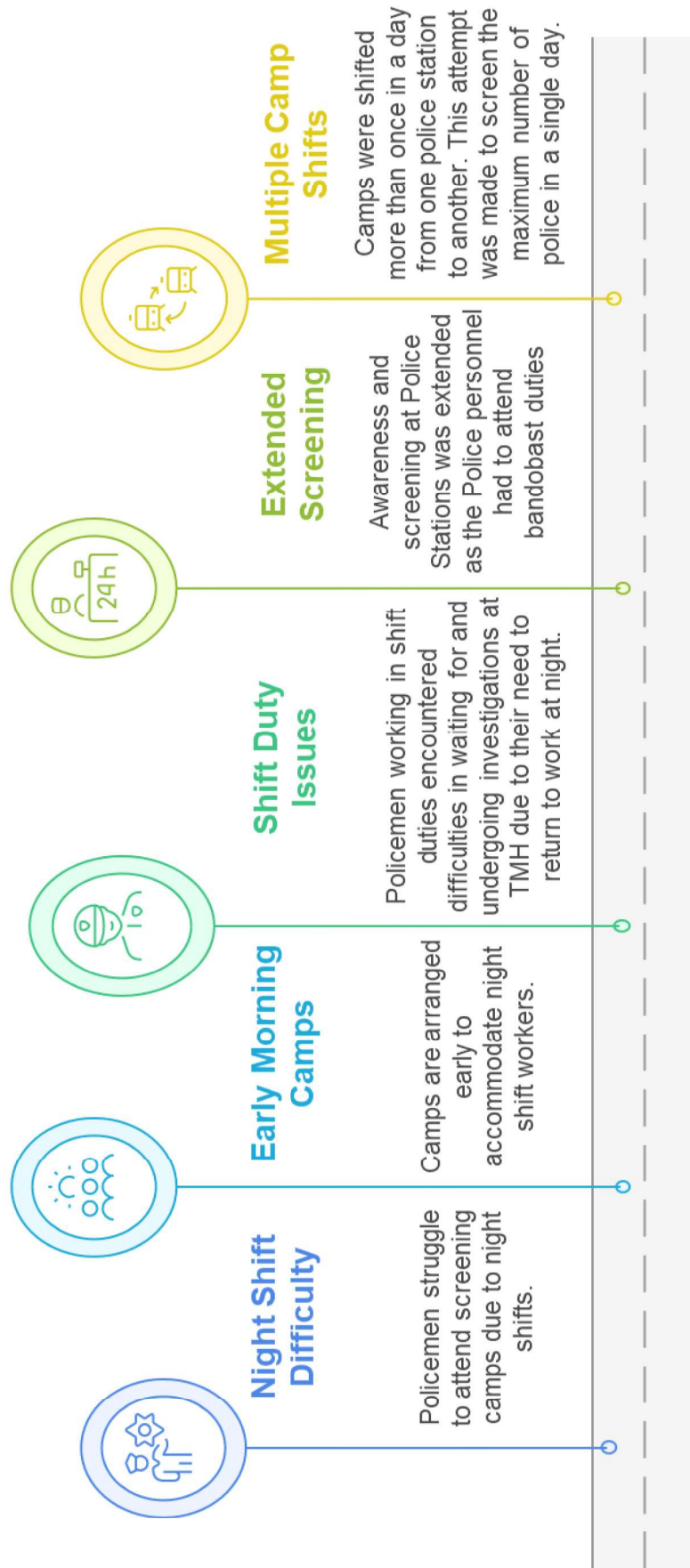
Following TCC at the camp site, all tobacco users were referred for tobacco cessation interventions to the Tobacco Cessation Clinic in the Department of Preventive Oncology at TMH.

The distribution of stages for tobacco cessation is outlined as follows [13]:



Key Challenges

Challenges in Screening Police Personnel



Preparation before Initiation of the Programme

Fifty-nine staff members were recruited in the month of February 2023. The details of the same are as follows.

Table: Staff recruited to conduct awareness and screening programme for common cancers and NCDs among Navi Mumbai Police personnel

Sr. No	Designation	No. of staff recruited
1.	Research Fellow	2
2.	Project Co-ordinator	1
3.	Supervisor	1
4.	Sr. Statistician	1
5.	Counselor	4
6.	Psychologist	1
7.	Medical Social Worker (MSWs)/ Medical Social Researcher	14
8.	Field Health Assistant	14
9.	Assistant Data Manager	5
10.	EDP Technician	3
11.	Sr. Administrator	1
12.	Peon/Porter	12
	Total Staff	59

Training Sessions

The recruited staff were trained for a period of three weeks, from 6th February 2023 to 24th February 2023 at TMH, Mumbai. Faculties from Department of Preventive Oncology delivered lectures followed by hands on training.

Topics of Training

- Introduction to Department of Preventive Oncology
- Burden of oral cavity cancers: Global and Indian perspective
- Oral precancerous and cancerous lesions.
- Staging of oral cavity cancer
- Administrative procedure of projects and introduction to the various Departments of Tata Memorial Hospital.
- Orientation to the registration counter at Department of Preventive Oncology
- Different methods of oral cavity cancer screening
- Management for oral cavity pre-cancers and cancers
- Biomedical waste management
- Introduction to research projects of Department of Preventive Oncology
- National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS)
- Introduction to Mumbai Police Awareness and Screening Project.
- Registration and completion of course on video demonstration on health education on NCG portal and submission of certificate.
- Understanding of the reporting system, reporting of field activities and reporting systems.
- Video demonstration of conducting health education programme on common cancers viz. Oral Cavity, Breast and Uterine Cervix.
- Video demonstration of screening methodologies of Oral Cavity, Breast and Uterine Cervix Cancers.

Practical Demonstration and Hands-on Training for Laboratory Techniques

- 5% Acetic acid preparation
- Lugol's Iodine preparation
- Egg albumin preparation
- Slides preparation for cytology
- Preparation of trolley with instruments for punch biopsy
- Insertion of vaginal speculum during cervical examination on mannequin
- Clinical Breast Examination on mannequin.
- Disinfection of instruments
- Hospital waste management

Demonstration and Hands on Training at Department of Preventive Oncology, OPD

◆ Oral Cavity:

- Requisites for performing Oral Visual Inspection (OVI)
- Step by step procedure for performing OVI
 - › Identification of benign lesions, pre-cancer lesions and conditions, suspicious ulcer and growth.

◆ **Breast:**

- Requisites for performing Clinical Breast Examination (CBE)
- Step by Step procedure for performing CBE
- Identification of benign and suspicious lump by its signs and symptoms

◆ **Uterine Cervix:**

- Requisites for performing uterine cervix screening
- Hands on training in preparation of acetic acid and Lugol's iodine
- Instructions to be provided regarding the procedure before taking up women for screening.
- Step by step procedure for Cervical Examination by speculum insertion.
- Visual inspection using 5% Acetic acid (VIA)
- Visual inspection using Lugol's Iodine (VILI)
- Identification of benign conditions, pre-cancerous lesions, suspicious and frank growths.
- Disinfection of instruments
- Hospital waste management
- Logistics maintenance and record retention

**Training on Management of Screen Positives
Referred to TMH**

- Registration procedure for participants at registration counter of Department of Preventive Oncology
- Navigating to screening clinic
- Instructions to be given on pre and post examination
- Explaining cytology/ punch biopsy/ treatment procedures
- Guiding participants to other department for further treatment procedures and management.
- Follow-up and referral management

Training on Tobacco Cessation Counselling (TCC) and Awareness Programme

- Training to conduct TCC
- TCC form filling
- Training on counselling for tobacco cessation
- Risk assessment and capturing the data on pre-tested questionnaire
- Training to conduct awareness on common cancer and NCDs
- Follow – up on telephone

Camp Materials and Logistics Management

- Arranging all required materials to set-up camp
- Maintenance of registers
- Placing indents

Training on Camp Procedures

- Shifting of camp material to the selected camp place
- Training to deliver health education sessions effectively
- Informed Consent Form (ICF) Procedure
- Training on Questionnaire and most common errors encountered while filling the form
- Camp discipline and punctuality

Visit to Ongoing Camps of the Department

Visits to different camps of the department were arranged during the training period. This provided an opportunity to observe and learn from the ongoing camps. They were also Posted in data management section. This helped in understanding the importance of various aspects of data management.


Funding Support

◆ **Funding Support:**

The project received funding support from Tata Memorial Centre and other donors for financial year 2023-2024 to implement this awareness and screening programme among Police personnel of Navi Mumbai region.

◆ **Reports and Utilization Certificates :**

- Quarterly progress reports on awareness and screening programmes conducted were shared with the funding agency.
- Annual Progress Report along with Project Completion Report for Navi Mumbai Police project were submitted to the funding agency for funding support in financial year 2023-24.



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A GRANT-IN-AID INSTITUTION OF THE DEPARTMENT OF ATOMIC ENERGY, GOVT OF INDIA

AA No. 1272779

Title: "Collaborative Action for Control of Cancer and Other Non- Communicable Diseases among Mumbai Police, Railway Police, Maharashtra Police & Maharashtra Security Force" by Department of Preventive Oncology, Tata Memorial Hospital Mumbai

Principle Investigator	: Dr. Gauravi Mishra
Projected by	: Mr. Rajkumar S Agarwal
Funding Support	: Rs. 11,000/-
Funding Received on	: 10 th November 2023

Background:
Department of Preventive Oncology, Tata Memorial Hospital (TMH) with one of the Non-CSR contribution from Mr. Rajkumar S Agarwal conducted Health Awareness and Screening programme for Police personnel. All the necessary approvals were obtained from the Senior Police authorities to screen police personnel in Navi Mumbai region. Screening was initiated for common cancers and Non-Communicable Diseases (NCD's) and all the police personnel were informed about the screening camps through broadcast message.


Chronology of activities in the screening camps:

- Informed Consent:** All eligible Police personnel were given necessary information regarding the project and were invited to attend the screening camps. Informed consent was obtained from the participants. The consent forms were made available in English and other vernacular languages such as Marathi and Hindi. A copy of consent was provided to the participants.
- Health Awareness Sessions:** All Police personnel were provided with the detailed health awareness session on hazards of tobacco and alcohol use, signs & symptoms and prevention of oral cavity, breast and uterine cervical cancers. They were also provided with detailed health education on Non-Communicable diseases such as diabetes, hypertension and obesity. Trained Medical Social Workers (MSWs) delivered these interactive sessions for at

Dr. E. Borges Mang. Patel
Mumbai - 400 012, India.
Phone : +91-22-2417 7000
+91-22-6953 7300

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AA No. 1272787

Title: "Collaborative Action for Control of Cancer and Other Non- Communicable Diseases among Mumbai Police, Railway Police, Maharashtra Police & Maharashtra Security Force" by Department of Preventive Oncology, Tata Memorial Hospital Mumbai

Principle Investigator	: Dr. Gauravi Mishra
Projected by	: Richway555 Social Welfare Foundation
Funding Support	: Rs. 51,000/-
Funding Received on	: 02 nd June 2023

Background:
Department of Preventive Oncology, Tata Memorial Hospital (TMH) with one of the Non-CSR contribution from Richway555 Social Welfare Foundation conducted Health Awareness and Screening programme for Police personnel. All the necessary approvals were obtained from the Senior Police authorities to screen police personnel in Navi Mumbai region. Screening was initiated for common cancers and Non-Communicable Diseases (NCD's) and all the police personnel were informed about the screening camps through broadcast message.


Chronology of activities in the screening camps:

- Informed Consent:** All eligible Police personnel were given necessary information regarding the project and were invited to attend the screening camps. Informed consent was obtained from the participants. The consent forms were made available in English and other vernacular languages such as Marathi and Hindi. A copy of consent was provided to the participants.
- Health Awareness Sessions:** All Police personnel were provided with the detailed

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Mumbai - 400 012, India.
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AA No. 1272786

Title: "Collaborative Action for Control of Cancer and Other Non- Communicable Diseases among Mumbai Police, Railway Police, Maharashtra Police & Maharashtra Security Force" by Department of Preventive Oncology, Tata Memorial Hospital Mumbai

Principle Investigator	: Dr. Gauravi Mishra
Projected by	: Mrs. Shalaja Piyush Vyas
Funding Support	: Rs. 15,000/-
Funding Received on	: 17 th November 2023

Background:
Department of Preventive Oncology, Tata Memorial Hospital (TMH) with one of the Non-CSR contribution from Mrs. Shalaja Piyush Vyas conducted Health Awareness and Screening programme for Police personnel. All the necessary approvals were obtained from the Senior Police authorities to screen police personnel in Thane region. Screening was initiated for common cancers and Non-Communicable Diseases (NCD's) and all the police personnel were informed about the screening camps through broadcast message.


Chronology of activities in the screening camps:

- Informed Consent:** All eligible Police personnel were given necessary information regarding the project and were invited to attend the screening camps. Informed consent was obtained from the participants. The consent forms were made available in English and other vernacular languages such as Marathi and Hindi. A copy of consent was provided to the participants.
- Health Awareness Sessions:** All Police personnel were provided with the detailed health awareness session on hazards of tobacco and alcohol use, signs & symptoms and prevention of oral cavity, breast and uterine cervical cancers. They were also provided with detailed health education on Non-Communicable diseases such as diabetes, hypertension and obesity. Trained Medical Social Workers (MSWs) delivered these interactive sessions for at

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AA No. 1272781

Title: "Collaborative Action for Control of Cancer and Other Non- Communicable Diseases among Mumbai Police, Railway Police, Maharashtra Police & Maharashtra Security Force" by Department of Preventive Oncology, Tata Memorial Hospital Mumbai

Principle Investigator	: Dr. Gauravi Mishra
Co-Principle Investigator	: Dr. Sharmila Pimple, Dr. C S Pramesh
Projected by	: Mr. Suraj Kanwar
Funding Support	: Rs. 1,00,000/-
Funding Received on	: 14 th September 2023

Background:
Department of Preventive Oncology, Tata Memorial Hospital (TMH) with one of the Non-CSR contribution from Mr. Suraj Kanwar conducted Health Awareness and Screening programme for Police personnel. All the necessary approvals were obtained from the Senior Police authorities to screen police personnel in Thane and Navi Mumbai region. Screening was initiated for common cancers and Non-Communicable Diseases (NCD's) and all the police personnel were informed about the screening camps through broadcast message.

Chronology of activities in the screening camps:

- Informed Consent:** All eligible Police personnel were given necessary information regarding the project and were invited to attend the screening camps. Informed consent was obtained from the participants. The consent forms were made available in English and other vernacular languages such as Marathi and Hindi. A copy of consent was provided to the participants.
- Health Awareness Sessions:** All Police personnel were provided with the detailed health awareness session on hazards of tobacco and alcohol use, signs & symptoms and prevention of oral cavity, breast and uterine cervical cancers. They were also provided with detailed health education on Non-Communicable diseases such as diabetes, hypertension and

Dr. E. Borges Mang. Patel
Mumbai - 400 012, India.
Phone : +91-22-2417 7000
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AA No. 1272774

Title: "Collaborative Action for Control of Cancer and Other Non- Communicable Diseases among Mumbai Police, Railway Police, Maharashtra Police & Maharashtra Security Force" by Department of Preventive Oncology, Tata Memorial Hospital Mumbai

Principle Investigator	: Dr. Gauravi Mishra
Projected by	: Mr. Mahesh Mangulkar
Funding Support	: Rs. 1,00,000/-
Funding Received on	: 22 nd August 2023

Background:

Department of Preventive Oncology, Tata Memorial Hospital (TMH) with one of the Non-CSR contribution from Mr. Mahesh Mangulkar conducted Health Awareness and Screening programme for Police personnel. All the necessary approvals were obtained from the Senior Police authorities to screen police personnel in Thane region. Screening was initiated for common cancers and Non-Communicable Diseases (NCD's) and all the police personnel were informed about the screening camps through broadcast message.

Chronology of activities in the screening camps:

- Informed Consent:** All eligible Police personnel were given necessary information regarding the project and were invited to attend the screening camps. Informed consent was obtained from the participants. The consent forms were made available in English and other vernacular languages such as Marathi and Hindi. A copy of consent was provided to the participants.
- Health Awareness Sessions:** All Police personnel were provided with the detailed health awareness session on hazards of tobacco and alcohol use, signs & symptoms and prevention of oral cavity, breast and uterine cervical cancers. They were also provided with detailed health education on Non-Communicable Diseases such as diabetes, hypertension and obesity. Trained Medical Social Workers (MSWs) delivered these interactive sessions for at

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AA No. 1272768

Title: "Collaborative Action for Control of Cancer and Other Non- Communicable Diseases among Mumbai Police, Railway Police, Maharashtra Police & Maharashtra Security Force" by Department of Preventive Oncology, Tata Memorial Hospital Mumbai

Principle Investigator	: Dr. Gauravi Mishra
Projected by	: Dr. Manorama h Mehta
Funding Support	: Rs. 50,00,000/-
Funding Received on	: 06 th June 2023

Background:

Department of Preventive Oncology, Tata Memorial Hospital (TMH) with one of the Non-CSR contribution from Dr. Manorama h Mehta conducted Health Awareness and Screening programme for Police personnel. All the necessary approvals were obtained from the Senior Police authorities to screen police personnel in Thane and Navi Mumbai region. Screening was initiated for common cancers and Non-Communicable Diseases (NCD's) and all the police personnel were informed about the screening camps through broadcast message.

Chronology of activities in the screening camps:

- Informed Consent:** All eligible Police personnel were given necessary information regarding the project and were invited to attend the screening camps. Informed consent was obtained from the participants. The consent forms were made available in English and other vernacular languages such as Marathi and Hindi. A copy of consent was provided to the participants.
- Health Awareness Sessions:** All Police personnel were provided with the detailed health awareness session on hazards of tobacco and alcohol use, signs & symptoms and prevention of oral cavity, breast and uterine cervical cancers. They were also provided with detailed health education on Non-Communicable Diseases such as diabetes, hypertension and obesity. Trained Medical Social Workers (MSWs) delivered these interactive sessions for at

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AA No. 1272775

Title: "Collaborative Action for Control of Cancer and Other Non- Communicable Diseases among Mumbai Police, Railway Police, Maharashtra Police & Maharashtra Security Force" by Department of Preventive Oncology, Tata Memorial Hospital Mumbai

Principle Investigator	: Dr. Gauravi Mishra
Projected by	: Mr. Parakh Vasuben Trambaklal
Funding Support	: Rs. 10,00,000/-
Funding Received on	: 18 th October 2023

Background:

Department of Preventive Oncology, Tata Memorial Hospital (TMH) with one of the Non-CSR contribution from Mr. Parakh Vasuben Trambaklal conducted Health Awareness and Screening programme for Police personnel. All the necessary approvals were obtained from the Senior Police authorities to screen police personnel in Navi Mumbai region. Screening was initiated for common cancers and Non-Communicable Diseases (NCD's) and all the police personnel were informed about the screening camps through broadcast message.

Chronology of activities in the screening camps:

- Informed Consent:** All eligible Police personnel were given necessary information regarding the project and were invited to attend the screening camps. Informed consent was obtained from the participants. The consent forms were made available in English and other vernacular languages such as Marathi and Hindi. A copy of consent was provided to the participants.
- Health Awareness Sessions:** All Police personnel were provided with the detailed health awareness session on hazards of tobacco and alcohol use, signs & symptoms and prevention of oral cavity, breast and uterine cervical cancers. They were also provided with detailed health education on Non-Communicable Diseases such as diabetes, hypertension and obesity. Trained Medical Social Workers (MSWs) delivered these interactive sessions for at

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Mumbai - 400 012, India.
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AA No. 1272784

Title: "Collaborative Action for Control of Cancer and Other Non- Communicable Diseases among Mumbai Police, Railway Police, Maharashtra Police & Maharashtra Security Force" by Department of Preventive Oncology, Tata Memorial Hospital Mumbai

Principle Investigator	: Dr. Gauravi Mishra
Projected by	: Mrs. Pratibha Khanna
Funding Support	: Rs. 11,00,000/-
Funding Received on	: 19 th October 2023

Background:

Department of Preventive Oncology, Tata Memorial Hospital (TMH) with one of the Non-CSR contribution from Mrs. Pratibha Khanna conducted Health Awareness and Screening programme for Police personnel. All the necessary approvals were obtained from the Senior Police authorities to screen police personnel in Navi Mumbai region. Screening was initiated for common cancers and Non-Communicable Diseases (NCD's) and all the police personnel were informed about the screening camps through broadcast message.

Chronology of activities in the screening camps:

- Informed Consent:** All eligible Police personnel were given necessary information regarding the project and were invited to attend the screening camps. Informed consent was obtained from the participants. The consent forms were made available in English and other vernacular languages such as Marathi and Hindi. A copy of consent was provided to the participants.
- Health Awareness Sessions:** All Police personnel were provided with the detailed health awareness session on hazards of tobacco and alcohol use, signs & symptoms and prevention of oral cavity, breast and uterine cervical cancers. They were also provided with detailed health education on Non-Communicable diseases such as diabetes, hypertension and obesity. Trained Medical Social Workers (MSWs) delivered these interactive sessions for at

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Summary

This comprehensive program focused on creating awareness and screening of common cancers using low cost and effective screening techniques viz. Oral Visual Inspection (OVI) for oral cavity cancers, Clinical Breast Examination (CBE) for breast cancers and Visual Inspection of Cervix using 5% of acetic acid for screening of uterine cervix cancers. Awareness and screening for NCDs like hypertension, diabetes and obesity was also covered under this programme. The screening modalities used for NCDs were as follows: Measurement of blood pressure for hypertension; collection of blood samples and testing for glycosylated haemoglobin (HbA1c) levels for diabetes mellitus and calculation of BMI by measuring height, weight, waist circumference and neck circumference of the participants for obesity screening.

A total of 3126 Police personnel in Navi Mumbai region received health awareness on risk factors, signs, symptoms and prevention of cancers viz. oral cavity, breast and uterine cervix cancers. They also received health awareness on harmful effects of tobacco and alcohol use. Detailed health awareness sessions were conducted on the signs, symptoms, risk factors and prevention of NCDs viz. diabetes mellitus, obesity and hypertension.

Police personnel of Navi Mumbai region were screened for common cancers and NCDs. Many were diagnosed with pre-cancers, cancers, diabetes, hypertension and obesity and received treatment for the same.

It is crucial to prioritize health and well-being of Police by implementing measures like, regular health check-ups, promoting physical activity and ensuring proper rest breaks. The adoption and integration of a comprehensive NCD and common cancer control strategy-including prevention, early detection, treatment, and follow-up within a continuum-of-care approach for police personnel should be included in the institutional policy. This programme implemented among Police personnel of Navi Mumbai region shows that workplace screening is feasible and can be replicated in similar groups across India.

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Abbreviations

BMI – Body Mass Index

BSE – Breast Self-Examination

CBE – Clinical Breast Examination

CCE – Centre for Cancer Epidemiology

EOW – Economic Offences Wing

HBNI – Homi Bhabha National Institute

ICF – Informed Consent Form

IEC – Institutional Ethics Committee

MSWs – Medical Social Workers

NCDs – Non-Communicable Diseases

NPCDCS – National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke

OPD – Out Patient Department

OVI – Oral Visual Inspection

PTSD – Post-Traumatic Stress Disorder

QRT – Quick Response Team

RCP – Right Control Police

TCC – Tobacco Cessation Counselling

TMH – Tata Memorial Hospital

TRAC – Tata Memorial Centre Research Administration Council

VIA – Visual Inspection using 5% Acetic Acid

VILI – Visual Inspection using Lugol's Iodine

WHO - World Health Organization



**Department of Preventive Oncology
Centre for Cancer Epidemiology
Tata Memorial Centre
Homi Bhabha National Institute (HBNI)
Mumbai, India**



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