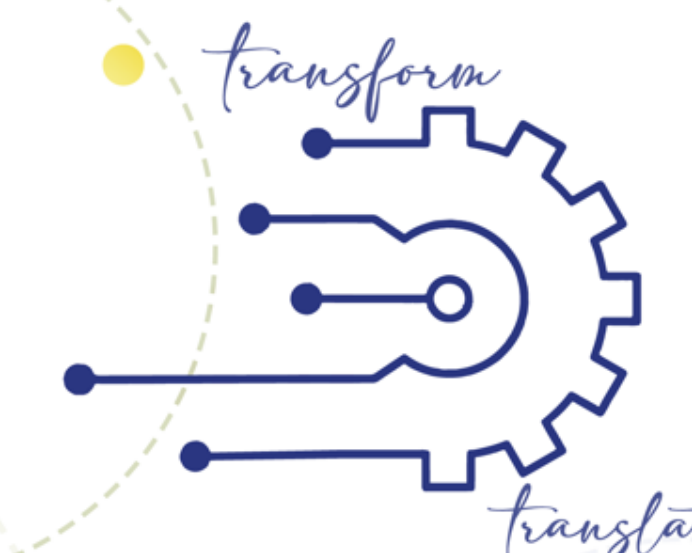


The implementation of Multinational-Lung Cancer Control Program (MLCCP)

Screening Activities in Pietermaritzburg and Durban South Clinics, KwaZulu-Natal (Nov 2020 - Oct 2022)

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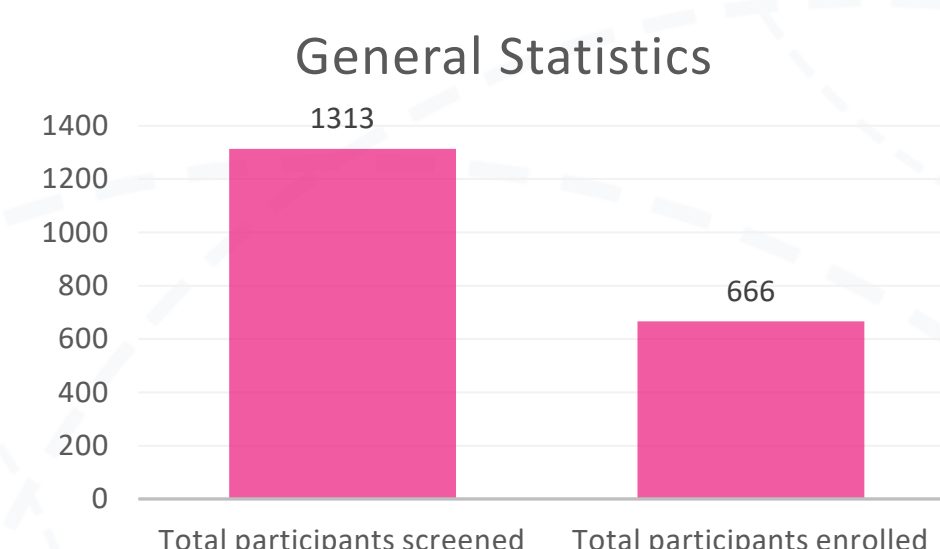
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TRANSFORMING RESEARCH
TRANSLATION-
REIMAGINING
PUBLIC HEALTH EVIDENCE,
POLICIES, AND PRACTICE



BACKGROUND

Background: Lung cancer is a significant public health concern with a high morbidity and mortality rate, worldwide and South Africa is no exception. As a proof-of-concept, we implemented the lung cancer screening programme at the primary healthcare (PHC) facilities in the Pietermaritzburg and Durban South communities through MLCCP.

The MLCCP conducted a study targeting the affected communities between November 2020 and October 2022 to address this pressing issue. The MLCCP successfully screened 1,313 participants and enrolled 666 individuals for a more comprehensive investigation between November 2020 and October 2022. This achievement represents an essential step toward understanding and mitigating the factors contributing to lung cancer in high-risk areas.



OBJECTIVES

The programme aimed to enhance lung cancer prevention, early detection, diagnosis, treatment and palliative care while promoting community awareness and education. Below are the specific objectives and mechanisms of action:

Prevention

Tobacco Cessation: Implementing smoking cessation programs to help current smokers quit.

Chemoprevention: Investigating and promoting the use of drugs, vitamins, or other agents to inhibit or reverse the development of lung cancer.

Environmental Controls: Reducing exposure to carcinogens such as radon, asbestos, and second-hand smoke.

Early Detection

Screening Initiatives: Regular screenings involving X-rays for high-risk populations.

Biomarker Research: Investigating the use of biological markers for early disease identification.

Risk Stratification: Developing algorithms to identify individuals at the highest risk for targeted screening.

Diagnosis

Advanced Imaging: Using state-of-the-art imaging technologies for more accurate diagnosis.

Biopsy Procedures: Utilizing minimally invasive techniques to obtain tissue samples.

Molecular Characterization: Conducting genetic and molecular studies to understand the specific types of lung cancer for tailored treatment.

Treatment

Personalized Medicine: Employing targeted therapies based on the tumor's genetic makeup.

Surgical Innovations: Adopting less invasive surgical techniques for better outcomes and quicker recovery.

Radiation and Chemotherapy: Optimizing the combination of radiation and chemotherapy treatments for better efficacy and fewer side effects.

Community Awareness and Education

Public Seminars: Conducting educational sessions to raise awareness about lung cancer risks and signs.

Resource Distribution: Disseminating brochures, videos, and online resources to educate the community.

Collaboration with Local Entities: Partnering with schools, religious organizations, and community centers for outreach and education.

METHODOLOGY

MLCCP utilizes a multidisciplinary approach involving healthcare professionals, community leaders, and stakeholders. Consisting of several core components, such as:

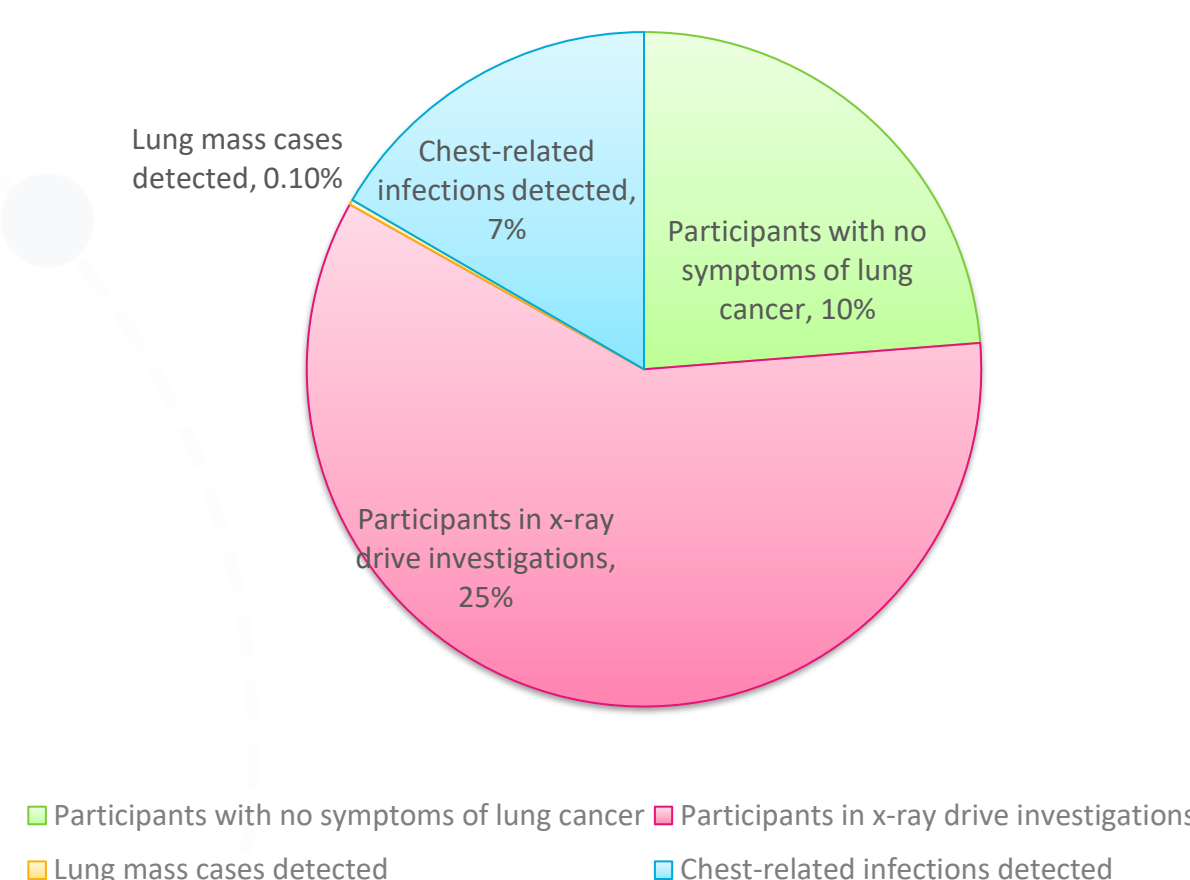
Raising awareness about the harmful effects of smoke second-hand smoke.

Focusing on early detection by implementing regular screening initiatives, such as chest x-rays, and symptom awareness campaigns to encourage prompt medical attention.

Enhancing access to diagnostic services, including bronchoscopy lung function test, to ensure accurate and timely diagnosis of lung cancer cases.

Facilitating comprehensive treatment approaches, including surgery, radiation therapy, and chemotherapy. It promotes the availability of support services, such as counselling, palliative care, and survivorship programmes.

Encouraging community engagement through partnerships with local organizations, community clinics, and educational institutions. It organizes workshops, awareness campaigns, and information sessions to educate community members about lung cancer risk factors, symptoms, and early detection.



RESULTS

MLCCP successfully screened 1 313 participants between November 2020 and October 2022, of the enrolled 666 participants, 10% were former smokers, and 20% were non-smokers with significant second-hand smoke exposure. 10% Had no symptoms of suggestive lung cancer, approximately 35% of males and 25% of females above 20 years old were smokers. About 25% of participants took part in the x-ray drive investigations. The programme detected 0,1% of lung mass cases and 7% of chest-related infections among the screened participants.

The data from this MLCCP study underscore the complex interplay of risk factors such as smoking, second-hand smoke exposure, and gender differences. They also highlight the importance of community-based interventions, including screening and x-ray investigations, in detecting lung cancer and related respiratory conditions early. This comprehensive dataset will be instrumental in refining existing public health strategies and developing new interventions to combat lung cancer in the targeted communities.



CONCLUSIONS

MLCCP implemented in the Pietermaritzburg and Durban South community clinics demonstrated a comprehensive approach to lung cancer control. By prioritizing prevention, early detection, diagnosis, treatment, and community engagement, the programme aims to reduce the burden of lung cancer and improve outcomes for individuals within these communities. Continued programme evaluation and refinement are necessary to ensure its effectiveness and sustainability.

The policy implication: To promote and replicate the comprehensive MLCCP in Pietermaritzburg and Durban South community clinics as a model for other regions, emphasizing prevention, early detection, diagnosis, treatment, and community engagement, while maintaining a focus on continuous evaluation and improvement.

Smoking-Related Metrics	Count	Implications/Remarks
Former smokers among enrolled	10%	Indicates the potential long-term effects of smoking.
Non-smokers with second-hand smoke exposure	20%	Highlights the risk posed by environmental tobacco smoke.
Males above 20 years old who were smokers	35%	A significant portion, raising concerns about male vulnerability to lung cancer.
Females above 20 years old who were smokers	25%	Indicates that females are also at substantial risk.

ADVOCACY MESSAGE

The MLCCP has laid critical groundwork in the fight against lung cancer, successfully screening over 1 300 individuals and enrolling 666 participants for a more comprehensive health investigation in targeted communities between November 2020 and October 2022. Despite these strides, there remains an urgent need for sustained efforts to mitigate this grave public health issue.

The MLCCP aspires to operate on multiple fronts—encompassing prevention, early detection, diagnosis, and treatment, while also focusing on community education and awareness. Our tobacco cessation programs aim to tackle the root cause of many lung cancers, while advanced screening and diagnostic methods are designed for early and accurate identification of the disease.

Personalized treatment plans then leverage the latest in medical science to offer patients the best chances of recovery. However, the cornerstone of effective lung cancer control remains community engagement. Through public seminars, educational resources, and collaboration with local organizations, we aim to equip individuals with the knowledge and tools they need to protect their lung health. But for the program to achieve its full potential, we require the collective involvement of policymakers, healthcare providers, and the community. Together, we can lessen the burden of lung cancer, improve respiratory health, and ultimately save lives.

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